ACADEMIC WOMEN IN ICT IN ASIA

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ABSTRACT

The women's population in the Information Communication and Technology field has been indicated doing sadly low. What will be the core reason of this scenario? What can we do to make a change to this matter? As much research has been done to uncover this matter, the progress of women in the ICT field remains the same or rises just slightly. As an overview to this project, intensive research has been done covering the matter of Academic Women in ICT in Asia highlighting the topics such as Why are there few women in the ICT field?, their Challenges and Opportunities, lastly Women's future in ICT. To enhance the research, an online web survey will be set up to enable successful academic women in ICT in Asia to answer the survey questions on the regarding topic. The answers retrieved will be analyzed, producing a final theory in a graph, chart or text form in real-time to summarize the information retrieved from the survey.

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CHAPTER I

INTRODUCTION

1.1 INTODUCTION

Women today play an important role of raising up the society as narrow as raising up a family. As women's responsibilities grow further their presence in our world's economic growth and technology turn around is fairly needed. Gender equality should not be question in our society nowadays. So is the scenario in the ICT world. It is indicated that the number of women today in ICT is sadly low. The ICT field today is merely lack of women. This is mainly a major problem concerning that our society is moving on drastically heading to a broadband age, wireless technologies, and mainly a world with no boundaries.

1.2 PROJECT OBJECTIVE

The main objective of this thesis:

- To build a website that will stand as a site that will allow successful academic women in ICT to answer survey questions regarding the topic Academic Women in ICT in Asia. The survey questions will help determine their challenges, the problems they face, their opinion about women in ICT and their recommendations on how to encourage women today to get involved in ICT. After these women are finish answering the survey questions, a conclusion in a graph, pie chart or text form will appear in real-time on the site.
- To have a server to support the website. The server will support the database and the programming to enable real-time results published for the users to view. The server will support the database together enabling calculation and

programming (execution) to be done real-time to come up with the latest results (conclusion) based on the study (Women in ICT).

1.3 PROJECT SCOPE

For this thesis, the aspects that are being observed are:

- To do a comprehensive research on women in ICT. This research would include reading and searching for information regarding women in ICT and to come up with an overview of women in ICT which is broken down into a summary. The summary would focus on areas that wished to be highlighted and focused on.
- To come up with a questionnaire that will help gather up information from the users (academic women in ICT in Asia) to help finalize the research with a theory to sum up with.
- To recognize the target users that will be academic women in ICT in Asia. This group will be recognized by searching for their names and email addresses through the internet.

1.4 GANTT CHART

1.4.1 WXES3181

WORKFLOWS/DURATION(2004)	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER
INTRODUCTION						
SYSTEM REQUIREMENTS						
RESEARCH ON WOMEN IN ICT						
DATA ANALYSIS						
SURVEY DESIGN AND ANALYSIS						
PILOT TESTING						
SYSTEM DESIGN						
IMPLEMENTATION						
TESTING						

1.4.2 WXES3182

WORKFLOWS/DURATION(2004)	DECEMBER	JANUARY	FEBRUARY	MARCH
INTRODUCTION				
SYSTEM REQUIREMENTS				
RESEARCH ON WOMEN IN ICT				
DATA ANALYSIS				
SURVEY DESIGN AND ANALYSIS				
PILOT TESTING				
SYSTEM DESIGN				
IMPLEMENTATION				
TESTING				

CHAPTER II

LITRATURE REVIEW

2.1 OVERVIEW OF WOMEN IN ICT

If given the chances the women in our society can really make a great difference in the ICT world no matter who we are, where we come from or whatever culture we live in. As refering to the article about "Women changing the world", we are proud to see that real women have been contributing quite a number to the ICT world. These women are not afraid of changes clearly, as to most of us are still afraid to even move a step further. To bring out the best in the ICT world, the women have to move a step further, think out of the box, and dare to take chances. As the role models in the mentioned article, they were willing to take a step further by quiting their jobs, start to devoting their lifes to the IT world but at the same time with a balanced family life. As we have seen, the effort was surely paid of, one of them made profit worths of billion dollars, just starting of by creating an official website. (Kate Lundy, 2003)

In the United States, Australia or even The United Kingdom, male have been populating the ICT world. But over here in some of the Asia countries like Malaysia, the women crowd the ICT jobs and the ICT Universities. Overall, the population of women in the ICT world is still slightly average. Much can be done to get the women interested in ICT. The goverment should be playing the most important role in this issue. In some countries, the male get paid higher than women even they are doing the same job. As for here in Malaysia, it is not rare to see that the higher roles in most outstanding companies are monopolied by men. The old tale that women cannot do their work as good as the men, should remain as an old myth. The women all over the world has proven that they can do something and contribute outstanding discoveries to the ICT fields. (Kate Lundy, 2003)

2.2 WHY ARE THERE FEW WOMEN IN THE ICT FIELD

According to a study done by the MIT Artificial Intelligence Laboratory, only 13% of PhDs in computer science went to women, and only 7.8% of computer science professors were female. This study was done in the year 1990. The incremental percentage by each year also is very slow and at times decreasing. (Ellen Spertus, 1991). Why does this scenario occur in our society? Probably gender bias and the lack interest of women in ICT would be main purpose of this scenario. Many women are often afraid to pursue their career and education in ICT for the common myth that men dominates the ICT field and men could succeed even far compared to the opposite gender.

To actually get the percentage of women in ICT to increase we are actually talking about how it is exactly to get women to be interested in ICT. And why is that most of the population of women having no interest in ICT. Even though the population of women worldwide is almost half the population than men, sadly this population makes no significant difference to the ICT field. According to an article done by Ilana DeBare, she stated that based on her personal observation in few school's IT laboratories, she founded that the number of women are so few compared to men. This directly shows the lack of interest of women in ICT since their early age. To look at another scenario, there were no studies done to show that women are not smart enough to venture the ICT world to make great discoveries or just to succeed like men. Women are excellent with computer applications but they do not quite have the basic learning skills to enable them to design those applications that would lead to great innovations in the future. Another common image often related to computer science would be nerd or geek. Women often don't want to be related to a certain image that would probably interfere with their social status. The male "geek" stereotype image has been a primary factor why females have lack of interest in computer science since the early age. This factor will then lead to few women in ICT nowadays.

(Summer Adams, Naisa Ali, Julia Medina, Libby Nix, Bill Rivera, 1999)

The tendencies of women to have interest or even to pursue their education or career in the common technological careers are particularly low. As ICT is considered a technical job with networking and software engineering figures, these fields are often interpreted as a manly or unfeminine job. For example it is often for people to be surprised if there would be a female successful in the engineering field that is mainly populated by male generally. The terms assertiveness, confidence, and high achievement is normally associated with masculine qualities. This thought often makes female draw back their line to a certain extend. Another factor that draws back female's interest to pursue their career and education in ICT that is mainly dominated by men is the workplace. Imagine having 20 males and a single female in a single workplace. Uncomfortable feelings, sexual harassments, communication between different genders, gender bias would be the common factor why women find it hard to even work in a same workplace that is dominated by the other gender. The feeling out of place will then lead women to having the difficulties to picture themselves to work in a certain environment for example ICT.
(Summer Adams, Naisa Ali, Julia Medina, Libby Nix, Bill Rivera, 1999)

Here are some statistics on Women in ICT:

- Statistics based on studies done by CRA Taulbee Survey in the year 1994 on the Statistics of women in Computer Science:
  (G. R. Andrews, 1994)
  - Percentage:

Gender	Bachelor's	Master's	Ph.D.	Assistant	Associate	Full
Men	82%	81%	84%	82%	91%	95%
Women	18%	19%	16%	18%	9%	5%

Table 2.1 Statistics 1

  - Absolute numbers:

Gender	Bachelor's	Master's	Ph.D.	Assistant	Associate	Full
Men	6742	4188	848	614	982	1157
Women	1474	991	157	137	102	59

Table 2.2 Statistics 2

- Computer Science Ph.D.s by gender since 1970:

Year	Ph.D.s	Male	Male%	Female	Female%
1970	112	111	99%	1	1%
1971	124	120	97%	4	3%
1972	206	194	94%	12	6%

Table 2.3 Statistics 3

- Percentage of Computer Science Ph.D.s awarded to women over three decades:

Year	1960	1970	1980	1990
Physical Sciences	3.5%	5.7%	12.2%	20%
Engineering	0.4%	0.4%	3.6%	8%

Table 2.4 Statistics 4

- Statistics based on studies done by the Jordanian University on their students: (Community Development Group, 2003)

  Statistics showing the students Number of Jordanian university students enrolled in Bsc. ICT related fields:

COMPUTER SCIENCE/ INFORMATION TECHNOLOGY					COMPUTER ENGINEERING & ELECTRONICS & COMMUNICATIONS				
	1999	2000	2001	Total of 3 years		1999	2000	2001	Total of 3 years
Total	2,972	5,608	5,645	14,225	Total	519	1,003	1,252	2,774
% Growth		89%	1%		% Growth		93%	25%	
Female	910	1,688	1,499	4,096	Female	86	200	267	553
% Growth		86%	-11%		% Growth		133%	34%	
% of total	31%	30%	27%	29%	% of total	17%	20%	21%	20%
Males	2,062	3,920	4,146	10,128	Male	433	803	985	2,221
% Growth		90%	6%		% Growth		85%	23%	
% of total	69%	70%	73%	71%	% of total	83%	80%	79%	80%

Table 2.5 Statistics 5

- A survey made by ITWeb.

(Ranka Jovanovic, 2004)

  - A comparison of top job satisfaction factors for female and male respondents

		Different priorities
No.	**Females**	**Males**
1	Challenge and responsibility	Challenge and responsibility
2	Career prospects	Company culture
3	Extra leave	Career prospects
4	Company culture	Money
5	Money	Quality of management

Table 2.6 Statistics 6

In conclusion, encouragement towards female to the ICT field needs to be improved. Women today must be educated on the importance of ICT and how far they would be left behind if the women would continue to shy away from these challenges. To increase the number of women in ICT we have to start to educate the women today and throw away all the irrational perceptions of women in ICT.

2.3 CHALLENGES AND OPPORTUNITIES

The lack of women in the ICT field has definitely been a clear fact that needs to be taken rather seriously. As women nowadays even try to keep up with the technologies through education-wise or career-wise there will still be challenges that still play a crucial factor on drawing back women to succeed in the ICT field especially in the rural areas.

One remaining factor would be social and cultural norms and values. The idea of married women staying at home without having to pursue their career and dreams should have been invalid at this age. Male dominating any field of jobs is not a rare sight. Women, married or single should have the chance to independently succeed upon their career and education. This problem is mainly seen in rural areas such as India and Arab for example. Other factors that brings such impact would be insecurity and lack of mobility in the workplace, discrimination in judging their work, and lack of self-confidence. Discrimination towards women especially in workplaces happens mainly in rural areas where we can see that men are seen as the more independent gender compared to females. Men are treated differently, are trusted on big projects and usually dominate the upper-level positions.

Another raising factor would be the level of education and literacy in rural countries. Some countries like Bangladesh and India for example have girls as young as 14 who are married that leads to leaving school and drops out education. There are also girls as old as 10 years old who does not know how to read and write. Some of these stereotype scenarios will face a great challenge to mend through for it has often been a tradition in some countries and remains as sensitive issues to some religions.

Amazing opportunities await these women without them even realizing it. Women in these rural areas can benefit from the technologies of ICT. The main problems would be to update the public's awareness on ICT and get the people to involve. To take a sample on women in rural areas for example farmers and women who make handicrafts for living. These women can benefit a whole load from ICT. The women farmers could use information as the key to upgrade their standard of living and apply the current technologies to the farm industry. Weather forecast, improved

technologies, and agricultural inputs could make a difference to their traditional farming living. Women who make handicrafts for living would benefit from e-commerce that could change a traditional handicraft routine to a world-wide business.

For ICT to become a norm in these rural areas there would be some recommendations that will surely be useful to be practiced for the future of ICT. As school is the most basic ground of education world-wide introducing a practical based computer curriculum in school would be an effective way to create awareness in ICT. Cultural Shows Showing Success Stories of Women Participating in ICT Sectors would give hope to young girls and encourage them to pursue their dreams accordingly. As television being the strongest communication media available, this way will actually bring an effective impact on women's awareness in ICT.
(Sayema Nazneen, 2003)

In conclusion, as many challenges and opportunities there are, women young and old should make a difference to take the challenge and bring their living up to another level enjoying the benefits of ICT. The government plays an important role of making ways and bringing opportunities to women to venture their career and education in ICT.

2.4 WOMEN'S FUTURE IN ICT

Upon reaching the level of similarity between both genders, the remaining challenges like religions, cultural norms, gender bias and discrimination will still be around that are quite hard to break through and draw back. How do we actually see women's stability and standard in the future, talking about another 10 years to come? The opportunity to pursue education in the ICT field would not be a constraint by then. Universities and colleges offering degrees in ICT related field should not be taken for granted by women all over the world. The government does play an important role on leading women's future in the ICT field. There could be a quota or an equal percentage of women and men in all universities. This way could actually generate women's involvement in ICT. Social awareness about the importance of ICT should be fair by then. As in 10 years times, the ICT future would be far more tremendous to compare from now on (Brian Lennon, 1998). Women could not take a chance and wait for the technology to come to them instead take a chance further and break through the future and taking possibilities.

As many other parties still play important roles in getting women to involve in ICT, the main counterpart would still be the women's themselves. Individual awareness and self interest would be the most important thing that will drive women to succeed in ICT. In the mean time, the government can make changes with shifting women's status in the ICT world. Discrimination against women should be a past thing and not still remain as a stereotype scenario.

CHAPTER III

RESEARCH PROPERTIES

3.1 DEFINITION OF RESEARCH

According to the Merriam-Webster Online dictionary the definition of research is:

- A careful or diligent search
- A studious inquiry or examination; especially : investigation or experimentation aimed at the discovery and interpretation of facts, revision of accepted theories or laws in the light of new facts, or practical application of such new or revised theories or laws
- The collecting of information about a particular subject

(Merriam-Webster, 2004)

According to Encarta MSN Online dictionary the definition of research is:

- An organized study, a methodical investigation into a subject in order to discover facts, to establish or revise a theory, or to develop a plan of action based on the facts discovered.
- To study something methodically, to carry out research into a subject.

(MSN Encarta, 2004)

As a conclusion, the definition of research is:

- An intense search on the related topic
- Gathering the data collected
- Analyzing the collected data and coming up with a final theory or assumption based on the data gathered and analyzed

3.2 METHODS OF COLLECTING DATA

Information can be collected by several different methods as follows:

- By **direct observation** (e.g. counting the number of vehicles passing a certain point in a given time). This method reduces the chance that incorrect information may be gathered, but it is not always feasible (e.g. it would be practically impossible to follow a housewife for a month to find out what she bought when out shopping).
- By **personal surveys**. The most common way of obtaining information in such fields as market research is the face to face interview. The trained interviewer, using a questionnaire, asks questions of individuals and notes the answers. This method has the advantage that many questions can be asked quickly and that high response rates are achieved. However, an interviewer can influence the answers and this may introduce a systematic bias into the survey.
- **Postal surveys** use a sample of people drawn from a specific mailing list or from an electoral register. The people selected are sent a questionnaire. This method has the following advantages:

    - Interviewing bias is avoided
    - The respondents can take their time answering and thus give more consideration to the answers
    - Costs are generally low.

    However, postal surveys have several disadvantages as follows:

        - Low response rates which may cause bias
        - The length of time needed for the survey
        - Lack of questionnaire control. Different people might interpret a question in different ways, something that does not happen when a trained interviewer is used.

- **Telephone surveys** which are special cases of personal interviews. These are becoming more widely used in the UK because more and more people have a telephone at home. Mobile phones may cause some problems however.

(Paul White, 1998)

- **Interviews** including direct interviews. The definition of Interview is asking questions to obtain opinions, ideas, explanations or specific information on a topic of interest. Here are some points on preparing interview questions:
    - Ask timely and relevant questions.
    - Ask questions of school or local interest if they apply to the topic.
    - Ask questions about the person's reaction to current issues.
    - Ask questions that relate to the focus statement—what is the purpose of the interview.
    - Do not ask yes/no questions. Ask open-ended questions.
    - Ask questions that will bring out the desired information, the 5 W's + (who, what, when, why, where, how).
    - Ask interesting questions to being the interview
    - Watch news programs to see how experienced journalists ask questions.

(Paul White, 1998)

3.3 EXAMPLES OF ONLINE WEB SURVEYS

There are many reasons why online web surveys exist these days. Some of the main reasons are to get feedback from the customers on certain products or to get the public's opinion on a related issue. The way the survey is presented will actually affect the way the users draw their feedback. A good, well presented online web survey will ensure the customer's satisfaction and happiness while answering the questions thus retrieving almost perfect data. To come up with a good online web survey, a research could be done by comparing available websites on the internet and analyzing their strengths and weaknesses. Here would be the 8 examples of online web surveys with their strengths and weaknesses:

3.3.1 WINDOWS SERVER SYSTEM WEBSITE

The 1st online web survey is a survey about the Windows Server System Website. Microsoft is interested to get the users of the website's opinion on the website so it can continue to serve the users better.
(Microsoft, 2004)

The strengths:

- The survey is well structured. The questions are presented in a smooth structure that is clear to view and easy to understand.
- The questions are short and easy to understand.
- Few questions are presented in 1 particular page, so there is no information overload.

The weaknesses:

- There were too many questions (18 questions) that took out 7 pages in total.
- The provided answers for each questions reached up to 10 answers to choose from. This caused information overload, the user's boredom, and the risk of the users abandoning the survey.
- There were too many text boxes to fill in. The users are usually lazy to fill in the blanks and this will cause the final information or analysis to be incorrect.

3.3.2 ULTRAFEEDBACK

The 2nd online web survey is a survey conducted by UltraFeedBack on the employee's satisfaction. The survey is conducted to figure out whether the employees are satisfied or not with their work.
(UltraFeedBack, 2004)

The strengths:

- The survey was rather short and easy to understand.
- The questions from the same group were put in separate frames so that they were well structured and easy to differentiate.
- There was a progress percentage box showing the user how far their progress is while answering the survey. This will not make the users wonder how many questions more they still have to answer.
- There were no empty text boxes giving the users convenience and sense of ease while answering the survey.
- Overall this particular survey could be easily favored by most users and will have no difficulties while answering the questions and understanding them.

The weaknesses:

- No major weakness was found while answering this survey and no difficulties were experienced during answering the questions except for this one important thing that should be taken into consideration. It would be a bit frustrating to some users for they cannot change their answers once it is clicked or selected. The warning message was also stated during the survey.

3.3.3 FIJI INCENTIVE TRAVEL PROGRAM

The 3rd online web survey is a survey about a study concerning the Fiji incentive travel program. The information that will be retrieved from the users would help the World Heritage in planning future incentive travel program.
(Stuart Cottrell, 1996)

The strengths:

- The survey will retrieve a lot of information for there were many questions.

The weaknesses:

- There were too many questions that the users will find it hard to answer all of them in total. This will cause the final information and analysis to be incorrect.
- There were too many empty spaces to fill in that users may find inconvenient and not user-friendly.
- The total time required answering the questions were estimated around 15 minutes which was stated in the beginning of the survey. Users will find this very disrupting as that is a long period for entertaining surveys.
- The outlay of the survey was very uninteresting with no sorts of color, pictures, logo, and structure.
- As a conclusion, the survey was very uninteresting and has many weaknesses.

3.3.4 OUTSOURCE SURVEYS

The 4th online web survey is an example of an online web survey provided by an online a company OutSource Surveys. This is one of many example of a possible layout of an online web survey.
(OutSource Surveys, 2004)

The strengths:

- The layout is very easy to understand.
- Easy to read questions and answers.
- Good use of colors.
- User-friendly and the users will surely have no difficulties while answering the questions.

The weaknesses:

- The survey is too short with too few questions and answers.
- Overall the survey is eye-catching but is too short and simple.

3.3.5 MADGEX

The 5th online web survey is an online web survey that was conducted by Madgex a wine company, wine merchants since 1874. The survey was conducted to get feedback from the wine consumers about wine generally.
(Madgex, 2003)

The strengths:

- Well structured and easy to understand.
- This survey is so far the best among the five surveys.
- The questions are well presented, one question with another are sequentially related.
- The layout is attractive with a professional touch.
- Good color usage

The weaknesses:

- While answering the survey the users might get distracted with the wine promotions available.

3.3.6 SURVEY CENTRAL

The 6th online web survey is an online web survey that was conducted by Survey Central a website that gets feedback from the users that use the website on any topic available. The survey was conducted to get feedback from the users that use the Survey Central website about their site.
(Survey Central, 2003)

The strengths:

- Clear and easy to understand.
- The questions are laid out one by one with a continue button available at the end of each page.
- A simple graphical lay out that would probably suit a general number of users.

The weaknesses:

- The overall presentation of the survey does not look as professional.
- The users may not be interested to answer the survey for the questions are typical and might bore the users.

3.3.7 PRECLICK CONFERENCE VERSION SURVEY

The 7th online web survey is an online web survey that was conducted by Preclick Photo to get feedback from the users that use their services to print photos and others.
(Preclick Photo, 2004)

The strengths:

- The questions are relevant to the intended topic and will certainly benefit the answers from the users.
- Nice and simple graphic usage.

The weaknesses:

- The users can answer this survey even though they have never used Preclick Photo's services before. Thus, the data collected from the survey would surely be not precise and not relevant to the company.

3.3.8 NICOTINE CHEWING-GUMS SURVEY

The 8th online web survey is an online web survey that was conducted by stop-tabac.ch to get feedback from smokers, those who are trying to quit from smoking and those who takes nicotine chewing gums.
(stop-tabac.ch, 2003)

The strengths:

- All the questions are gathered in one table-looks neat.
- Each question is brought up in sequence, relevant to the question before.
- This survey could be considered as a good survey for the good questions.

The weaknesses:

- The graphical layout is too simple.
- The good survey questions could be complimented with a good graphical layout to go with.

3.4 DESIGNING A SURVEY

The survey can be a powerful tool to figure out what our market needs and how we can market to them. Just the process of developing a survey will help to learn more about the target market.
(The Write Market, 2004)

3.4.1 ESTABLISHING GOALS FOR THE SURVEY

Determining the goals specifically:

- The users will find the webpage through their emails that will be sent to them.
- The users have to be the intended ones that are successful academic women in ICT in Asia. (The list of emails is available in the Appendix section).
- They might be from different backgrounds but all fall in the same field.
- Their level of knowledge about the scenario of women in ICT could be low, moderate, or excellent.

3.4.2 WHO WILL BE ASKED

The following people will be asked to complete the survey:

- The responding women in ICT that will come across the website.
- Academic Women in ICT in Asia.

3.4.3 METHODS OF SURVEYING

The methods of surveying that will be used would be through a web based system that will reach the users through their email. Another method that would probably be used is personal one-to-one interview with the users who are in reach.

3.4.4 PLANNING THE RESEARCH

Once the users that will answer the survey and the methods of surveying have been determined, a timeline should be developed from designing the survey to analyzing the data.

3.4.5 PILOT TESTING

To test the survey, the pilot testing method has been chosen. Pilot testing is a method done to test a product in the real world with real people. The idea is to get users to test the product who are most similar to the intended users for the product. This would help to get the accurate feedback from the testing. One user to test at a time would be the best way to conduct the testing. This would be to prevent one user to get influenced by another user who is also testing the product and would give a different feedback. For the user to test the system, they should not be interfered. This would enable us to study the user's behavior towards the product. Notes should be taken during testing. Questions could be asked during testing to indicate why the user does this and that, is the user confused or understand the product perfectly. Survey questions could be given about the intended product could help make the pilot testing easier. What they like or do not like about the product and so on. This could be conducted in a group.
(Northern Arizona University, 2004)

This method will help determine the pros and cons of the survey. There will be 5 users that will be participating in the pilot testing after the survey questions have been completed. After the pilot testing some alterations could be done to improve the quality of the survey to be more effective.

3.4.6 ANALYZING DATA

To come up with good survey questions, after testing more analyzing could be done to really determine what kind of information that is really needed. After testing, the information would be gathered then determining whether there is enough information and is it relevant to what information that is really trying to be gathered.

A common mistake done when analyzing data is not deciding how the graph would look like in the end. Designing a draft of the predicted outcoming graph would help to determine the analysis part of the information gathered.

CHAPTER IV

SYSTEM DESIGN

4.1 QUESTIONNARE ANALYSIS

1. How long have you been working or studying in the Information and Communication Technology (ICT) field?
    a. 1 month→1 year
    b. More than 1 year→5 years
    c. More than 5 years→10 years
    d. More than 10 years and above

2. What makes you interested to get involved in ICT?
    a. Self interest based on self awareness in ICT. Wanting to know more about the technology a step ahead.
    b. Based on the current trend, the market for ICT is in a popular demand. In another way, jobs ICT related are well paid off.
    c. Family background. Since you were young your parents have been encouraging you to pursue your studies in ICT.
    d. Accidentally dropped in the ICT field. Had no other choices at that particular time.
    e. Peer pressure. Influenced by peers.
    f. Others.

3. What is the biggest challenge that you face as a working woman today?
    a. Family attention. Hard to divide time and attention between family and career.
    b. Workplace difficulties. Sexual harassment, discrimination against women, and inequality between men and women.
    c. Social limitations. Not able to socialize as much as men can.
    d. Men get paid higher compared to women in your community.
    e. Unable to give full concentration to improve one self at work because of pregnancy, menstruations, baby delivery leave and so on.
    f. Others.

4. Do you think that ICT education and ICT work is challenging? If so, how challenging could it be to you?
    a. It is not challenging at all.
    b. It can be challenging at times, but overall it's moderate.
    c. It is a challenging course/job but I think I can deal with the challenge.
    d. It is very challenging that I do give up at times.
    e. This would be the most challenging course/job I have ever encountered with.
    f. Others.

5. Do you think that men get treated differently at your workplace to compare with women? If yes, what would be the primary reason for this to occur?
    a. No.
    b. Moderate / sometimes.
    c. Yes.
        - Because men are more productive then women. They work harder, faster thus they produce more work then women do.
        - Because men are more reliable then women. Colleagues rely more on men in the workplace.
        - Men get respected even more to compare with women.
        - Men dominate the upper level positions in your workplace even though there women who are as good as them in the workplace.

6. How do the men in your workplace treat you?
    a. They treat you with respect. There is no sense of rejection to you.
    b. They treat you normally like everyone else in the workplace.
    c. You do feel a bit left out at times by the men in your workplace but it is something that you can deal with.
    d. They treat you with no respect and you even feel discriminated by the opposite gender.
    e. Others.

7. The table below shows statistics based on studies done by the Jordanian University on the number of Jordanian university students enrolled in Bsc. ICT related fields: (Community Development Group, 2003)

COMPUTER SCIENCE/ INFORMATION TECHNOLOGY					COMPUTER ENGINEERING & ELECTRONICS & COMMUNICATIONS				
	1999	2000	2001	Total of 3 years		1999	2000	2001	Total of 3 years
Total	2,972	5,608	5,645	14,225	Total	519	1,003	1,252	2,774
% Growth		89%	1%		% Growth		93%	25%	
Female	910	1,688	1,499	4,096	Female	86	200	267	553
% Growth		86%	-11%		% Growth		133%	34%	
% of total	31%	30%	27%	29%	% of total	17%	20%	21%	20%
Males	2,062	3,920	4,146	10,128	Male	433	803	985	2,221
% Growth		90%	6%		% Growth		85%	23%	
% of total	69%	70%	73%	71%	% of total	83%	80%	79%	80%

Table 4.1 Statistics 7

Here is another statistic done by CRA Taulbee Survey in the year 1994 on the Statistics of women in Computer Science. More statistics can be viewed in the following URL provided. (G. R. Andrews, 1994)

Gender	Bachelor's	Master's	Ph.D.	Assistant	Associate	Full
Men	82%	81%	84%	82%	91%	95%
Women	18%	19%	16%	18%	9%	5%

Table 4.2 Statistics 8

These statistics has proved that there are lacks of women in ICT with the reasons to follow. How do you see the future of women in ICT for the next 5 years to come?

a. Gender equality would not be an issue by then. Women would face no gender bias problems and their presence would be valued with respect. The number of women in ICT would not be as few as today, but rather impressive.
b. The number has increased to compare with a few years back, but much more could be done to increase the number of women in ICT.
c. The situation is so far still the same for not much will change in 5 years. The women are still not aware and not interested to pursue their education and career in ICT for many following reasons for example, family problems, challenging tasks, workplace problems, discrimination against women and gender inequality is still an issue.
d. The number of women in ICT could fairly decrease if no extreme action would be done to encounter this problem. And as I can see this problem has not be taken seriously even today.
e. Others.

8. In your opinion how do you see this situation by your side and what are your recommendations to help deal with this problem?

_____

_____

_____

_____

_____

4.2 PILOT TESTING UPON QUESTIONNARE

A pilot testing was done on the questionnaire with 5 people that are:

- Fatin Mazura Marzuki (pursuing Degree in Computer Science)
- Aqilah Anuar (pursuing Degree in Information Technology)
- Dian Nurfitri M.Nasir Ahmad (pursuing Degree in Information Technology)
- Rohafiza Abd Razak (pursuing Degree in Information Technology)
- Nur Aisha Abd Hamid (pursuing Degree in Computer Science)

These people are closely related to ICT, pursuing their degrees in Information Technology as well as Computer science, and they are all females. As the intended users of the system would be educated women in ICT, this sample of users would the closest related to them. A short survey was done after the pilot testing to get feedback from the users after they have answered the questionnaire. These are the questions that were asked to them after answering the survey questions:

1. Do you understand all the questions correctly? If not which question and why?
2. Do you think that all the questions are relevant with the intended topic? If not which question is not relevant and why?
3. Do you think that the given answers are relevant and enough for the intended questions? If not which answers are not relevant and why? If you have your own answer, please state it down with the question number indicating the answer you gave.
4. Do you think there are enough questions? If not should there be more or less questions?
5. How long did you take to complete the survey?
6. Do you think that the questionnaire is boring and non-interesting? If yes, what would you suggest to make the questionnaire more interesting (the graphics does not count)?
7. Lastly please rate the questionnaire in percentage (100% best, 0%worst).

4.2.1 ANALYSIS UPON PILOT TESTING

The analysis part comes after the pilot testing has been done. The data gathered from the pilot testing that has been done with a sample of 5 users has been analyzed and finally presented in a graph form. The graph below shows the results gathered from the users answering the survey questions that have been designed.

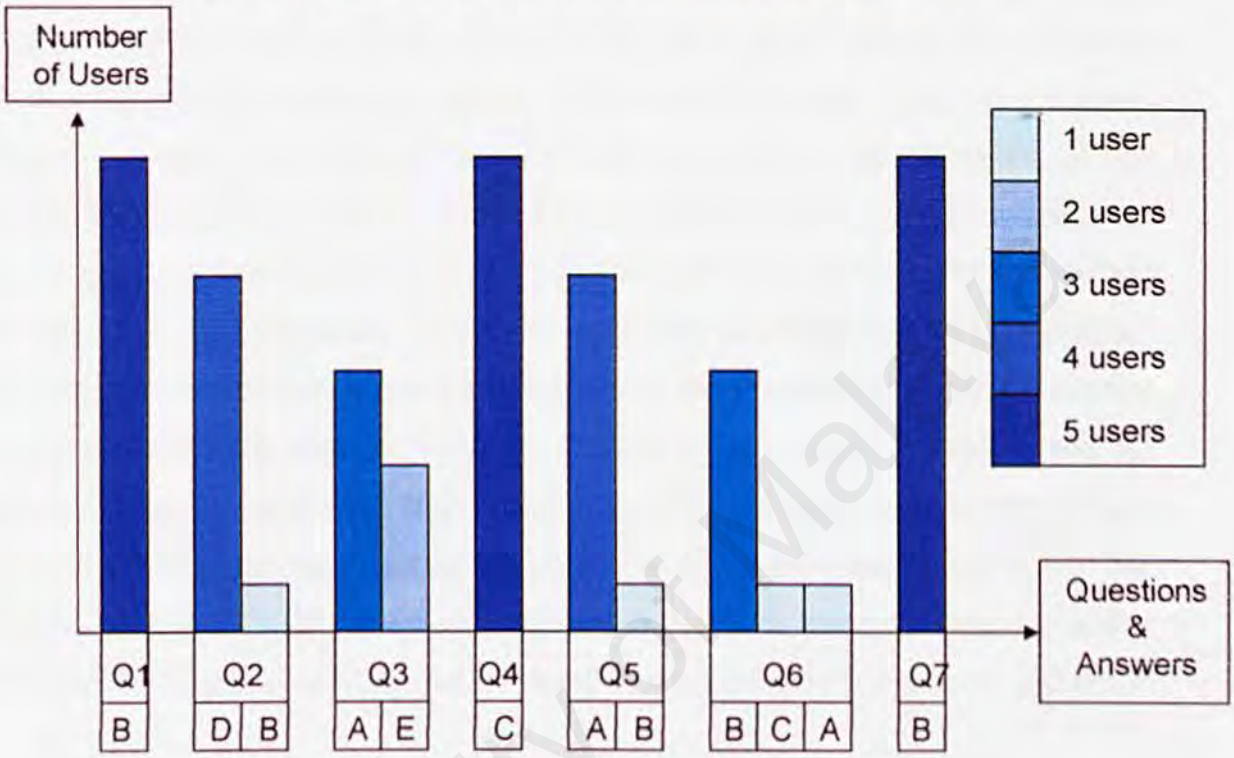


Figure 4.1 Analysis graph upon pilot testing

The graph above is showing a certain number of users with their preferred answers. All of the users (5 of them) choose answer B for question number 1, 4 of them choose D for question number 2 and the other user choose B and the list goes on until question number 7. This graph tells us that within the sample of all of the users, they are actually studying or working in the ICT field between more than 1 year to 5 years. 4 of them stated that they accidentally dropped in the ICT field and had no other choices at the time they wanted to continue studying. The other user got involved in the ICT field based on the current trend and believed that the market for ICT is in a popular demand. In another way, jobs ICT related are well paid off. 3 of the users agreed that the biggest challenge they face as a working woman today would be family attention. They find it hard to divide their time and attention between

family and career. For the other 2 users they think that the biggest challenge that they face as a working woman today would be the disability to give full concentration to improve their self at work because of pregnancy, menstruations, baby delivery leave and so on.

All of the users agreed that ICT education and ICT work is a challenging course/job but they think that they can still deal with the challenge. 4 of the users decided not to agree to the thought that men get treated differently at their workplace to compare with women but the other user agreed that men do get treated differently at her workplace with the primary reason that men get respected even more to compare with women at her workplace. 3 of the users feel that the men in their workplace treat them normally like everyone else. 1 of them feels that she gets treated with respect from the men at her workplace and there is no sense of rejection to her. The other user agrees that she does feels a bit left out at times by the men in her workplace but it is something that she can deal with. Eventhough the women's current percentage in the ICT field has been indicated being sadly low, all of the users believe that the number of women in ICT will increase in another 5 years to come to compare with a few years back, but much more could be done to increase the number of women in ICT.

3 out of 5 users have given their opinions on the scenario of women in ICT from their side and their recommendations on how to deal with the problem. Here are their opinions that could be likely taken into consideration to deal with this matter:

- To take extreme action and to make sure women nowadays are more alert and aware about the problem. Provide more activities for women to improve themselves for this matter.
- The employers ought to have more faith in female ICT employees. This could be done by focusing on the employer's side, all the works could be done equally while sharpening the technical skills often found lacking in female ICT graduates.
- This is a serious problem that many of us are unaware off. One suggestion is to train all gender equally from the beginning starting from school so that both men and women will have the same opportunity in

this field. Women are also capable of handling or creating new ideas for this field as long as they are given the same opportunity as men.

After answering the survey the users were asked to give feedback upon the survey design. Some questions were prepared to guide the users to comment upon the survey. In summary the users felt that they understand all the questions correctly and all the questions are relevant with the intended topic. As for the given answers, the option answers are relevant and enough for the intended questions. Most of the users think that there are not enough questions and there should there be more questions available. The users took around 5 to 10 minutes to answer the survey and they all agreed that the questionnaire did not bore them and it was a rather interesting survey for its topic. When asked to rate the survey in percentage from 100% being the best to 0% being the worst their rating were from 50% to 95% overall.

4.3 DEVELOPMENT TOOLS

4.3.1 WEB AUTHORING TOOLS

4.3.1.1 DREAMWEAVER MX 2004

Dreamweaver MX 2004 is the professional choice for building web sites and applications. It provides a powerful combination of visual layout tools, application development features, and code editing support, enabling developers and designers at every skill level to create visually appealing, standards-based sites and applications quickly. From leading support for CSS-based design to hand-coding features, Dreamweaver provides the tools professionals need in an integrated, streamlined environment. Developers can use Dreamweaver with the server technology of their choice to build powerful Internet applications that connect users to databases, web services, and legacy systems.

(amazon.com, 2004)

4.3.1.2 MICROSOFT FRONTPAGE

Microsoft FrontPage is a software program which allows users to create dynamic Web sites without having to know HTML and other scripting languages that are used to compose all Web sites on the Internet. The new edition, FrontPage 2003, is now available and has more advanced features than ever.

The ease of use has made FrontPage the most popular of all Web-authoring software programs, but FrontPage does require that special components (called FrontPage Extensions) be installed on the Web server. Supernets's NT Hosting Services fully support FrontPage-created Web sites - support users will not find in the UNIX hosting environment.

(Supernets, 2000)

4.3.1.3 GOLIVE 6

Adobe GoLive 6 CS software delivers what you need to create professional Web sites, including smooth integration with Adobe software, a creative design environment that allows you to maximize your productivity, and powerful tools that support industry standards.

(Adobe systems, 2004)

4.3.1.4 VISUAL STUDIO .NET 2003

Visual Studio .NET Professional 2003 is Microsoft's multi-faceted development tool, targeting both Windows and Web applications. This 2003 edition includes numerous small improvements as well as major new features like the Compact Framework, for applications that run on Pocket PC and other smart devices. It supports multiple languages, with the main ones being Visual Basic, C#, and C++. There is also a Java-like language called J#, although J# applications only work on Windows so this is not a true Java development tool. The Visual Studio .NET environment is truly integrated. It makes extensive use of docking and tabbed windows, and there are plenty of project wizards along with huge amounts of online help. Auto-completion and pop-up help eases the business of editing code.

(amazon.com, 2004)

4.3.1.5 WEB AUTHORING TOOLS COMPARISON

The table below shows the comparison between the most popular web authoring tools. (Wiser Ways, 2004)

Dreamweaver MX 2004 has been chosen the web authoring tool for all the better choices compared to the other given tools.

	Dreamweaver MX 2004	FrontPage 2003	FrontPage 2002	GoLive 6	Visual Studio.NET 2003
Workspace					
Split View of Code and Design	✓	✓		✓	
Customizable Toolbar	✓	✓			
Visual Table Editing Cues	✓	✓			
Professional Quick Start	**Dreamweaver**	**FrontPage**	**FrontPage**	**GoLive**	**Visual**

	MX 2004	2003	2002	6	Studio.NET 2003
Pre-Built Web Designs	✓	✓	✓		
Pre-Built Accessible Web Sites	✓				
Sample Site Structures	✓	✓	✓		
Team Collaboration Site Structures		✓			
CSS Based Themes		✓			
Sample CSS Templates	✓				
Sample JavaScript Functions	✓	✓			
Template Architecture	✓	✓	✓	✓	
Microsoft Word and Excel Copy and Paste	✓	✓			
Flash Elements	✓				
Define Editable, Optional and Repeated Regions for Templates	✓	✓			
Nested Templates	✓				
JavaScript Pop-up menu creation	✓	✓			
Code Editing Support	**Dreamweaver MX 2004**	**FrontPage 2003**	**FrontPage 2002**	**GoLive 6**	**Visual Studio.NET 2003**
Code Hints	✓	✓			✓
Customizable Syntax Coloring	✓	✓		✓	✓
Snippets Panel	✓	✓			
Tag Editor	✓	✓			
Right-Click Coder Tools	✓				
Customizable Tag Database	✓	✓			
Printing From Code View	✓	✓	✓		✓
Integrated Debugging		✓			✓
Siteless File Editing	✓	✓			
Multiple Technology Development	**Dreamweaver MX 2004**	**FrontPage 2003**	**FrontPage 2002**	**GoLive 6**	**Visual Studio.NET 2003**

Server Code Libraries	ColdFusion, ASP, ASP.NET, JSP, and PHP			ASP, JSP and PHP	ASP and ASP.NET
Database Integration	✓	✓			✓
Tag Editors	HTML, CFML, and ASP.NET	ASP, ASP.NET			ASP.NET
Dynamic Form Objects	ColdFusion, ASP, ASP.NET, JSP, and PHP	ASP, ASP.NET			
Server Objects and Behaviors	ColdFusion, ASP, ASP.NET, JSP, and PHP	ASP.NET			ASP.NET
Unique Support for ASP.NET Development	**Dreamweaver MX 2004**	**FrontPage 2003**	**FrontPage 2002**	**GoLive 6**	**Visual Studio.NET 2003**
ASP.NET Custom Tag Support	✓	✓			✓
ASP.NET Web Forms Support	✓	✓			✓
ASP.NET Form Controls Objects	✓	✓			✓
ASP.NET DataGrid and DataList Objects	✓	✓			✓
XML and Web Services	**Dreamweaver MX 2004**	**FrontPage 2003**	**FrontPage 2002**	**GoLive 6**	**Visual Studio.NET 2003**
XML Editing and Validation	✓	✓			✓
XML Namespace Support	✓	✓			✓
Tree view for viewing XML, HTML	✓	✓			
Web Services Introspection	.NET, ColdFusion, and Java				.NET
Web Service Creation	ColdFusion				.NET
Web Service Creation Wizard	ColdFusion				.NET

Standards Support	Dreamweaver MX 2004	FrontPage 2003	FrontPage 2002	GoLive 6	Visual Studio.NET 2003
XHTML support	✓	✓		✓	✓
Code Validator	✓	Through Add-ins			✓
Cascading Style Sheet (CSS) Rendering	✓	✓			
CSS Layout Visualization	✓	✓			
CSS Rule Inspector	✓	Through Add-ins			
CSS-based Text Property Inspector	✓	Through Add-ins			✓
CSS-based Page Properties	✓	✓			✓
Accessibility Support	**Dreamweaver MX 2004**	**FrontPage 2003**	**FrontPage 2002**	**GoLive 6**	**Visual Studio.NET 2003**
Accessibility Site Reporting	✓	✓		✓	
Integrated Accessibility Reference Content	✓				
Accessibility option for generating compliant code	✓	Through Add-ins			
Accessible Tags	✓	✓			
Accessible Environment	✓	✓			
Keyboard Accessibility	✓	✓	✓		✓
Screen Reader Support	✓	✓	✓		✓
Web Publishing	**Dreamweaver MX 2004**	**FrontPage 2003**	**FrontPage 2002**	**GoLive 6**	**Visual Studio.NET 2003**
Full support for the Mac platform	✓			✓	
Secure FTP Publishing	✓				
FTP Publishing	✓	✓			
HTTP Publishing	Through extensions	✓			✓

Integration with Other Technologies and Tools	Dreamweaver MX 2004	FrontPage 2003	FrontPage 2002	GoLive 6	Visual Studio.NET 2003
Designed for Windows XP Compliance	✓	✓	✓		✓
MS Office Application Integration		✓			✓
SharePoint Team Services Integration		WSS	STS		
Wireless development support	Through extensions			✓	✓
Macromedia Flash MX Integration	✓	For Embedding			
Fireworks MX Integration	✓	as external editor	as external editor		

Table 4.3 Web Authoring Tools Comparison

4.3.2 SERVER-SIDE SCRIPTING LANGUAGES

4.3.2.1 PHP

PHP is a widely used Open Source server-side general-purpose scripting language that is especially suited for Web development and can be embedded into HTML. Its syntax draws upon C, Java, and Perl, and is easy to learn. PHP runs on many different platforms and can be used as a standalone executable or as a module under a variety of web servers. It has excellent support for databases, XML, LDAP, IMAP, Java, various Internet protocols, and general data manipulation, and is extensible via its powerful API. It is actively developed and supported by a talented and energetic international team.

(Synop Pty Ltd, 2004)

4.3.2.2 ASP

Active Server Pages or ASP, as it is more commonly known, is a technology that enables users to make dynamic and interactive web pages. ASP uses server-side scripting to dynamically produce web pages that are not affected by the type of browser the web site visitor is using. The default scripting language used for writing ASP is VBScript, although users can use other scripting languages like JScript (Microsoft's version of JavaScript). ASP pages have the extension .asp instead of .htm, when a page with the extension .asp is requested by a browser the web server knows to interpret any ASP contained within the web page before sending the HTML produced to the browser. This way all the ASP is run on the web server and no ASP will ever be passed to the web browser. Any web pages containing ASP cannot be run by just simply opening the page in a web browser. The page must be requested through a web server that supports ASP, this is why ASP stands for Active Server Pages, no server, no active pages. As ASP was first introduced by Microsoft on its web server, Internet Information Services (IIS) that runs on Windows 2000 /XP Pro/NT4 it is this web server that ASP pages usually run best on. For the users running Windows and wish to play around with ASP on their own system, will need to install Microsoft's Internet Information Services (IIS).

(Web Wiz Guide, 2004)

4.3.2.3 COLDFUSION

With ColdFusion MX, the users can build and deploy powerful web applications and web services with far less training time and fewer lines of code than ASP, PHP, and JSP. The latest version 6.1 delivers simplified installation and migration, a streamlined product family, updates to key ColdFusion features, and a dramatic increase in runtime performance.

(Macromedia, 2004)

4.3.2.4 JSP

A Java Server Page (JSP) application consists of HTML or XML markup into which special tags and code blocks are inserted. The code is executed on the server and the result is a dynamic page that is returned to the client browser. Although JSPs are simple to build, they have at their disposal the full power of object-oriented Java and the Java Server API. The Java source code and its extensions help make the HTML more functional, for example it can be used in dynamic database queries. JSPs are not restricted to any specific platform or server. If JSP applications want to use Oracle Portal as a portlet repository, the JSP application needs to be registered to the Portal. After registration, a private namespace is created for this JSP application. Users can then create portlet instances using Portal or through APIs from their applications. Each portlet instance belongs to an application namespace.

(Wood group, 2004)

4.3.2.5 SERVER-SIDE SCRIPTING LANGUAGES COMPARISON

The table below shows the comparison between the most popular server-side scripting languages.

(eBiz-Intellect, 2004)

ASP has been chosen as the server-side scripting language for all the better choices compared to the other given languages. The familiarity with the language also makes the learning curve lower.

	PHP	ColdFusion	ASP	JSP
Language In Page	PHP	CFML	VBScript, JScript	Java
OS Platform	Unix (Linux), Windows, MacOS, OS/2	Windows NT, Solaris, Linux	Windows 9x, NT, other platforms requires third-party ASP porting products	UNIX, Microsoft Windows, Mac OS, Linux
Supported Web server	Apache only (version 3.0)IPlanet/Netscape Enterprise Server (NSAPI), MS Internet Information Server (IIS), Apache, Zeus, fhttpd, etc. (version 4.0)	IIS, Netscape Enterprise Server, Apache, Website Server (WSAPI), CGI	IIS, Personal Web Server (PWS), other servers with third-party products	Any Web server, including Apache, Netscape and IIS
Supported Database	MySQL, mSQL, ODBC, Oracle, Informix, Sybase, etc.	ODBC, OLE DB, DB2, Oracle, Informix, Sybase, etc.	any ODBC-compliant database	any ODBC- and JDBC-compliant database
Portability	Poor	Good	Fair	Good
Scalability	NO	Good	Good	Good
Component Support	NO	COM, CORBA, JavaBeans	COM components	JavaBeans, Enterprise JavaBeans
Learning curve	Medium (C, Perl)	Low	Medium (VBScript, Jscript)	High (Java)

Table 4.4 Server-Side Scripting Languages Comparison

4.3.3 DATABASE

4.3.3.1 IBM DB2

Short for Database 2, a family of relational database products offered by IBM. DB2 provides an open database environment that runs on a wide variety of computing platforms. A DB2 database can grow from a small single-user application to a large multi-user system. Using SQL, users can obtain data simultaneously from DB2 and other databases. DB2 includes a range of application development and management tools.

(Jupitermedia, 2004)

4.3.3.2 MICROSOFT ACCESS

Often referred to as simply Access, Microsoft's database creation and management software.

(Jupitermedia, 2004)

4.3.3.3 MICROSOFT SQL SERVER

Generically, any database management system (DBMS) that can respond to queries from client machines formatted in the SQL language. When capitalized, the term generally refers to either of two database management products from Sybase and Microsoft. Both companies offer client-server DBMS products called SQL Server.

(Jupitermedia, 2004)

4.3.3.4 MYSQL

MySQL is an open source RDBMS that relies on SQL for processing the data in the database. MySQL provides APIs for the languages C, C++, Eiffel, Java, Perl, PHP and Python. In addition, OLE DB and ODBC providers exist for MySQL data connection in the Microsoft environment. A MySQL .NET Native Provider is also available, which allows native MySQL to .NET access without the need for OLE DB.

(Jupitermedia, 2004)

4.3.3.5 ORACLE

Based in Redwood, California, Oracle Corporation is the largest software company whose primary business is database products. Historically, Oracle has targeted high-end workstations and minicomputers as the server platforms to run its database systems. Its relational database was the first to support the SQL language, which has since become the industry standard.
(Jupitermedia, 2004)

4.3.3.6 DATABASE TYPE COMPARISON

The table below shows the comparison between the most popular database types.
(Bradley, 2004)
Microsoft Access 2003 has been chosen as the database type because it is the most familiar database type thus making the learning curve low. Microsoft Access would also be able to support the project's small system.

	IBM DB2 Universal Database 7.2	Microsoft Access 2003	Microsoft SQL Server 2000	MySQL AB MySQL 4.0	Oracle 9iDB
DBMS Type	Transactional relational database server	Relational file-based database	Transactional relational database server	Relational database server (Transactional with InnoDB drivers)	Transactional relational database server
Hardware Requirements	Dedicated server.	Intel Pentium III or AMD Athlon processor, 136 MB RAM, 285 MB hard drive space	Intel Pentium II or AMD K6-II processor, 64 MB RAM, 380 MB hard drive space	Minimum required for operating system.	Dedicated server.
Software Requirements	One of the following: Windows 2000 Server,	Internet Explorer 5.0 and one of the following:	Windows 2000 Server or Windows .NET Server 2003, Internet Explorer	Win32 or Linux/UNIX-based operating	One of the following: Windows 2000 Server,

	Windows .NET Server 2003, Linux (kernel 2.4 or later), OS/2 Warp 3 or later, AIX 5L, HP UX Version 11/11i or later, Solaris 5.7 or later.	Windows NT, Windows 2000, Windows XP	5.0	system, MyODBC (for ODBC driver support), Connector/J (for JDBC driver support)	Windows .NET Server 2003, TRU64 UNIX, HP-UX Version 11, Solaris 8, AIX.
Advantages	Well-known and well-documented DBMS capable of enterprise-level data management, supports all major database access standards.	Easy to use and administer, requires minimal knowledge of SQL, imposes relatively light load on CPU, inexpensive, relatively well-suited for XML.	More reliable than one might expect from Microsoft, supports enterprise-class reliability and security features, compatible with many third-party application servers, can run multiple databases on one server.	Free, extensive online documentation, compatible with many different operating systems	Industry-standard DBMS capable of enterprise-level data management, supports all major database access standards, known for extremely high reliability and security.
Disadvantages	Ridiculously expensive for this project.	Access databases use a proprietary format mostly incompatible with SQL, cannot perform point-in-time recovery,	Expensive, requires a Windows 2000 Server, can be difficult to administer.	Not fully SQL92 complaint (which may cause problems with application servers that form their own	Licensing based on named individual persons instead of devices, documentation difficult to

		cannot log database activity, slower than other databases, completely inaccessible to Java-based applications.		SQL queries), free version offers no tech support, version 4.0 and the MyODBC, Connector/J and InnoDB drivers are all in beta testing, cannot lock objects below the table level, InnoDB offers transactional support but without ACID compliance, some extensions are not compatible with the SQL99 standard.	understand.
Database Limitations	None relevant.	Database only runs on Windows, limited to 255 users, limited to 32,768 objects in database, file size limited to 2	Limit of approximately 2 billion objects in database.	Limited to 32 indexes per table, database size limited to maximum file size of operating	None known.

		GB.		system.	
ACID Compliance	Yes.	No.	Yes.	No.	Yes.
Reliability	Supports failover clusters, point-in-time recovery and other enterprise-class reliability features.	The database file itself is much more stable than the program. Fortunately, the program doesn't have to run if the file is accessed through the Web.	Supports failover clusters, point-in-time recovery and other enterprise-class reliability features, can automatically restart itself if stopped.	Open-source software, appears to be almost constantly in beta, Connector/J has a history of reliability issues.	Supports failover clusters, point-in-time recovery and other enterprise-class reliability features.
Security	User authentication, transaction logging	Requires use of workgroup information file to perform user authentication, this file must be manually updated and redistributed each time the users change, no transaction logging	User authentication with option to integrate database security with Windows 2000 security, transaction logging.	Unknown.	Integrated user authentication, extensive transaction logging.
Standards	SQL99, SQL/J, XML, ODBC, JDBC, J2EE 1.3	Microsoft Jet, XML, ODBC, SQL (only if converted to Access Project)	SQL99, XML, ODBC, JDBC, T-SQL	SQL92 Intermediate, ODBC (requires MyODBC), JDBC (requires Connector/J)	SQL99, SQL/J, PL/SQL, ODBC, JDBC, XML, J2EE 1.3

Source	http://www-3.ibm.com/software/data/db2/udb/features.html	http://www.microsoft.com/office/access/default.asp	http://www.microsoft.com/sql/evaluation/sysreqs/2000/default.asp	http://www.mysql.com	http://www.oracle.com/ip/deploy/database/oracle9i/

Table 4.5 Database Type Comparison

4.4 WEBSITE DESIGN

The following web design will be the first page of the website outcome. The figure 4.2 is showing whole first page of the website:

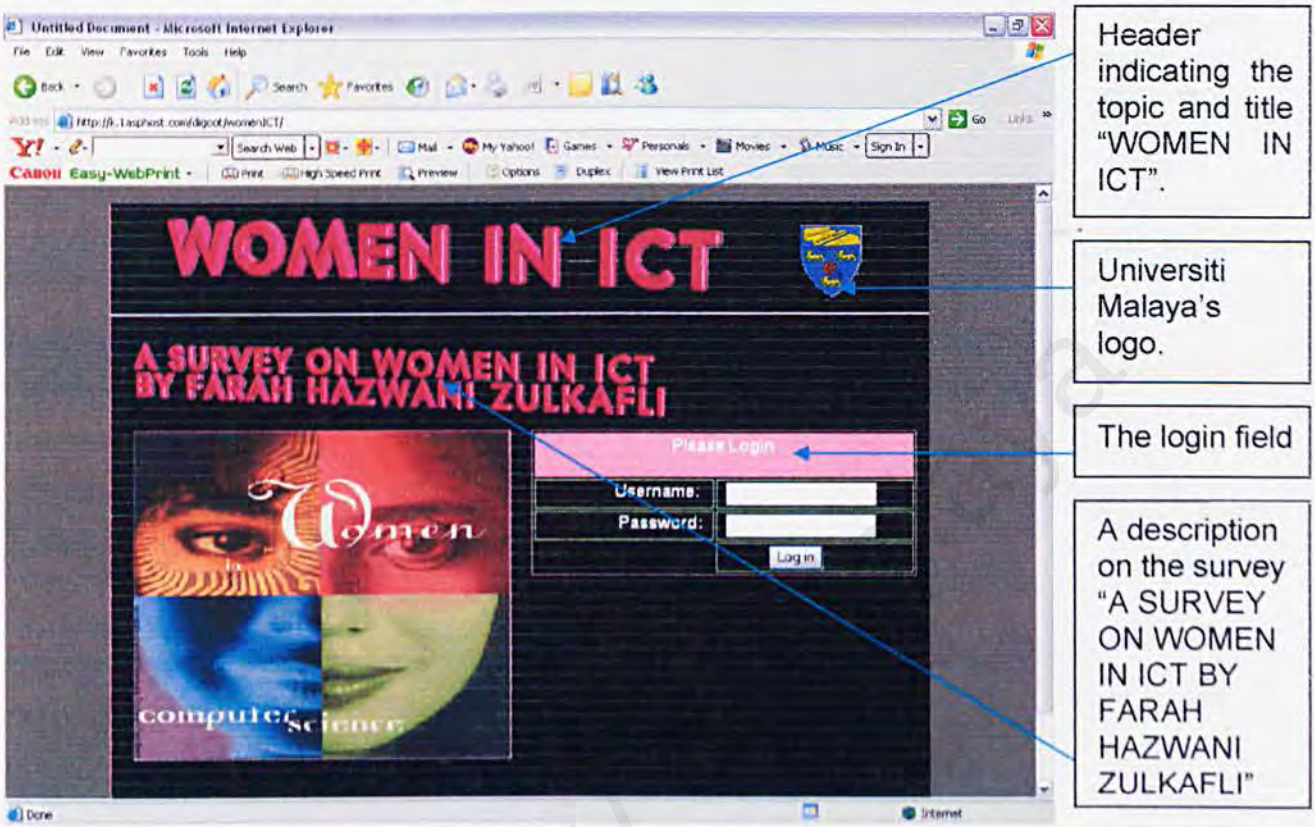


Figure 4.2 Web design 1

The big header Women in ICT indicates the topic and title of the website and the survey. The sub header available is telling the user that this website represents a survey on Women in ICT done by the author Farah Hazwani Zulkafli. The picture is a graphic display with a woman's picture and on the right side would be the login field.

In figure 4.3 the users can view the survey questions and answer the survey with the provided answers just by clicking on one of the radio buttons.

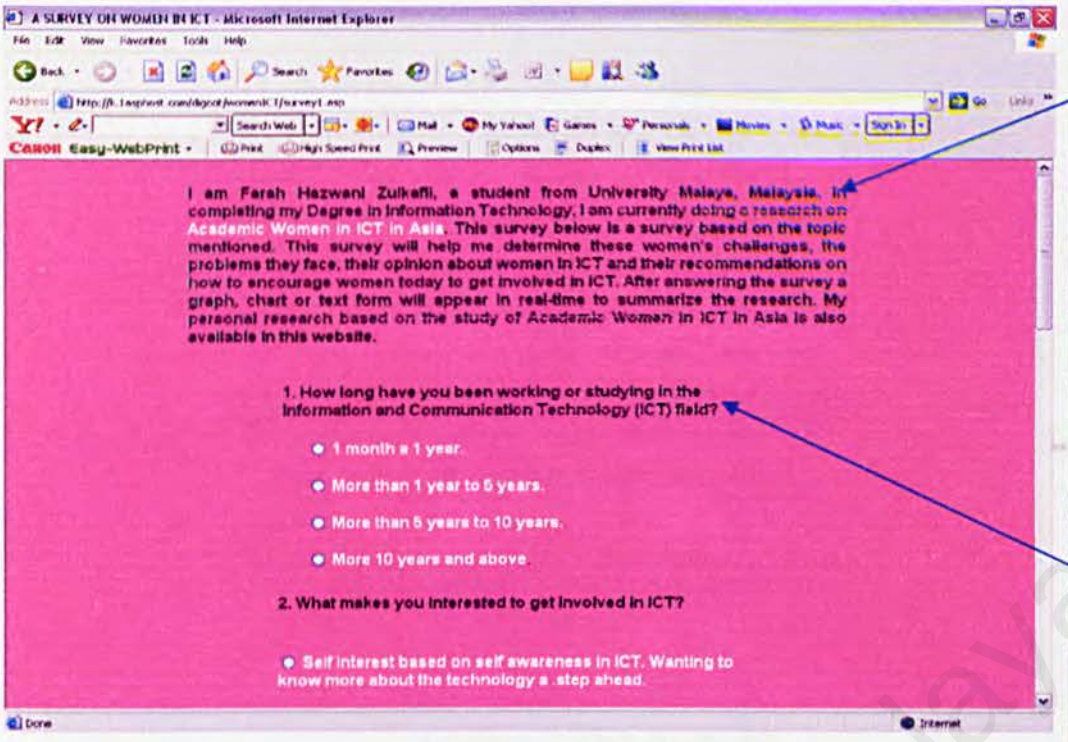


Figure 4.3 Web design 2

Preceding the survey questions would be a brief explanation about the survey and an introduction about the author's education background.

The questions will be in black color and is numbered accordingly.

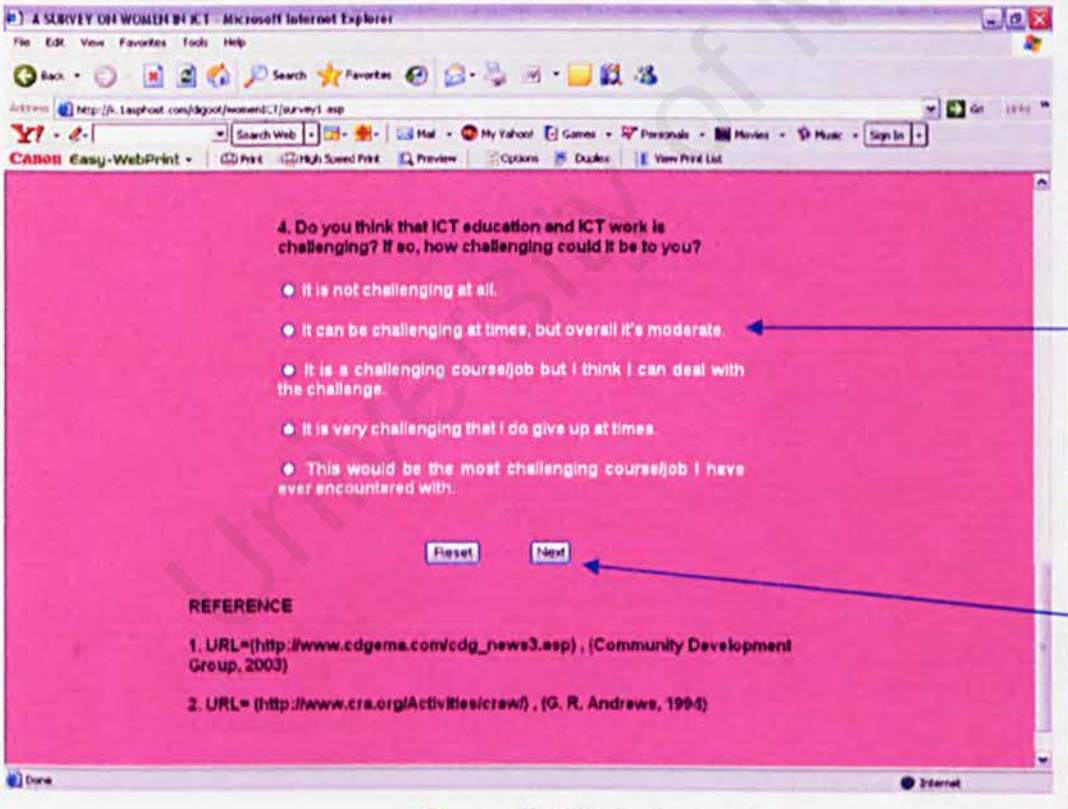
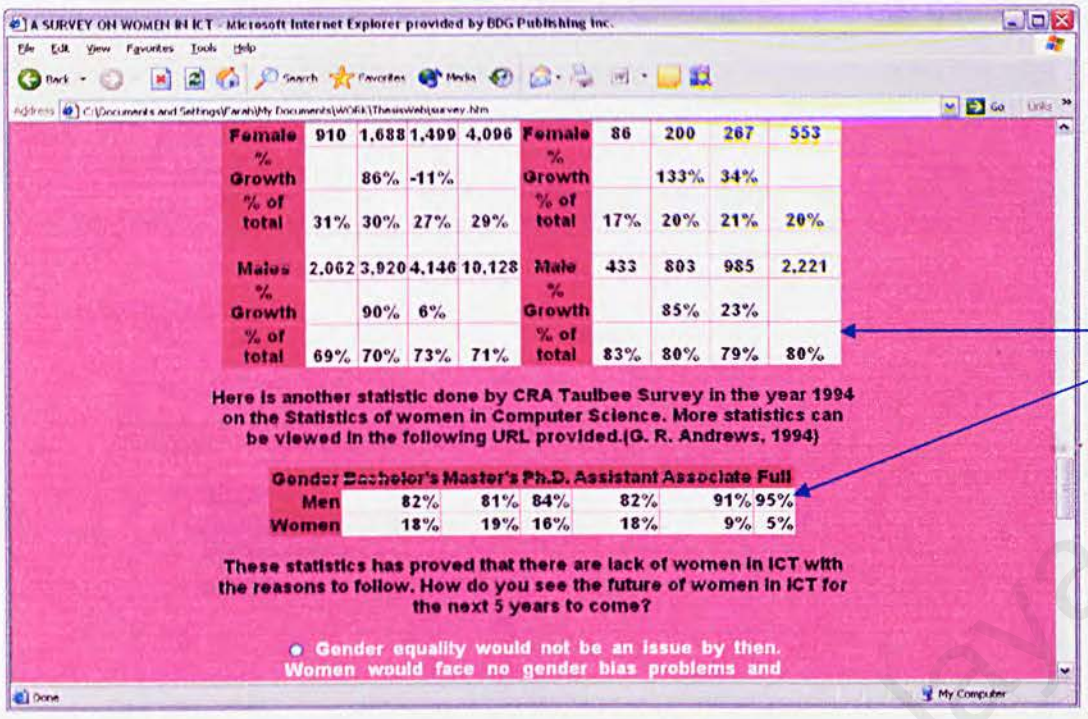


Figure 4.4 Web design 3

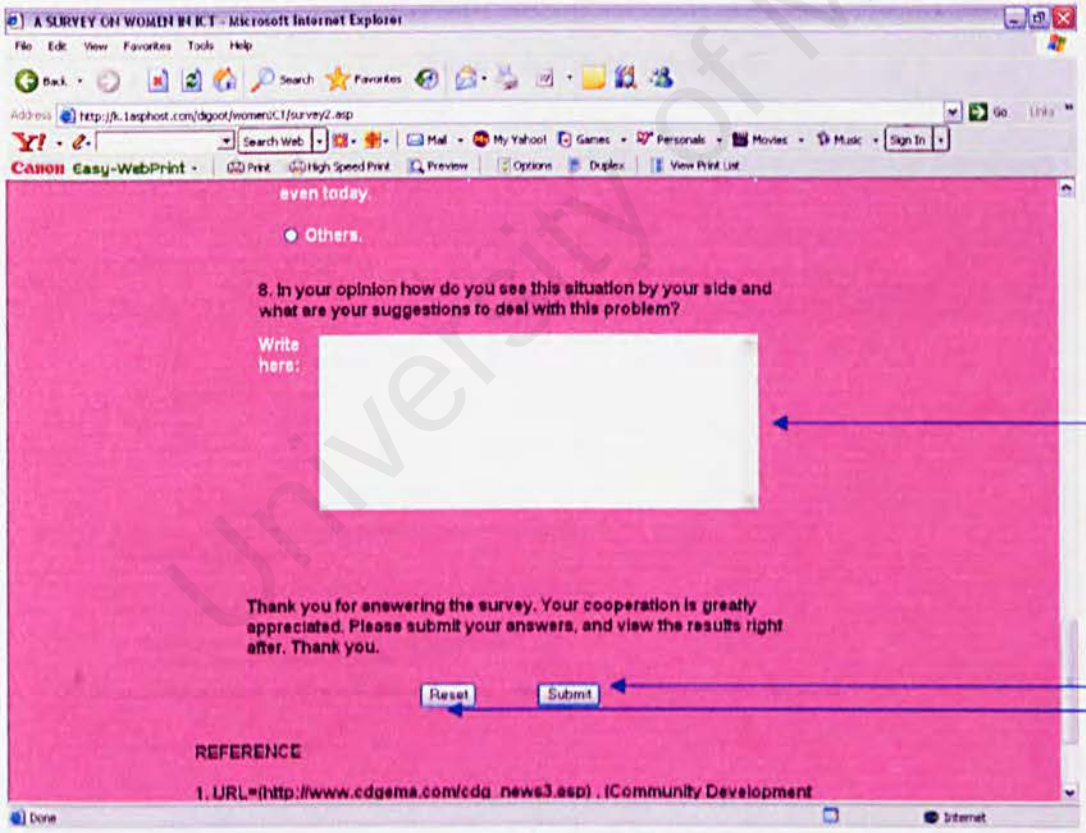
The answers are white in color with a radio button preceding them for the users to click by choice.

The button 'Next' to the next page to answer the other 4 questions and 'Reset' to reset the answers



Some of the questions have a few tables of statistics to support the facts available for the users to view.

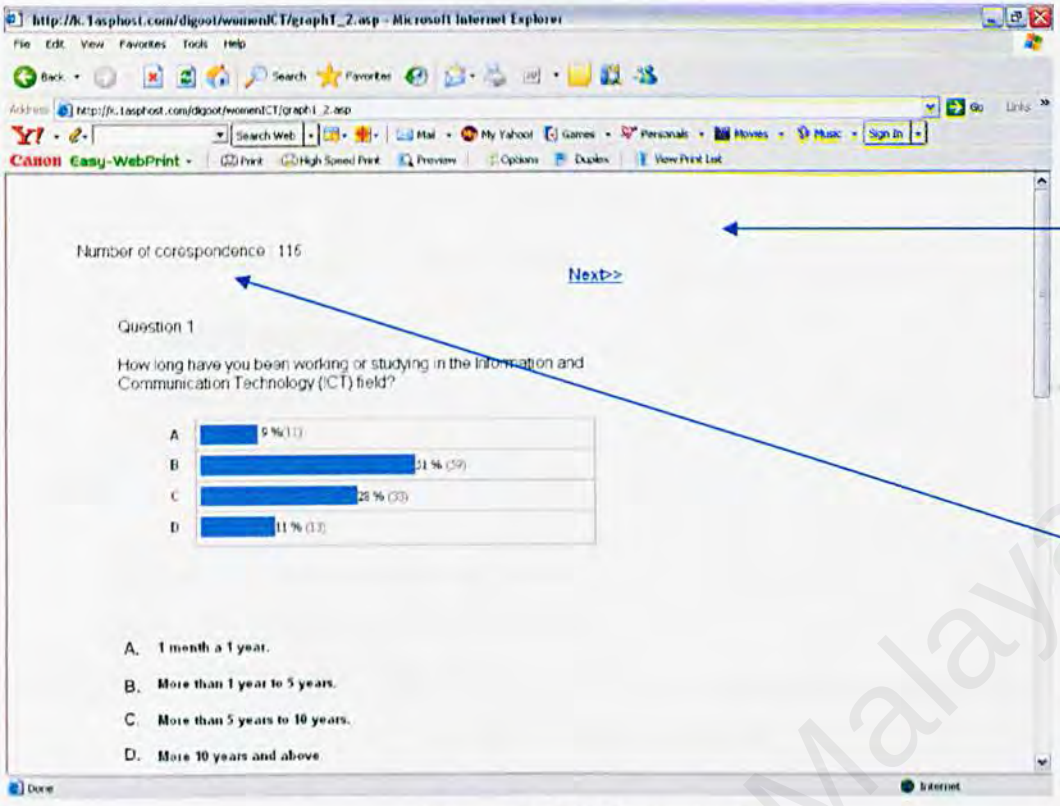
Figure 4.5 Web design 4



The last question, questions number 8 enables the user to give opinions and suggestions that can be written down in this available textbox.

The button 'Submit' will enable the user to submit their answers to view the results and the button 'Reset' will let the users clear their answers

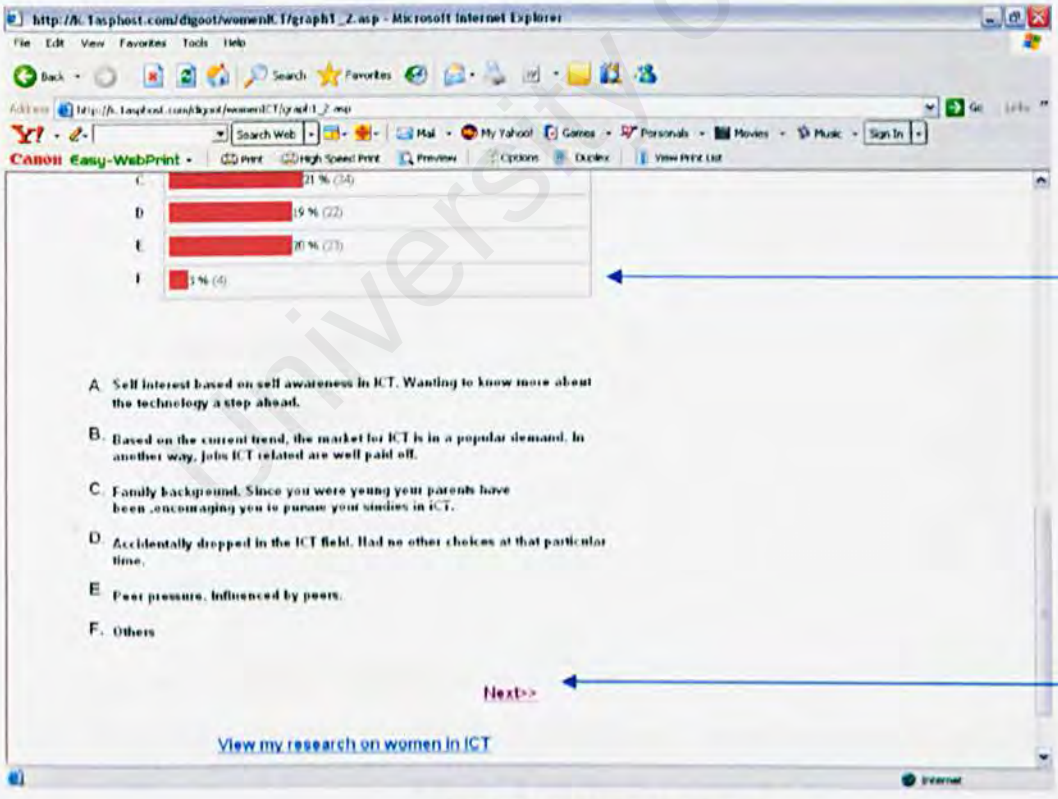
Figure 4.6 Web design 5



This would be the first graph page that would let users view the results on latest survey analysis.

The number of users who have answered the survey so far

Figure 4.7 Web design 6



The graph per question showing how many users answered a, b, c or d. calculation in percentage is also available

The link 'Next>>' will lead the users to the next page of the graph page for other questions.

Figure 4.8 Web design 7

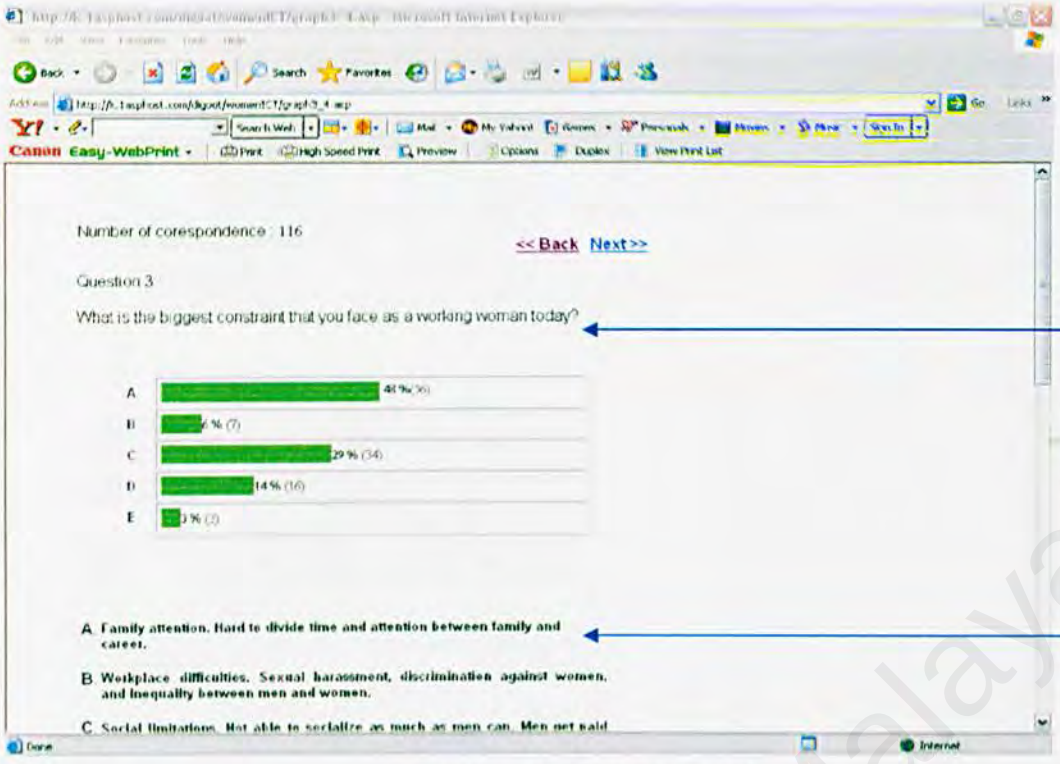


Figure 4.9 Web design 8

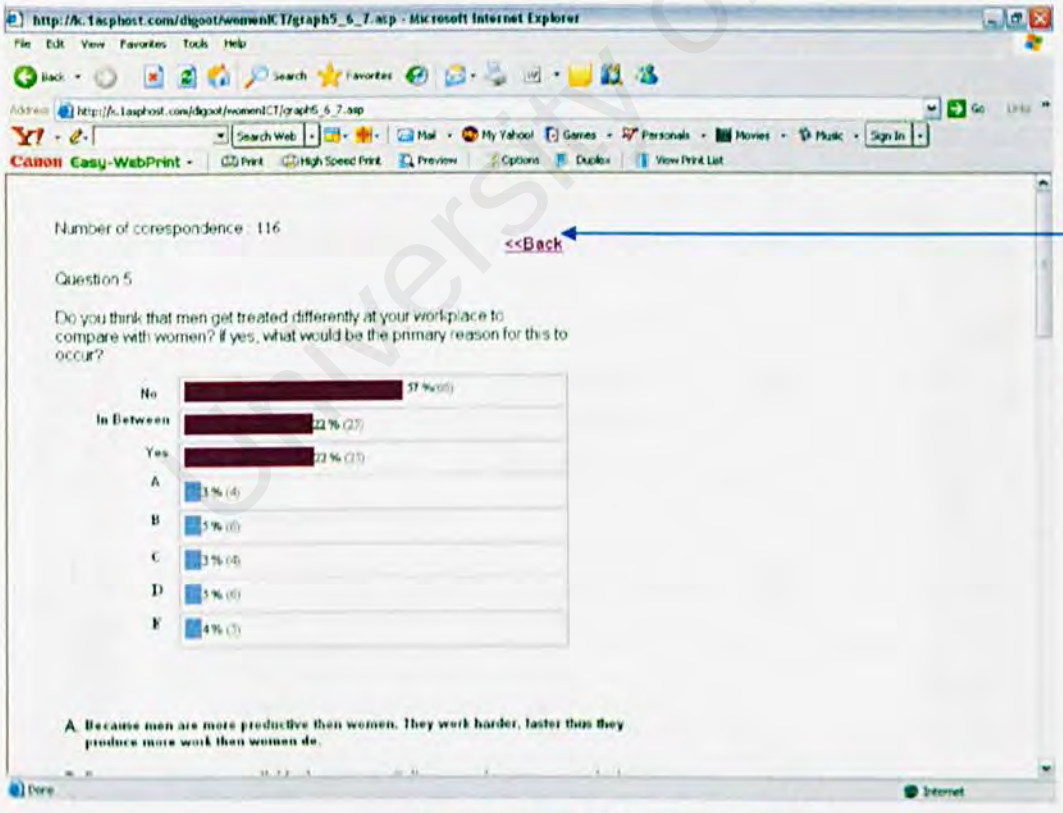
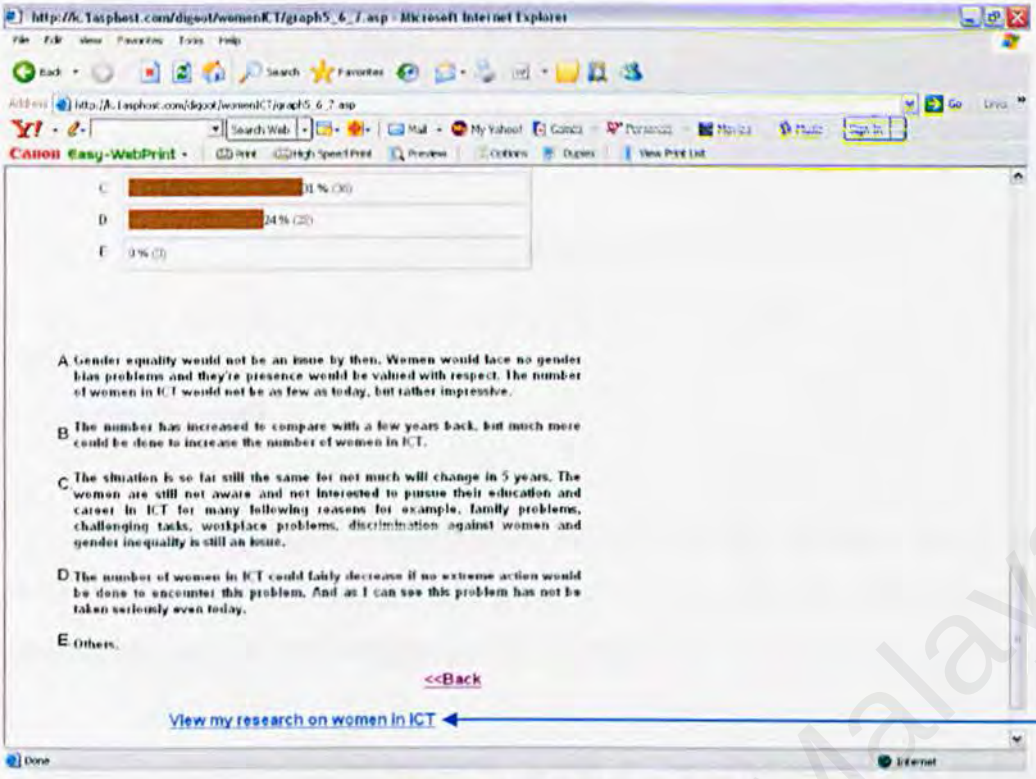
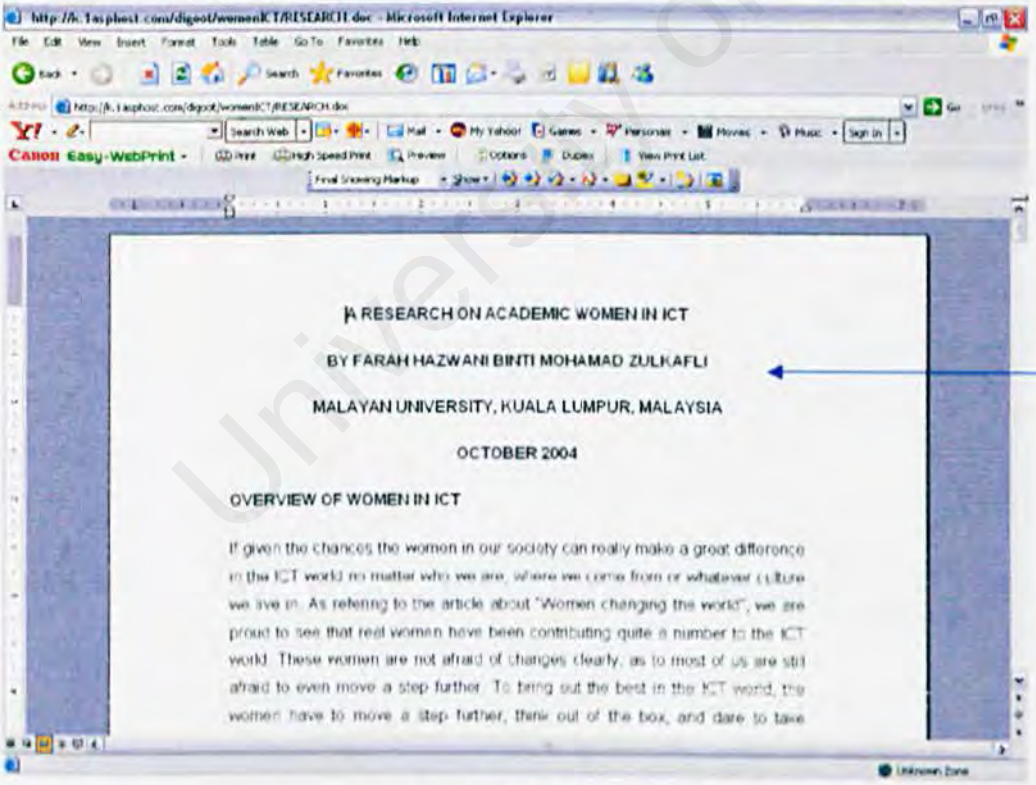


Figure 4.10 Web design 9



The link 'View my research on women in ICT is available at the end of each graph page to enable the users to view the author's personal research on the intended topic.

Figure 4.11 Web design 10



By clicking the link to 'View my research on women in ICT' the users would get to view this research page in Microsoft Word format.

Figure 4.12 Web design 11

CHAPTER V

SYSTEM IMPLEMENTATION

5.1 INTODUCTION

Implementation is a phase or process of translating the detailed design modules for the system function requirement into program codes. It is the delivery of the system into production, which means day-to-day operation.

The trigger for system implementation phase is the approval of the technical design specifications resulting from the design phase which is previously done. Given the design specifications, the Academic Women in ICT survey system can be constructed and be tested its components for that design. Eventually, a functional system will be built which initially involves installing proposed development tool. The functional system can then be implemented or delivered as an operational system.

5.2 PLATFORM DEVELOPMENT

5.2.1 OPERATING SYSTEM

Microsoft Window XP Professional was used as the operating system in order to develop the Academic Women in ICT survey system. Besides it being user-friendly, it also provides a window based environment, it most likely to be used common to almost everyone.

5.2.2 WEB SERVER

During the design phase, the web server that was chosen for developing the system is the Internet Information Server (IIS). The IIS web server was chosen for its compatibility with ASP programming.

5.2.3 DATABASE

Microsoft Access was used to support the system figuring that the system developed is a small scale system. A database named 'thesis' was created for the Academic Women in ICT survey system. Only two tables were required for the survey system. The first table 'Acc' is used to store the username and password that is required for login before answering the survey questions. The next table 'Question' is used to store all the answers retrieved from the survey.

5.3 DEVELOPMENT ENVIRONMENT

Development environment plays a major role in determining the speed of developing the system. Using the suitable hardware and software will not only help to speed up the system development but also determine the success of the project. The final list of the hardware and software tools used to develop the entire survey system is listed below.

5.3.1 HARDWARE DEVELOPMENT REQUIRED

The hardware configured for the development environment is the underlying element of the whole system. Below is listed the hardware specifications that have been used for the Academic Women in ICT survey system.

HARDWARE	SPECIFICATIONS
Microprocessor	2.6 GHz Pentium 4
RAM	256 Mb
Hard Disk	60.0 Mb
Monitor	15 inch color, 1024 x 728 resolution
Input Device	Mouse, Keyboard
Peripheral	Other Standard Desktop PC Components

Table 5.1 Hardware Development

5.3.2 SOFTWARE DEVELOPMENT ENVIRONMENT

Table below depicts the software used to develop the system.

SOFTWARE	PURPOSE	DESCRIPTION
Microsoft Windows XP Professional	System Requirement	Operating System (OS)
Internet Information Server (IIS)	System Requirement	Web Server Host
Microsoft Access	System Database	Database Storage and Data Manipulation
Macromedia Dreamweaver MX 2004	System Development	Development Tools for coding the web pages
ASP VbScript Language	System Development	Programming Language to code web pages
Hyper Text Markup Language	System Development	Design the web pages
Internet Explore 6.0	System Development	Web Browser for viewing the web pages
Microsoft Word XP	Documentation	Design and writing Report Documentation

Table 5.2 Software Tools

5.4 PROGRAM DEVELOPMENT PROCESS

5.4.1 CODING APPROACH

Coding the program is the process of writing the program instructions that implement the program design which translate the design specifications into a machine-readable format. It is an iterative process whereby it is done until the programmer obtains the desired results. If design is performed in a detailed manner, coding can be accomplished mechanically.

There are two types of coding approach, which is top-down and the other one is bottom-up. The bottom-up coding is based on coding some complete lower level modules and leaving the high level modules merely as skeletons that are used to call the lower modules, whereas the top-down approach is the reverse.

For this system, coding is done with the bottom-up approach. The advantages of this approach are: testing can be carried out on some of the functions as soon as it is completed, and critical functions can be coded first to test their efficiency.

5.4.2 CODING TOOLS (SCRIPTING LANGUAGE)

To implement the design the program must be written. The way the code is written must be in a way that is understandable not only to the programmer when revisited it for the testing, but also to others as the system evolves over time. Codes are formatted to enhance understanding. Spacing or line brake in between different section of the codes will enhance readability too.

This system is mainly developed using ASP (Active Sever Pages) VbScript and HTML. A brief explanation regarding these scripting languages will be present as below.

5.4.2.1 HYPER TEXT MARKUP LANGUAGE (HTML)

HTML is a markup language that allows text and documents to be displayed in any different platform development. As the survey system is automated, it is a web based application. Basically, all the HTML coding are normally delimited by the <BODY>.....</BODY> tags. The skeleton for every HTML pages for the survey system can be found on the interface coding.

```
<table width="800" border="0" align="center" cellpadding="0" cellspacing="0" bgcolor="#000000"
style="BORDER-RIGHT: #ff99cc 1px solid; BORDER-TOP: #ff99cc 1px solid; BORDER-LEFT:
#ff99cc 1px solid; BORDER-BOTTOM: #ff99cc 1px solid">
 <!--DWLayoutTable-->
 <tr>
  <td height="122" colspan="8" valign="top"><table width="100%" border="0" cellpadding="0"
cellspacing="0">
    <!--DWLayoutTable-->
    <tr>
     <td width="657" height="98" align="center" valign="center"><img src="header3d.gif"
width="543" height="74"></td>
     <td width="147" valign="top"><img src="um.bmp" width="99" height="98"></td>
    </tr>
    <tr>
     <td height="24" colspan="2" valign="top"><hr></td>
    </tr>
  </table>
```

5.4.2.2 ASP (ACTIVE SERVER PAGES) VBSCRIPT

An ASP VbScript is primarily a scripting environment. It is a powerful server-based technology from Microsoft, designed to create dynamic and interactive pages. ASP programming is found in every page of the survey system.

```
<%@LANGUAGE="VBSCRIPT" CODEPAGE="1252"%>
<!--#include file="../Connections/womenICT.asp" -->

<%
question_1= request.QueryString("question_1")
question_2 = request.QueryString("question_2")
question_3 = request.QueryString("question_3")
question_4 = request.QueryString("question_4")
'question_5 =request.QueryString("question_5")
question_5 = trim(Request.Form("question_5"))
question_5_sub = trim(Request.Form("question_5_sub"))
question_6 = trim(Request.Form("question_6"))
question_7 = trim(Request.Form("question_7"))
question_8 = trim(Request.Form("question_8"))


if question_5="" then %>
<!-- #Include File="field_empty3.asp" -->
<%response.End
end if
if question_5="yes" then
if question_5_sub="" then %>
<!-- #Include File="field_empty3.asp" -->
<%response.End
end if
end if
if question_6="" then %>
<!-- #Include File="field_empty3.asp" -->
<%response.End
end if


if question_7="" then %>
<!-- #Include File="field_empty3.asp" -->
<%response.End
end if

Dim rsAdd_a, rsAdd_b, rsAdd_c, rsAdd_d, strSQL_a, strSQL_b, strSQL_c, strSQL_d


Set rsAdd_a = Server.CreateObject("ADODB.Recordset")
strSQL_a = "SELECT * FROM question;"

'Set the cursor type we are using so we can navigate through the recordset
rsAdd_a.CursorType = 2

'Set the lock type so that the record is locked by ADO when it is updated
rsAdd_a.LockType = 3

'Open the recordset with the SQL query
rsAdd_a.Open strSQL_a, adoCon

.....
```

5.5 SUMMARY

The implementation of the Academic Women in ICT survey system focuses on various aspects which mainly require translating the design phase into program codes in order to develop the functionality of the system. Hence the selection of the development platform which ranges from the operating system till the programming platform chosen has to be up most suitable to the requirement of the system which is ASP VbScript, Microsoft Access, HTML, and Macromedia Dreamweaver. The coding approach focuses on giving the best reliability and performance of the system and the designs of the algorithm are important. This is to ensure the stability of the system and minimizing the problem occurred in the future enhancement.

CHAPTER VI

SYSTEM TESTING

6.1 INTRODUCTION

Developing a quality system with zero errors is the most essential goal for any software developer and software testing was the first software quality assurance tool, applied to control the software product's quality before its shipment or installation for use. Testing is clearly a necessary area for software validation. Typically, prior to coding the program, design reviews and code inspections are done as part of the static testing effort. As it uncover different classes of errors in a minimum amount of time and with a minimum amount of effort.

The purposes of having testing performed for the Academic Women in ICT survey system are stated below:

- To identify and reveal as many errors as possible in the graph page mainly.
- To bring the tested software, after correction of the identified errors and retesting, to an acceptable level of quality.
- To perform the required tests efficiently and effectively, within budgetary and scheduling limitations.

6.2 TESTING STRATEGY

For this small scale system, the main part of testing is done on the real-time generated graph page that includes the calculation percentage, real-time generated graph, number of users who answered the survey questions. The testing method used on the survey system would be unit testing, integration testing (top-down testing), system testing (functional and performance testing).

6.2.1 UNIT TESTING

Unit testing is the basic testing essential for any software product and is extremely time-consuming. It involves the tests on each function module independently within a limited scope and then furthermore with a wider one when the software product reached its peak performance.

For the Academic Women in ICT survey system, unit testing was done extensively on the graph functions. It involves testing each small working function that are number of users who answered so far, number of users who answered which answer (a, b, c, d) and the calculation of the graph percentage. Firstly, the function that counts the number of users will be tested first. The next function tested would be the number of users which answer (a, b, c, d). Lastly, the function with the calculation of the graph percentage will be tested.

6.2.2 INTEGRATION TESTING

The integration testing method is done by integrating those functions mentioned above which are the calculation percentage, real-time generated graph, and number of users who answered the survey questions. The Top-Down Integration testing approach has been used to test the whole functions in the graph page.

The approach applied in testing the system is referred as Top-Down Integration where integration will start at the highest level of main program or module or sub modules are gradually added until the bottom is reached.

6.2.3 SYSTEM TESTING

System testing is applied to ensure that the system fulfils the user requirements. System testing is different compare to other testing strategies which its goal is to ensure that the system execute exactly to what the users want. The Academic Women in ICT survey system has gone through the system testing which involves functional testing and performance testing.

6.2.3.1 FUNCTIONAL TESTING

System testing begins with function testing. It is based on the system functional requirements, and to ensure that all the requirements are met. An effective functional testing is to be able detect system bugs and errors with high possibilities.

For example, the graph page for the Academic Women in ICT survey system can be tested by examining the way on how the system generates the graph with no fault and error.

6.2.3.2 PERFORMANCE TESTING

Performance testing is performed to test run-time performance of the survey system. Besides testing on its efficiency, it also tests on the system's non-functional requirement which includes:

- Security test (To ensure that the system fulfils the security requirement)
- Timing test (To ensure the response time of the system is acceptable)
- Volume test (To ensure all the fields can accommodate the expected data)
- Recovery Test (Recovery test address responses to the presence of faults or loss of data, power, devices or services)
- Stress Test (To determine whether a program fulfill the requirements defined for it. It is equally important to make sure that program works accordingly, even under extreme condition)
- Human factor test (Simple forms and displays related message to determine user friendliness)
- Browser independence tests (To ensure that the application works properly in the web browser)

6.2.4 ANALYSIS OF RESULTS

The objective of conducting this survey is to gather comments and feedback regarding pre-test Academic Women in ICT survey system. Besides that, it is also to gather new ideas and opinions on improving the system's performance as well to meet the level of the user's knowledge.

The survey was conducted among 10 people (pilot testing) who did run the pretest of the survey system. From the survey, it shows that 80% of the user's opinion of the interface is very good in terms of the color combination, image, ease of eyes and also user-friendly. However, the rest of them agreed that the system would need some improvement on its layout. They suggested that the information should be broken

down into more pages to provide more clarity while reading. Action was taken due to this result where the system's layout was broken down into more pages to provide more clarity for the readers.

6.3 SUMMARY

System testing is obviously an important phase as its main purpose is to analyze and ensure that the software program is executed correctly and confirms to the requirement specified. Despite of detecting errors such as bugs, it also helps to evaluate the features of the software product.

It is understood that there are different type of methods in performing testing and for the Academic Women in ICT survey system, the testing strategies such as the unit testing, integration testing, and system testing and performance testing are performed.

Based on testing phases, it is easier to ensure the system qualities and strength where fault and error can be discovered.

CHAPTER VII

SYSTEM EVALUATION

7.1 INTRODUCTION

After having gone through the implementation and testing phase, the final phase of developing this system is the evaluation stage. In this phase, system evaluation involves determining the problems or difficulties, which arise during and after the program coding phase, recognizing the system strengths and weaknesses, and finally drafting out the system limitations and also its future enhancements.

7.2 PROBLEMS AND SOLUTIONS

There were many problems faced during the completion of the survey system. Only the main problems are highlighted here. The first main problem faced during the implementation of the system was the graph did not work as well as it expected there were some errors in terms of the calculation (the percentage). Fixed the error by debugging the code and run it through a whole lot of data. The second problem faced was during setting up the server to enable open source from this server (direct access from the whole internet). The solution was by using free web hosting. The system was eventually hosted through 1asphost.com. The third problem was during the pre-viva, there were many positive comments on how to make the system to seem more appealing. Solved the problem by changing the layout and tried best to follow the comments accordingly. Here is the most common problem that is usually faced by most programmers including the author.

7.2.1 DIFFICULTIES IN CHOOSING A DEVELOPMENT TECHNOLOGY, PROGRAMMING LANGUAGE AND TOOLS

There are many software tools available to develop a web-based database system currently as stated in the earlier chapters. Choosing a suitable technology and tool was a critical process as all tools have their strengths and weaknesses. In addition, the availability of the required tools for development is also a major consideration.

In order to solve this problem, advises and views were sought from project supervisor, course mates and even seniors engaging in similar project. Furthermore, surfing the Internet and visiting the library helped to clarify some doubts.

7.3 SYSTEM STRENGTHS

This survey system is evaluated systematically as followed:

- The survey system is able to generate real-time graph results on the intended topic based on the calculated results.
- The system is able to cater for a worldwide scope. This would be specifically women all over the world could participate.
- The real-time generated graph (results) could be viewed clearly by number of people answered or by percentage.
- A clear graph generated per question makes it easier to view data.
- The system conveys a simple yet appealing layout.
- To be able to access the system in terms of viewing the question page and submitting the answers, a username and password is intended for security purpose. This means that only the intended recipients (from the desired background) could be able to answer.
- The recipients are guided clearly per question with clear and available answers.
- The users are able to view personal research done by the author.

7.4 SYSTEM LIMITATIONS

Due to time and knowledge limitation, there are a few system constraints in this survey system, some of them are discussed below:

- The security provided might not be tight enough. The recipients could easily give away the password to other people from many different backgrounds.
- The results can only be viewed in a bar chart graph. There are no particular options if the users would want to view the real-time generated graph in pie charts form or other form of graphs.
- The results (bar chart) can only be viewed one graph per question. It cannot be viewed as a whole summary or in other words, one graph that would be able to represent the whole survey report analysis.
- The graph results is not sorted out or not known geographically.

7.5 FUTURE ENHANCEMENTS

System development is a dynamic process and changes must be expected. For this survey system, there can still have some improvements. Here are some suggestions for future enhancements to increase the whole survey system:

- Provide tighter security to the system. Ask the recipients to enter their email address during the survey. This would enable the researcher to track back the genuine recipients. If the recipient tries to answer the survey for the second time (redundant data) a warning sign might pop up so that the same recipient cannot submit the data twice or more.
- Options for viewing the real-time generated graph in pie charts or bar charts and many other forms would be available in real-time.
- To have an additional function at the last page that will provide a button that will allow the users to view a single graph generated real-time on the latest survey report analysis (as a whole in only one graph).
- Able to sort results according to country.

7.6 CONCLUSION (LEARNING OUTCOME)

So much have been learned through out the completion of this project. Here are some valuable learning outcomes that were gained along the way to point out. Gained the exposure and knowledge in ASP coding and academic women in ICT mainly. The overall scenario was very uplifting and motivating and makes the author more aware of the situation. Besides that, the author also gained exposure on online web surveys and generation of graph in real-time.

Some moral values that have been taken up along the way would be discipline overall, being on time and holding onto responsibilities.

CHAPTER VIII

SURVEY REPORT ANALYSIS

8.1 INTRODUCTION

As the facts have resided, the number of academic women in ICT has been indicated to be doing very low to compare with the opposite gender. With all the interesting scenarios where gender bias is still an issue, women all over the world having lack of interest in ICT, ICT is still seen as a technical job, unfeminine and nerdy, plus many other factors implying why women are so few in ICT.

Based on the survey done on a sample of 500 academic women in ICT through out a few countries in Asia namely Malaysia, Thailand, Singapore, Australia, Hong Kong, Pakistan, Indonesia, and Bangladesh only 116 of them managed to participate in the survey by answering the survey questions. Out of the 116 sample of women, the majority of them have been involved in ICT for more than one year to five years. The time line given for the data collection is from early January 2005 to end of February 2005. The graph below represents the summary on the whole survey report analysis.

8.2 SUMMARY OF ANALYSIS IN GRAPH FORM

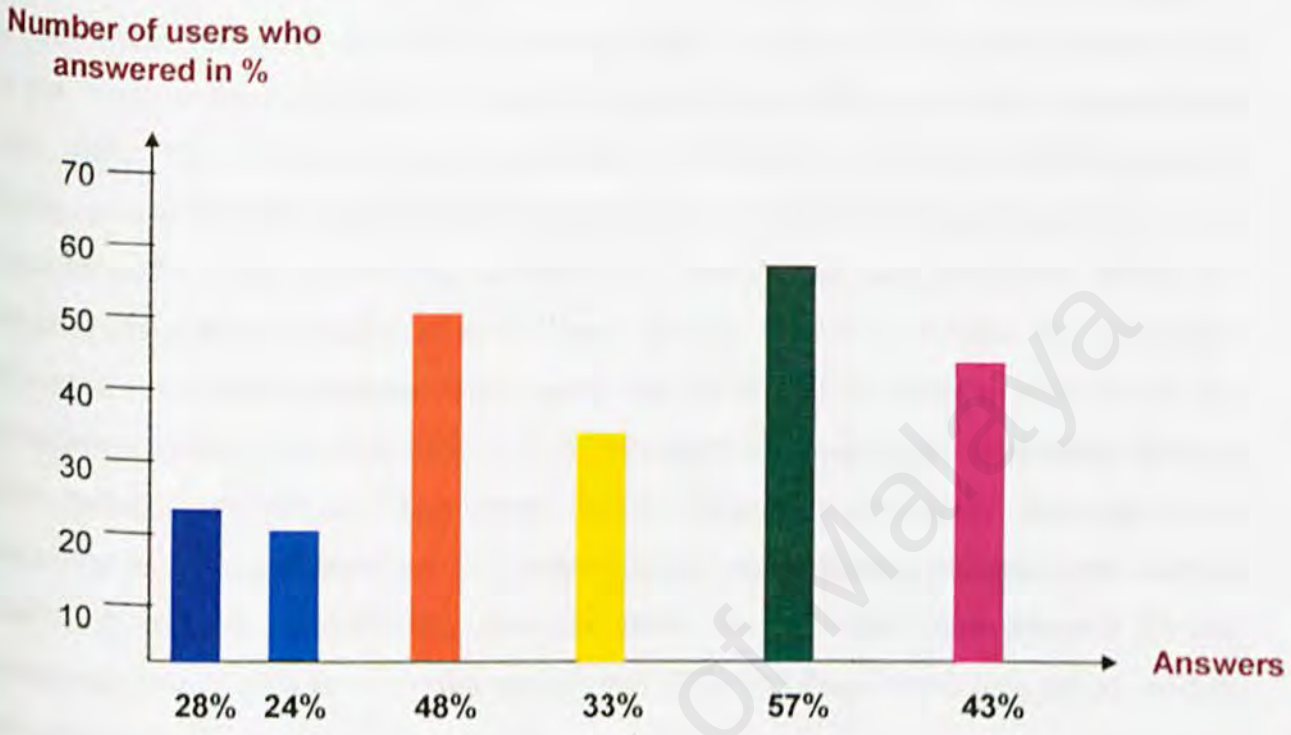


Figure 8.1 Summary analysis

8.3 SUMMARY OF ANALYSIS IN REPORT FORM

From the survey results, the core reason for women getting interested in ICT would be their own self interest based on self awareness in ICT or in other words, wanting to know more about the technology a step ahead. The second highest reason would be the family background factor. Since they were young their parents or family have been giving the encouragement to pursue studies in ICT. From the data above, it clearly shows that the academic women involved in ICT were interested in the first place by self interest and family background. Even though the population of women currently exceeds the population of men in this world, it makes no significant difference towards the number of academic women in ICT. In other words, to actually get women to be interested in ICT, it is important to create self awareness among them rather than forcing. The family factor plays an amazingly important role according to the data gathered. The upbringing of an individual actually does help in motivating oneself towards any directed path. In this case, the parents should encourage young girls to not scare away from ICT, and their upbringing could lead to self interest in ICT mainly.

Looking back on the earlier research on "Why Are There Few Women in ICT?" the main factors would be low self interest in ICT, interest in technical areas like ICT are low, and women are often afraid to pursue their education in ICT for the common myth that men dominates the ICT field and men could succeed even far compared to the opposite gender. These rising factors make clear sense if women today were raised up to scare away from technical areas, thus leading to having no interest in the field, and at the same time believing that only the opposite gender can perform well in those technical areas namely ICT. This theory only leads to one source, the family factor. Thus, it is believed that up to this point, family plays the important role on the girls self interest in ICT.

It is also indicated that from the survey results, the biggest constraint that these women face as a working women today would be family attention. They find it hard to divide their time and attention between their family and career. In most Asian countries, family should always remain as the main priority to women besides their

education and career. In the world today, modern women struggle to balance their career/education with their own family. Modern women today believe that their self career is as important as giving attention to their family. But still to most women in rural countries like India and Bangladesh, this issue is still a merely sensitive issue. Some women are forced not to go to work and remain playing the role of staying at home mothers. The world can never move forward if women are drawn back from even working in the first place. Having family attention being the biggest constraint for women today in having a balanced career life, this constraint is actually pretty hard to break through. Women constantly face challenges like religions and beliefs, cultural norms, gender bias and discrimination that will always be around and are quite hard to break through.

Majority of the women who answered the survey also indicated that the ICT field is seen as a challenging job/education field but overall they find it to be moderate. Most women are often scared to pursue their career/education in ICT for it is seen as a technical job that leads to the interpretation of it being so challenging. From the data collected, it has proven that these women who are involved in ICT believe that the course can be a challenging job but they find it quite moderate. Having this said, women today should be aware that ICT is not as hard as it seems. The common myth that ICT field is extremely technical and is only suitable for the male population should be non applicable by now.

Since the majority of academic women in ICT agreed that they find ICT as a challenging job but still find it moderate, this explains that even though ICT could be challenging but they can still handle the challenge even with having family attention as the biggest constraint. This actually proves that women in ICT today are actually capable of handling challenging situations even as working women or staying at home mothers. In conclusion, women today should try to strive for the best in whatever they do and believe that nothing is impossible. Negative thinking and perceptions towards ICT would not lead them anywhere and would do them no good.

Having gender bias being one of the main factors on why women are so few in ICT, the question on whether these academic women in ICT feels often discriminated by the other gender arises. The ICT field is often seen dominated by men mainly. The

thought of having men populating the workplace would surely scare of most women. Gender bias and discrimination would always come to pass in any kind of society. Having gender equality in any society would be impossible to reach at any kind of level. The majority agreed that they surprisingly do not get treated differently by men at their workplace whereas they pointed out that they have been treated with respect by the opposite gender and there is no sense of rejection to them. This interesting factor leads to the conclusion that in the academic field of ICT, women do not often be discriminated. Women all over the world should be aware of this situation for the common assumption that women often get discriminated at their workplace.

Talking about the future of academic women in ICT, majority of the women believe that the situation is so far still the same for not much will change in 5 years. The women are still not aware and not interested to pursue their education and career in ICT for many following reasons for example, family problems, challenging tasks, workplace problems, discrimination against women and gender inequality is still an issue.

In summary, the family still plays the important role in the upbringing of these young girls to create self interest in them and the main counterpart would be the women themselves. ICT should not be seen as a rigid technical area for most women found it to be a challenging course but generally moderate. As family attention being the biggest constraint primarily, modern women today should be able to adapt to constant changes that will need them to adapt in the working world yet still be available at home as mothers and spouses. Having proven that most women disagree that they often get discriminated by the opposite gender, this should open most eyes on how the workplace even being dominated by men is not a bad place after all. Talking about the future in 5 years to come, the situation on such few academic women in ICT could remain the same if no particular action is done.

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21. URL=(http://www.surveymonkey.com/Users/50167557/Surveys/28603166949/BED1358B-7C8C-4225-8CF2-8DF27C7475EA.asp?U=28603166949&DO_NOT_COPY_THIS_LINK), Preclick Photo,21
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APPENDIXES

APPENDIX 1
USER MANUAL

1.1 INTRODUCTION

This user manual is useful for users from different background to use the Academic Women in ICT survey system. This user manual consists of the guideline and example to help users to use the system in the correct way.

1.2 OBJECTIVE

The objective of this user manual is to enable the users to understand the Academic Women in ICT survey system

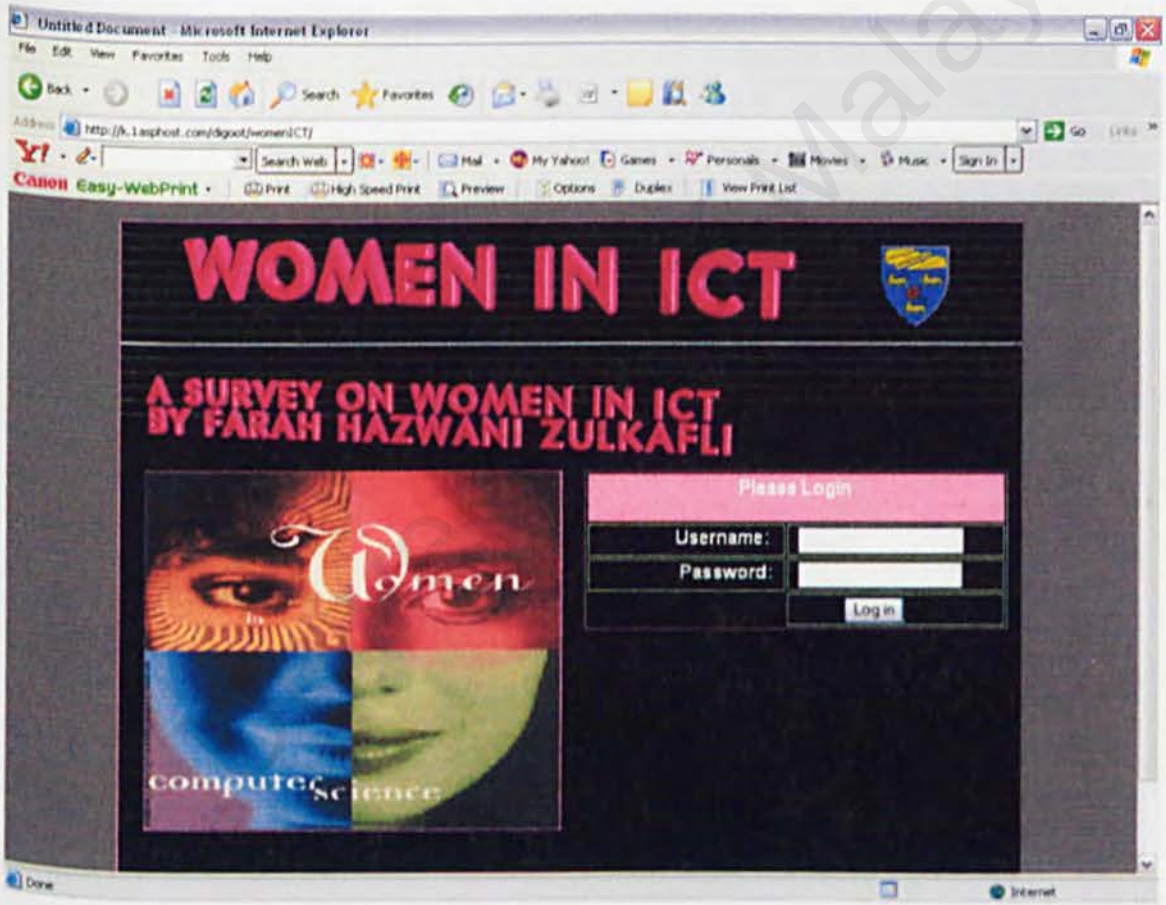
1.3 USERS GUIDE

This system was developed mainly based on a research done on the topic Academic Women in ICT in Asia. This online web survey basically contains questions that will be answered online by these academic women in ICT in Asia. After answering the survey questions, a graph will be generated in real-time that will display the latest statistics of the results that summarizes the research. The survey will determine these women's challenges, the problems they face, their opinion about women in ICT and their recommendations on how to encourage women today to get involved in ICT.

1.3.1 MAIN PAGE (INDEX)

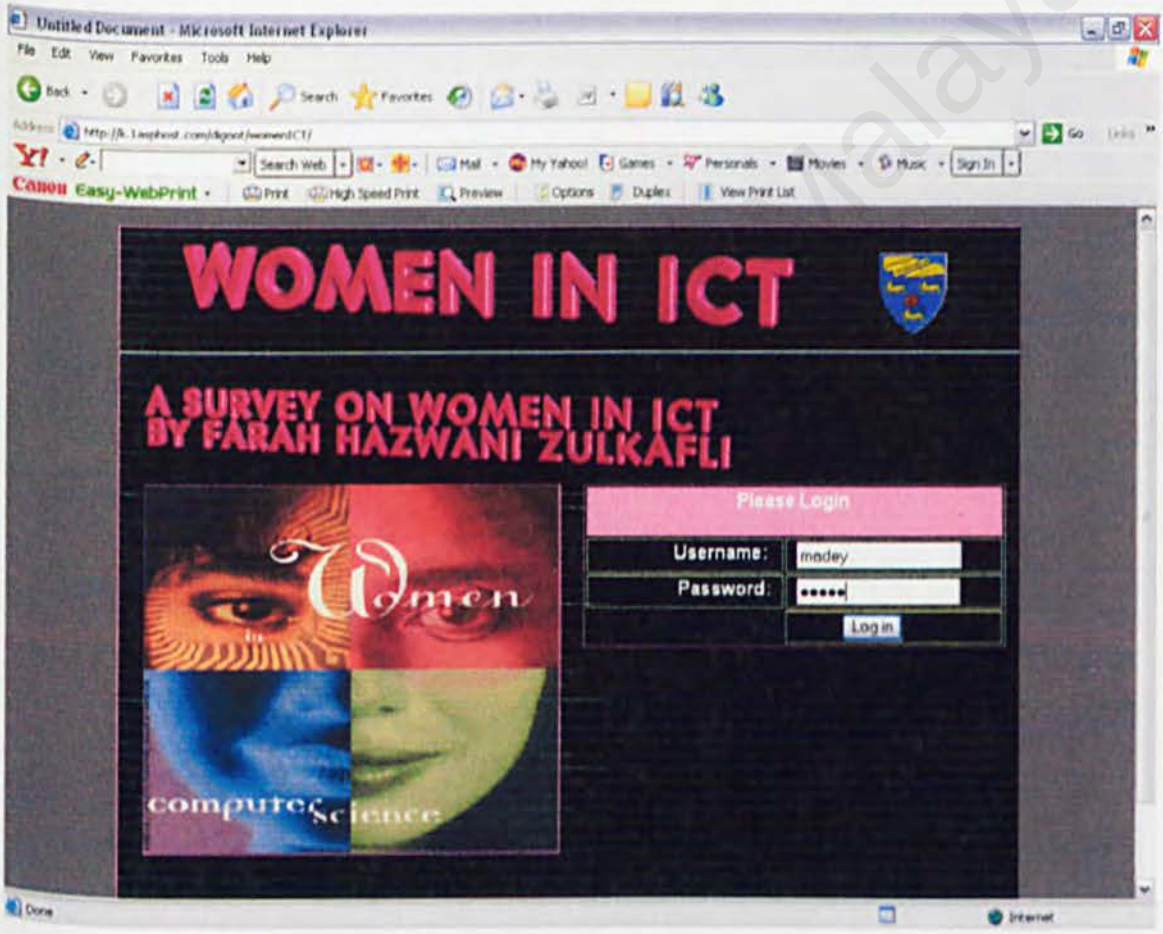
This would be the first page of the Academic Women in ICT in Asia survey system. The first page is basically a simple introduction to the survey where the user can view the header 'WOMEN IN ICT', Universiti Malaya's logo, sub header 'A SURVEY ON WOMEN IN ICT BY FARAH HAZWANI ZULKAFLI', a graphic display with a woman's picture, and lastly the login field.

The link for this page: k.1asphost.com/digoot/womenICT



The users need to fill in the required login field to enable them to view and answer the survey questions. This security measurement was done to make sure that the data gathered would be close to genuine and the report survey analysis would be nearly precise with getting the users from the appropriate background. The username is 'madey' and password 'madey' was used and passed out through email to all the intended recipients.

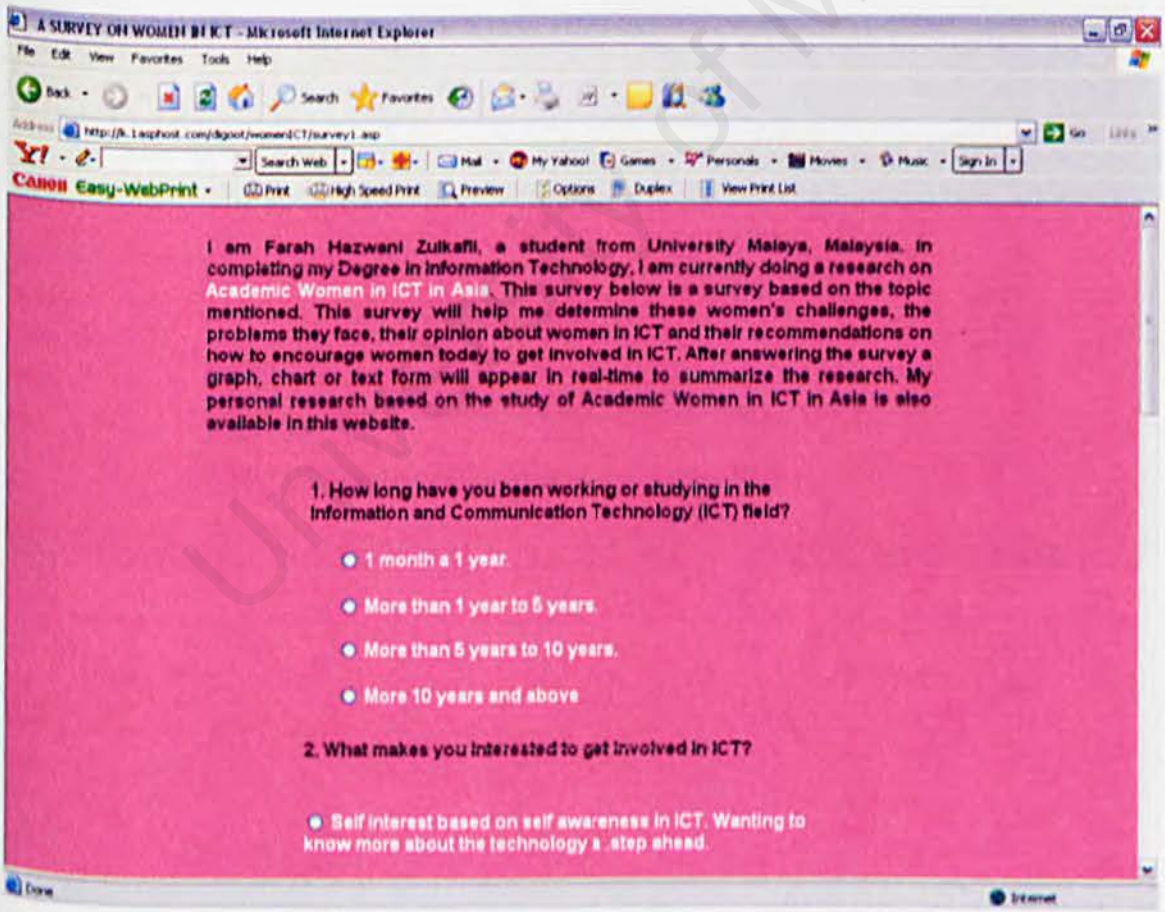
The link for this page: k.1asphost.com/digoot/womenICT



1.3.2 FIRST QUESTION PAGE

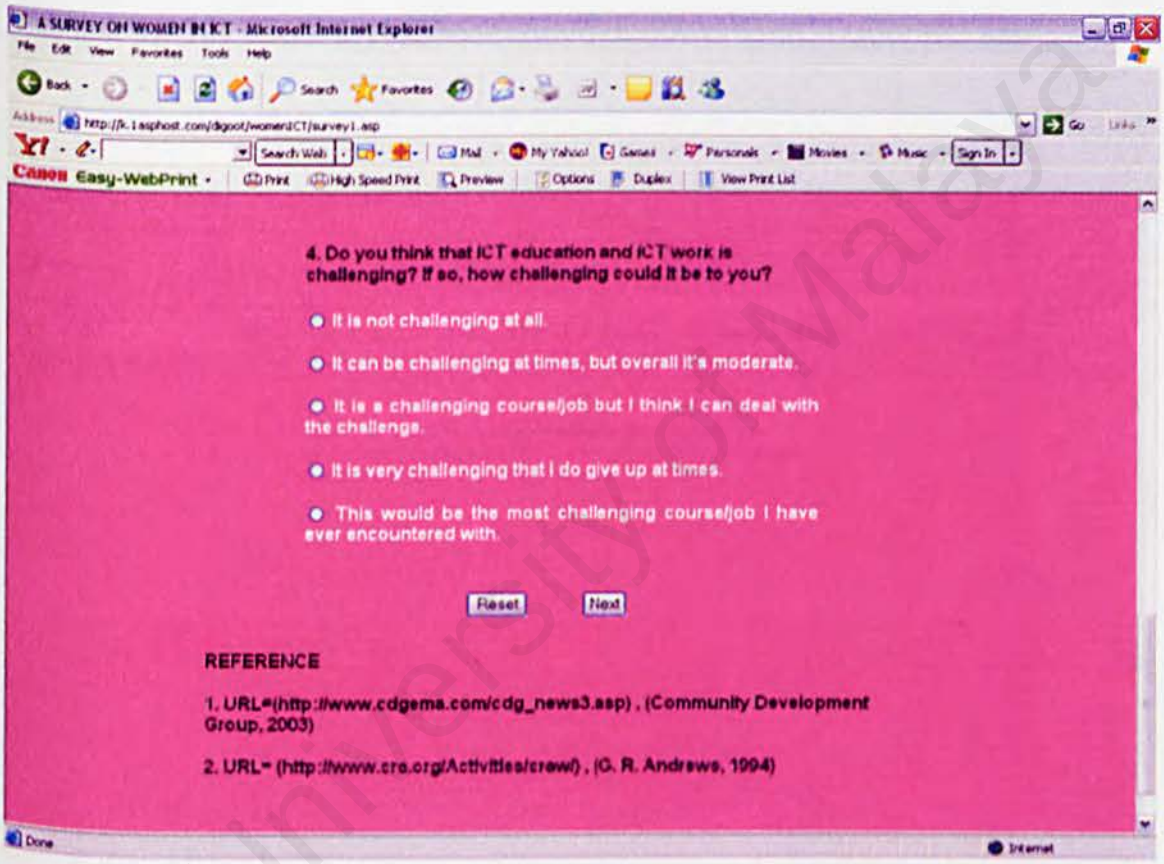
This page is the first page of the survey question page. Firstly, the users can read the description of the survey system, the author's background, the survey's objectives, and a brief description on how the system works. After reading the system's description the users can start answering the survey questions provided. There are exactly eight questions all together, the first four in the first page (this page) and the other four in the next page. The users can only choose one answer per question. Multiple answers are not allowed.

The link for this page: k.1asphost.com/digoot/womenICT/survey1.asp



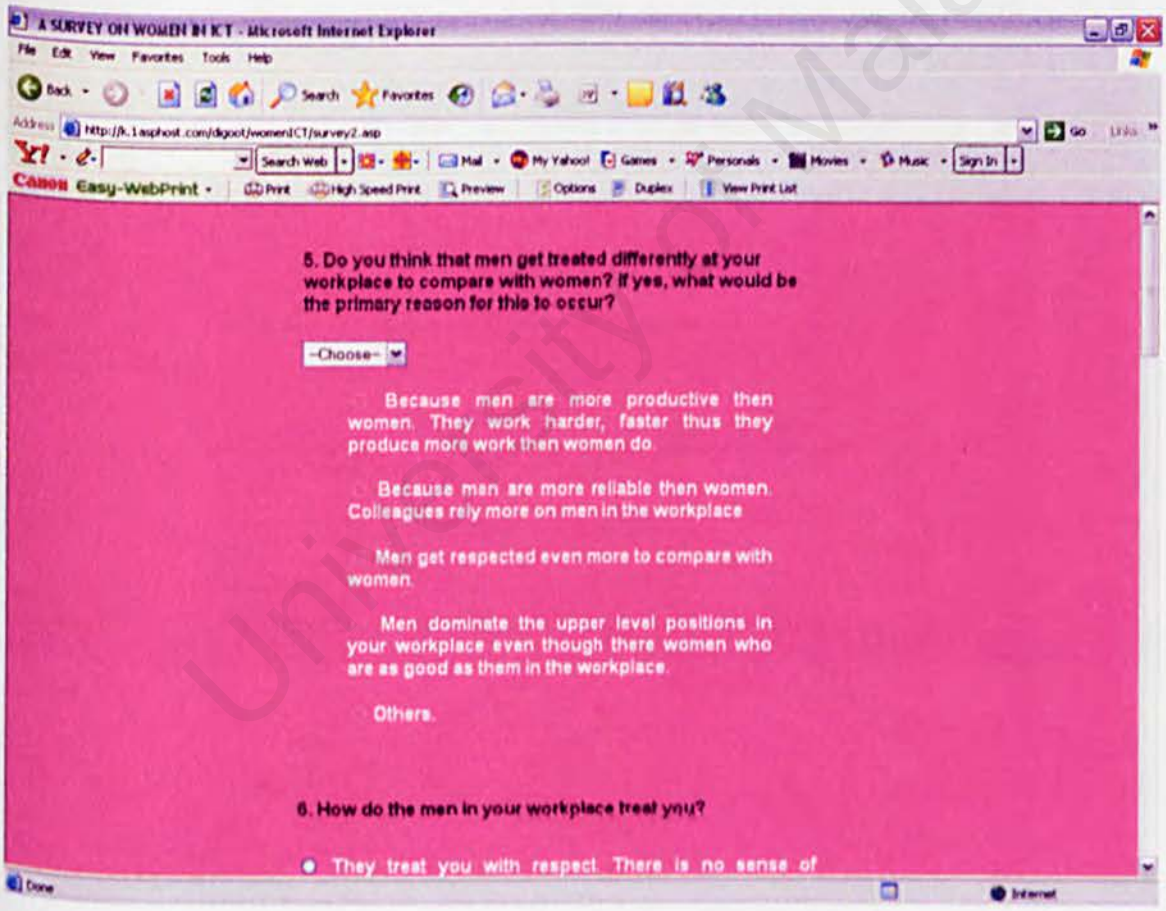
After answering all of the questions in the first survey question page the user can proceed to the next page to answer the rest of the questions by clicking the button 'Next'. The users can reset their answers by clicking the button 'Reset'. If the users have not answered all of the four questions in this page a warning error will prompt out and the users must answer all of the questions first to enable them to proceed.

The link for this page: k.1asphost.com/digoot/womenICT/survey1.asp



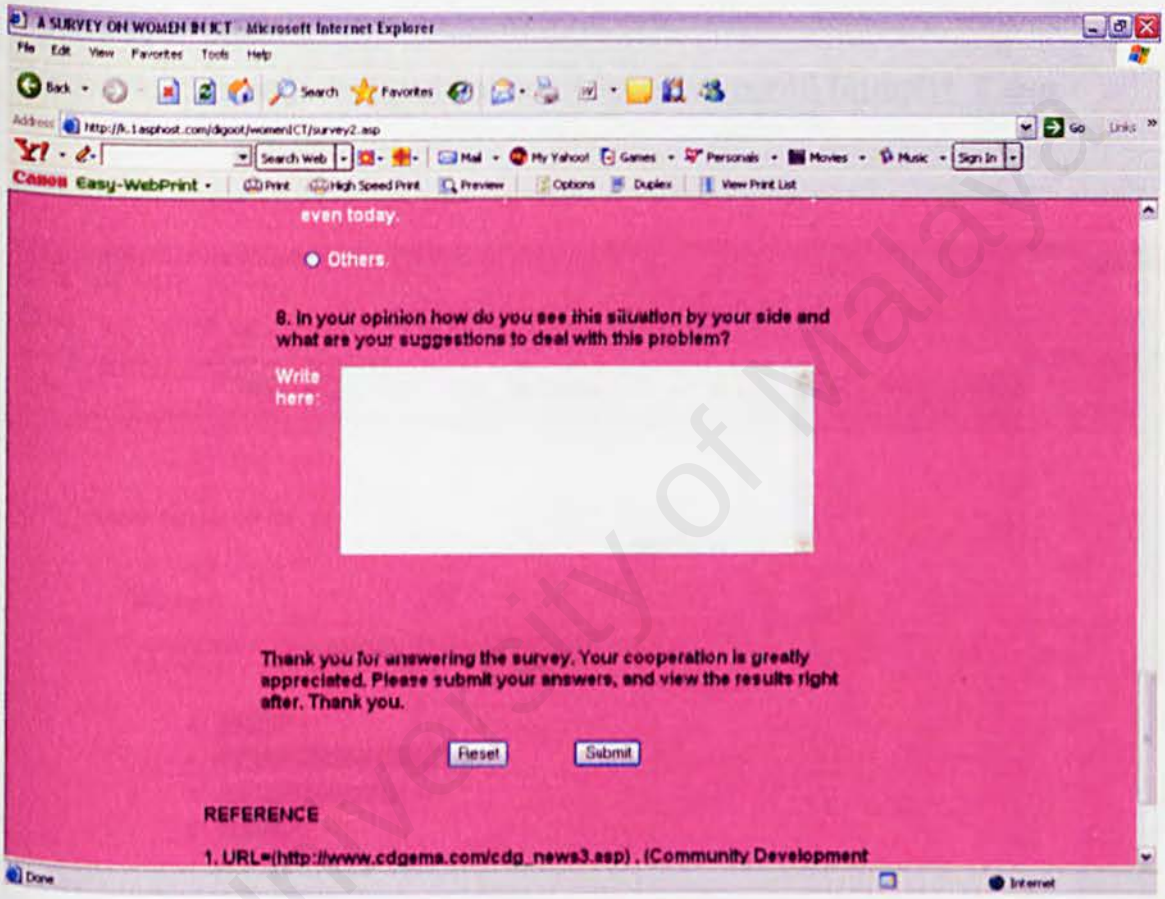
1.3.3 SECOND QUESTION PAGE

This page is the second page of the survey question page. The users can only choose one answer per question. Multiple answers are not allowed. For this particular question number five, firstly there is a drop down list and only one answer needs to be selected from there. The given answers are 'No', 'In Between', and 'Yes'. If 'Yes' was chosen, then only the proceeding multiple answers will be visible for the users to click from and choose one answer too.
The link for this page: k.1asphost.com/digoot/womenICT/survey2.asp



After answering all of the questions in the can submit the answers by clicking 'Submit'. The users can also reset their answers by clicking the button 'Reset'. If the users have not answered all of the four questions in this page a warning error will prompt out and the users must answer all of the questions first to enable them to proceed.

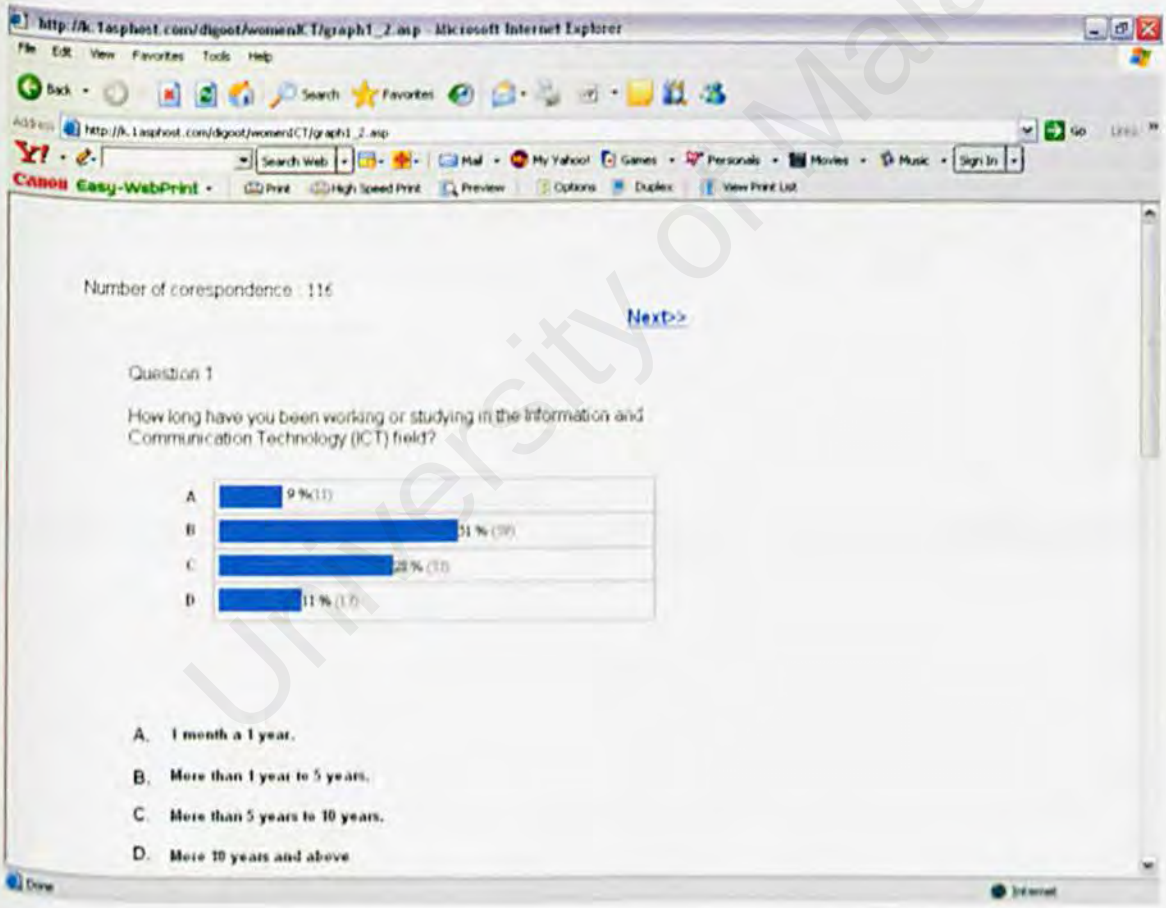
The link for this page: k.1asphost.com/digoot/womenICT/survey2.asp



1.3.4 FIRST GRAPH PAGE

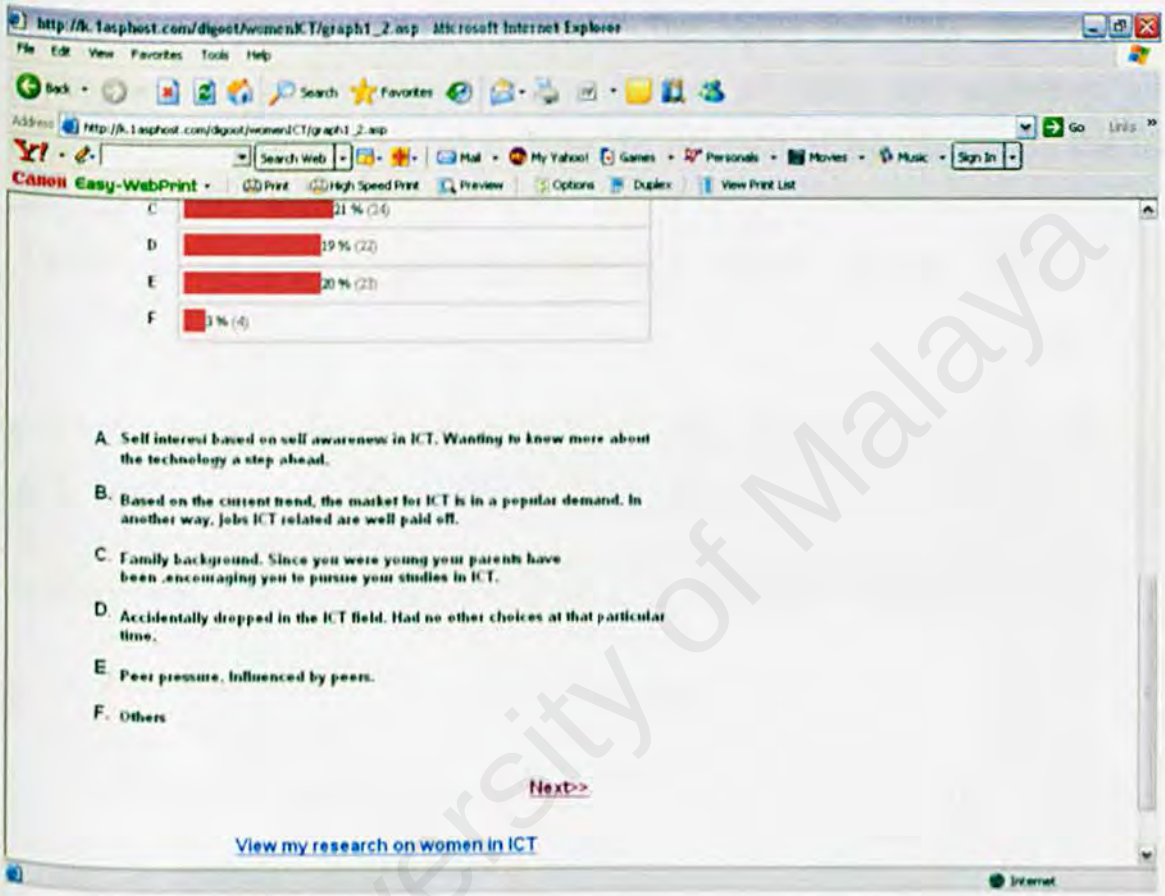
After answering all of the questions by clicking the button 'Submit' this page will appear, the first graph page. The graphs are broken down per question. The users can view the number of correspondence answered so far, the number of users who answered which answer by number and by percentage. To proceed to the next page the users can click the link 'Next>>'. Same goes to all of the other graph pages below.

The link for this page: k.1asphost.com/digoot/womenICT/graph1_2.asp



At the bottom of each of the graph pages, there is a link stated 'View my research on women in ICT'. The users can click this link to view the research on the topic done by the author.

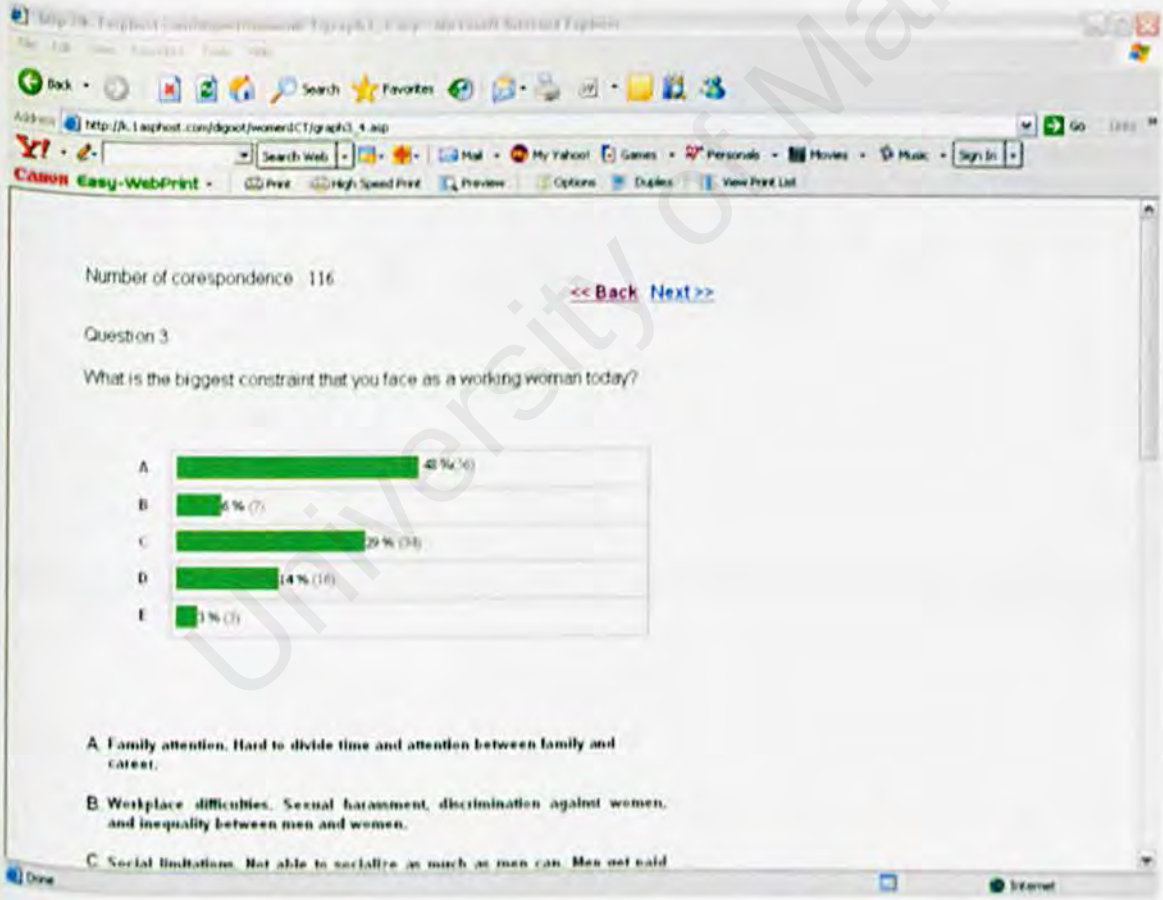
The link for this page: k.1asphost.com/digoot/womenICT/graph1_2.asp



1.3.5 SECOND GRAPH PAGE

By clicking the link 'Next>>' from the first graph page, the users will get to this page to enable them to view the rest of the results. The users can click the link '<<Back' to enable users to navigate back to view the previous results. The graphs are broken down per question. The users can view the number of correspondence answered so far, the number of users who answered which answer by number and by percentage. To proceed to the next page the users can click the link 'Next>>'.

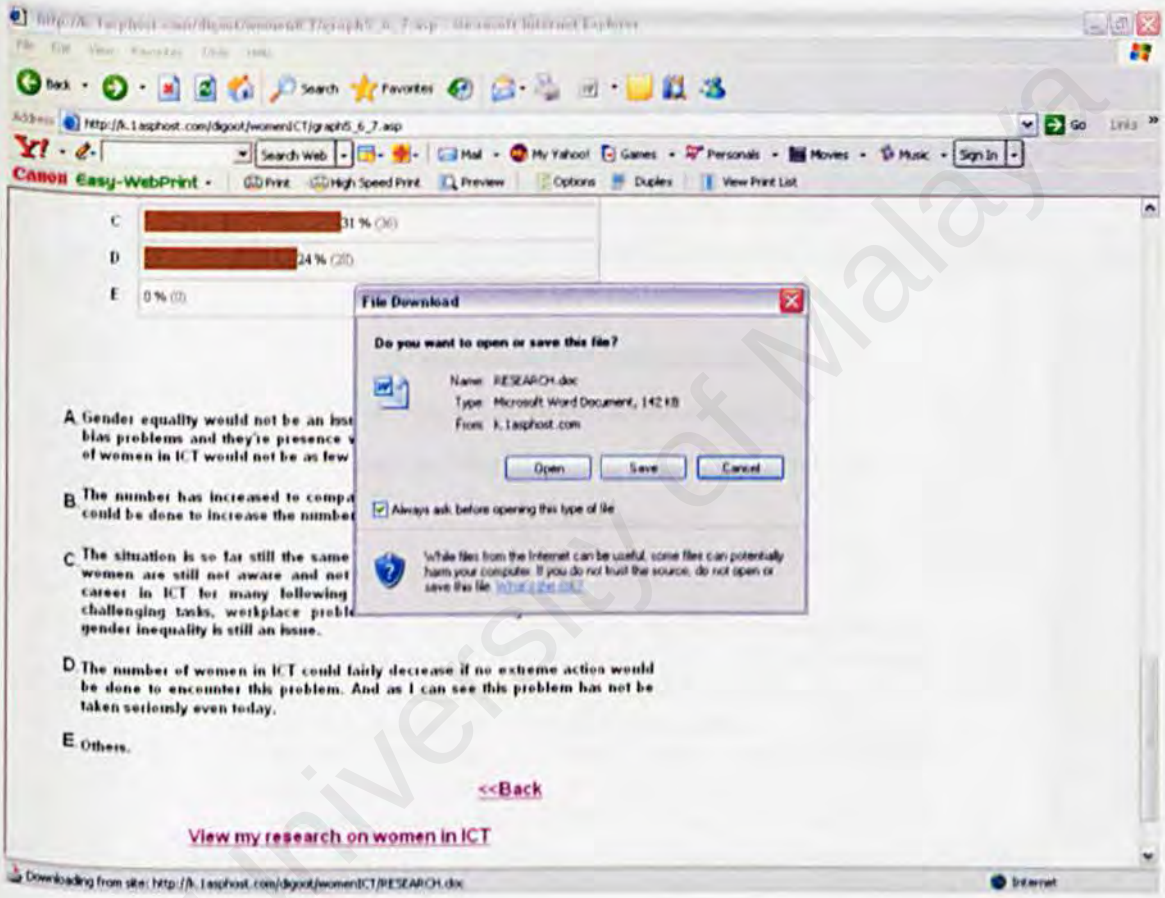
The link for this page: k.1asphost.com/digoot/womenICT/graph3_4.asp



1.3.6 THIRD GRAPH PAGE

By clicking the link 'View my research on women in ICT', the users can choose on whether to save or just open the file.

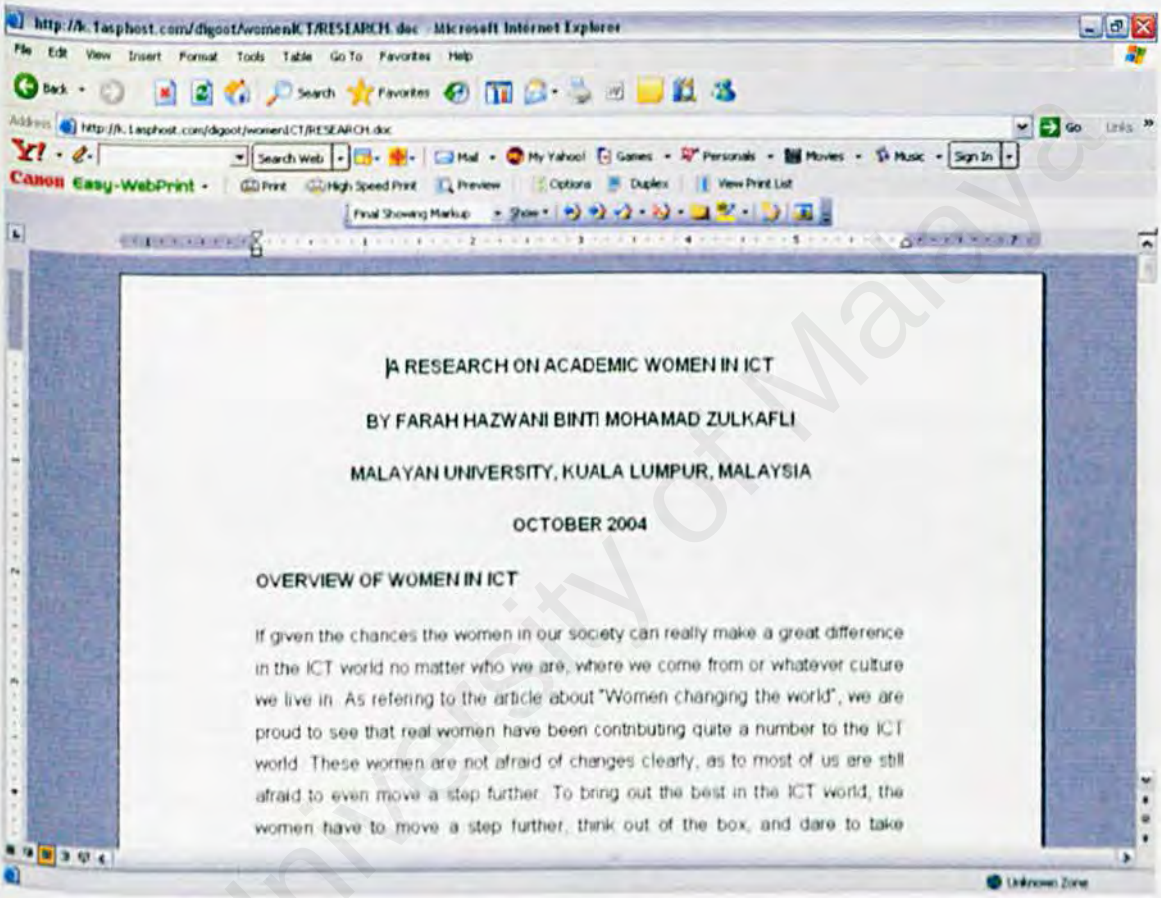
The link for this page: k.1asphost.com/digoot/womenICT/graph5_6_7.asp



1.3.7 THE RESEARCH PAGE (MICROSOFT WORDS)

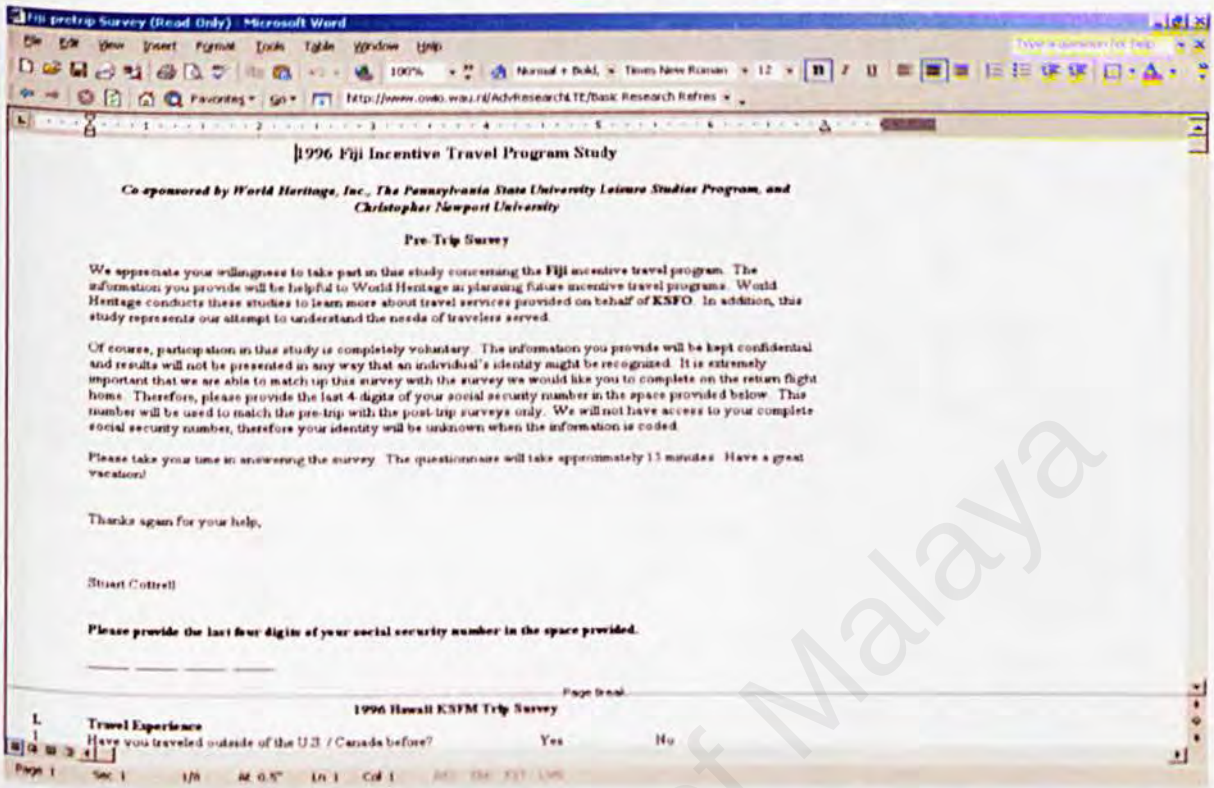
Here is the research in Microsoft Words format done by the author for the users to view.

The link for this page: k.1asphost.com/digoot/womenICT/RESEARCH.asp



APPENDIX 2

FIJI INCENTIVE TRAVEL PROGRAM



Fiji pretrip Survey (Read-Only) - Microsoft Word

1996 Fiji Incentive Travel Program Study

Co-sponsored by World Heritage, Inc., The Pennsylvania State University Leisure Studies Program, and Christopher Newport University

Pre-Trip Survey

We appreciate your willingness to take part in this study concerning the **Fiji** incentive travel program. The information you provide will be helpful to World Heritage in planning future incentive travel programs. World Heritage conducts these studies to learn more about travel services provided on behalf of **KSFO**. In addition, this study represents our attempt to understand the needs of travelers served.

Of course, participation in this study is completely voluntary. The information you provide will be kept confidential and results will not be presented in any way that an individual's identity might be recognized. It is extremely important that we are able to match up this survey with the survey we would like you to complete on the return flight home. Therefore, please provide the last 4 digits of your social security number in the space provided below. This number will be used to match the pre-trip with the post-trip surveys only. We will not have access to your complete social security number, therefore your identity will be unknown when the information is coded.

Please take your time in answering the survey. The questionnaire will take approximately 15 minutes. Have a great vacation!

Thanks again for your help,

Stuart Cottrell

Please provide the last four digits of your social security number in the space provided.

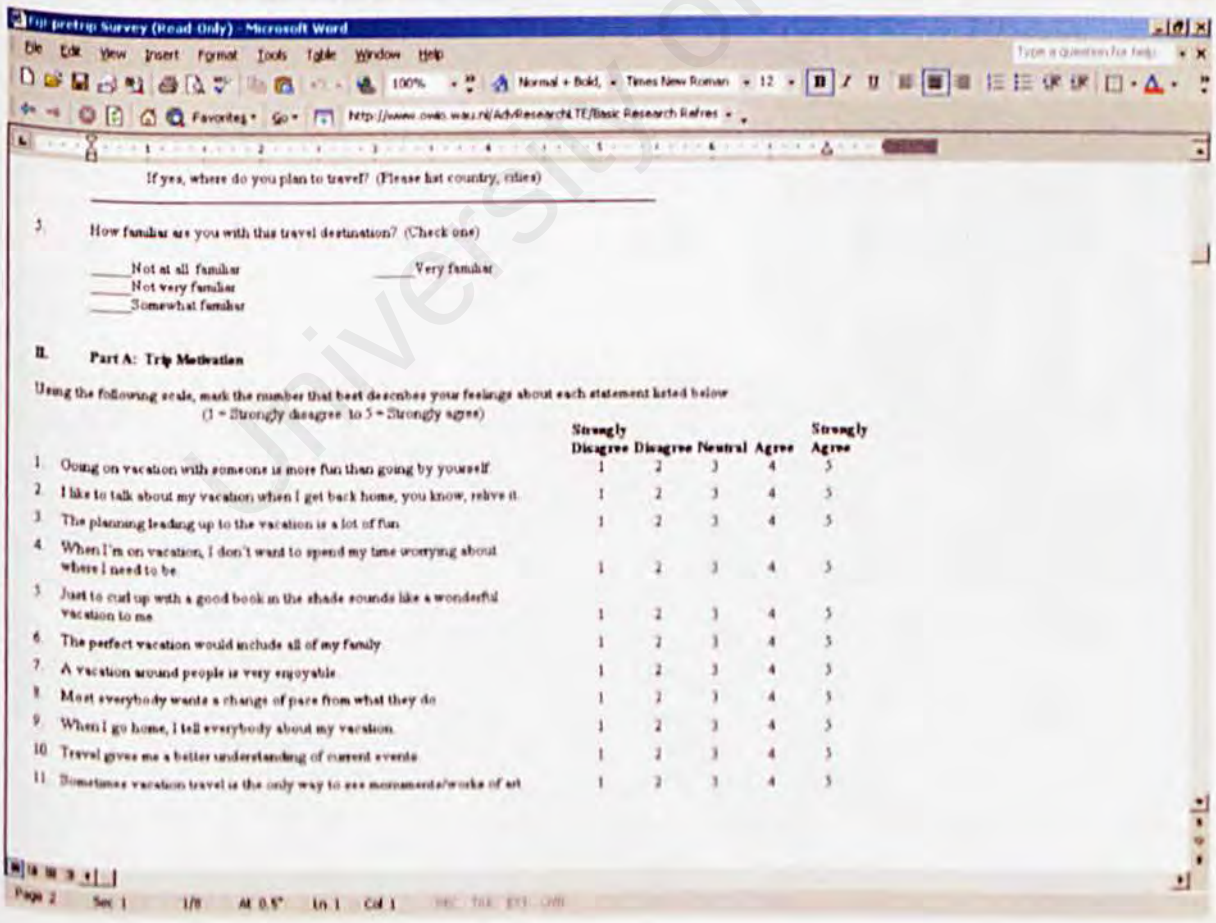
____ ____ ____ ____

Page Break

1996 Hawaii KSFM Trip Survey

I. **Travel Experience**

1. Have you traveled outside of the U.S. / Canada before? Yes No



Fiji pretrip Survey (Read-Only) - Microsoft Word

If yes, where do you plan to travel? (Please list country, cities)

_____

3. How familiar are you with this travel destination? (Check one)

____Not at all familiar
____Not very familiar
____Somewhat familiar
____Very familiar

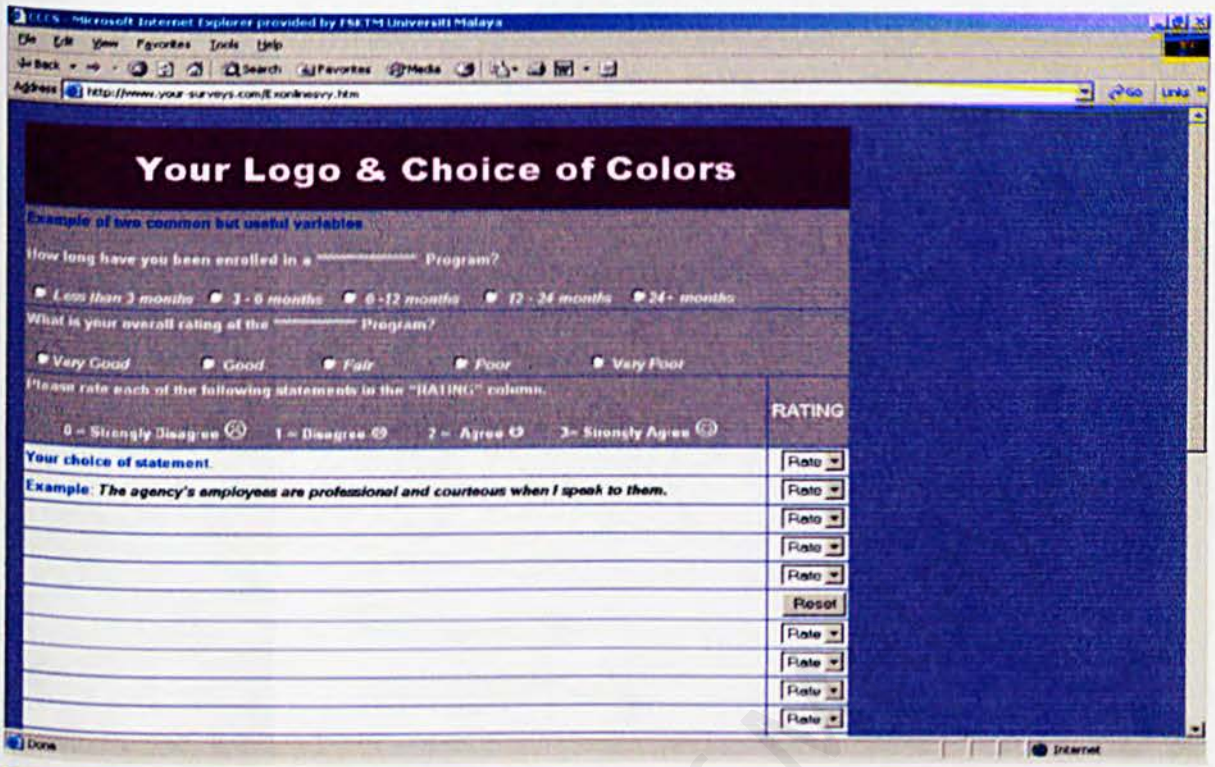
II. **Part A: Trip Motivation**

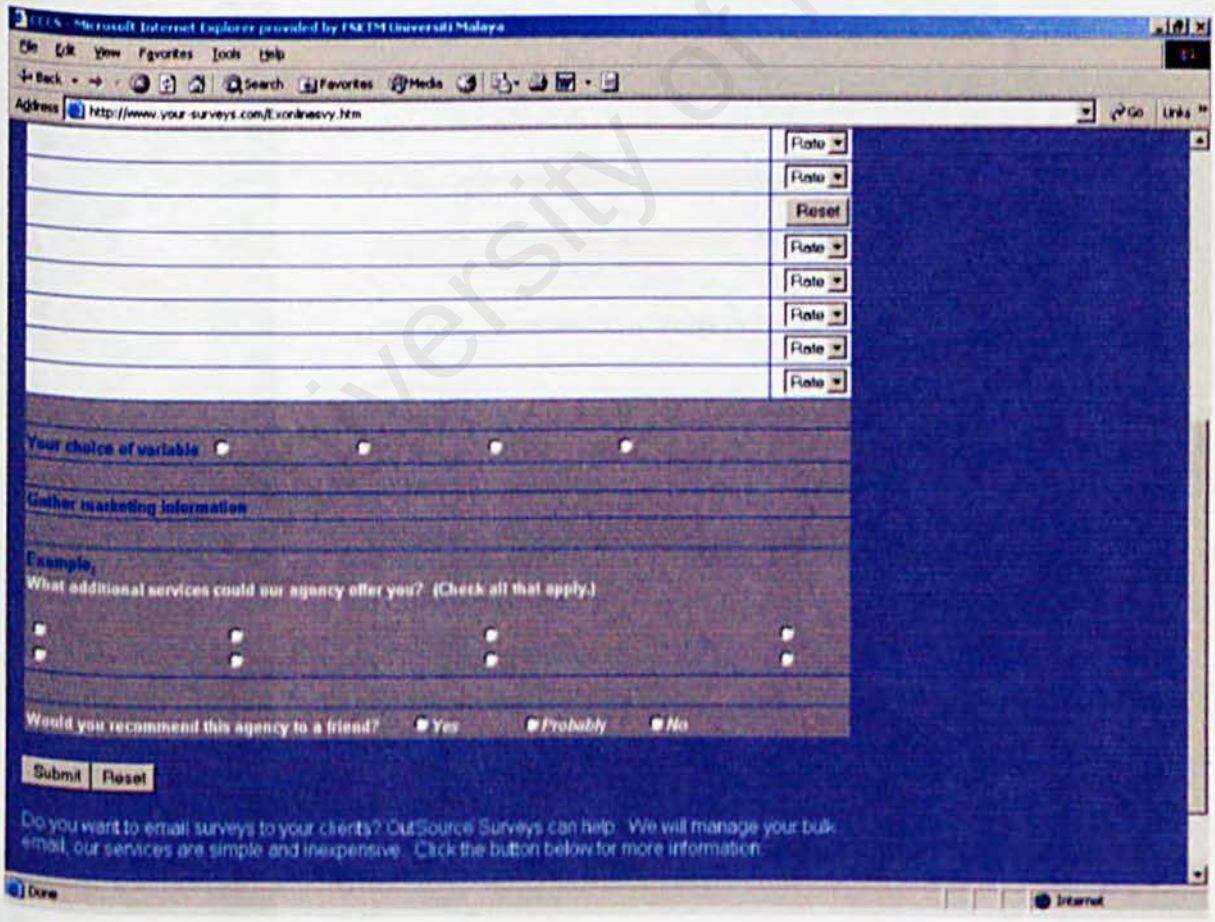
Using the following scale, mark the number that best describes your feelings about each statement listed below.
(1 = Strongly disagree to 5 = Strongly agree)

		Strongly Disagree		Neutral		Strongly Agree
1.	Going on vacation with someone is more fun than going by yourself.	1	2	3	4	5
2.	I like to talk about my vacation when I get back home, you know, relive it.	1	2	3	4	5
3.	The planning leading up to the vacation is a lot of fun.	1	2	3	4	5
4.	When I'm on vacation, I don't want to spend my time worrying about where I need to be.	1	2	3	4	5
5.	Just to curl up with a good book in the shade sounds like a wonderful vacation to me.	1	2	3	4	5
6.	The perfect vacation would include all of my family.	1	2	3	4	5
7.	A vacation around people is very enjoyable.	1	2	3	4	5
8.	Most everybody wants a change of pace from what they do.	1	2	3	4	5
9.	When I go home, I tell everybody about my vacation.	1	2	3	4	5
10.	Travel gives me a better understanding of current events.	1	2	3	4	5
11.	Sometimes vacation travel is the only way to see monuments/works of art.	1	2	3	4	5

APPENDIX 3

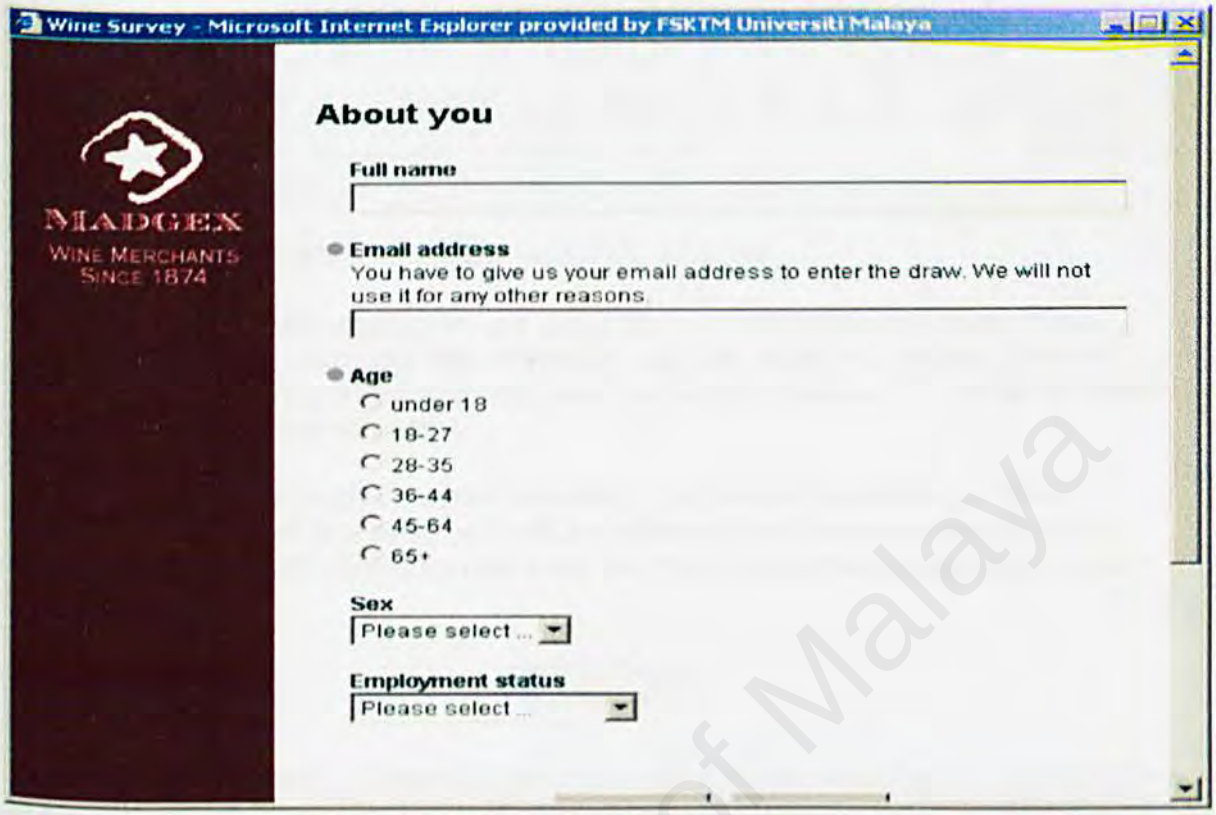
OUTSOURCE SURVEYS

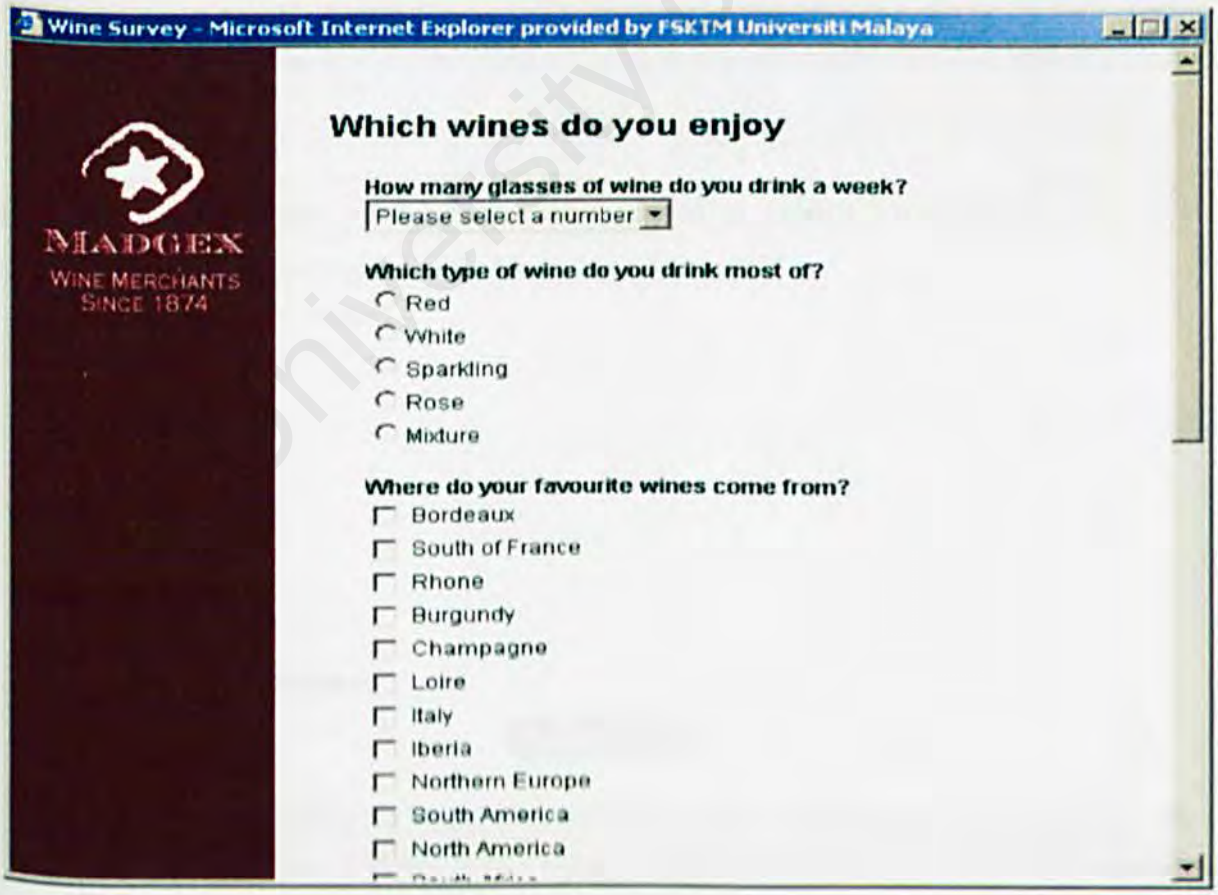




APPENDIX 4

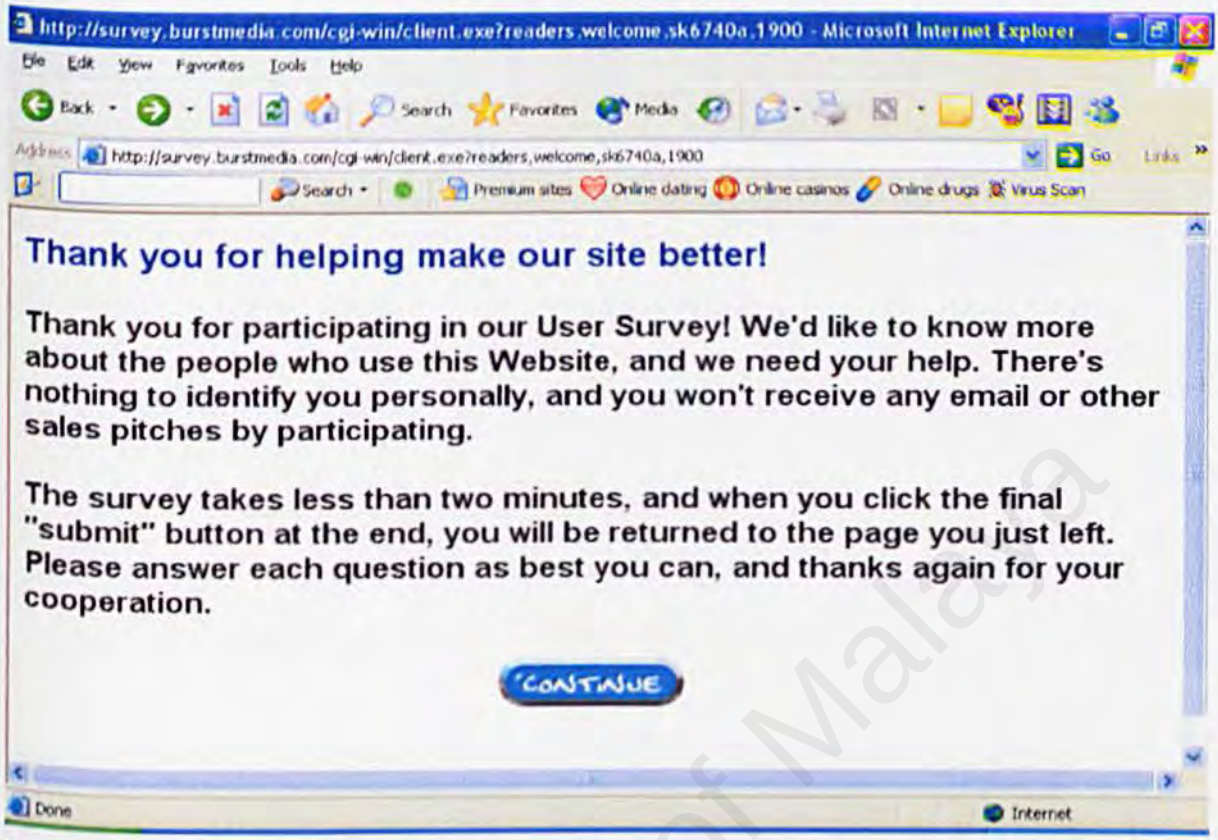
MADGEX

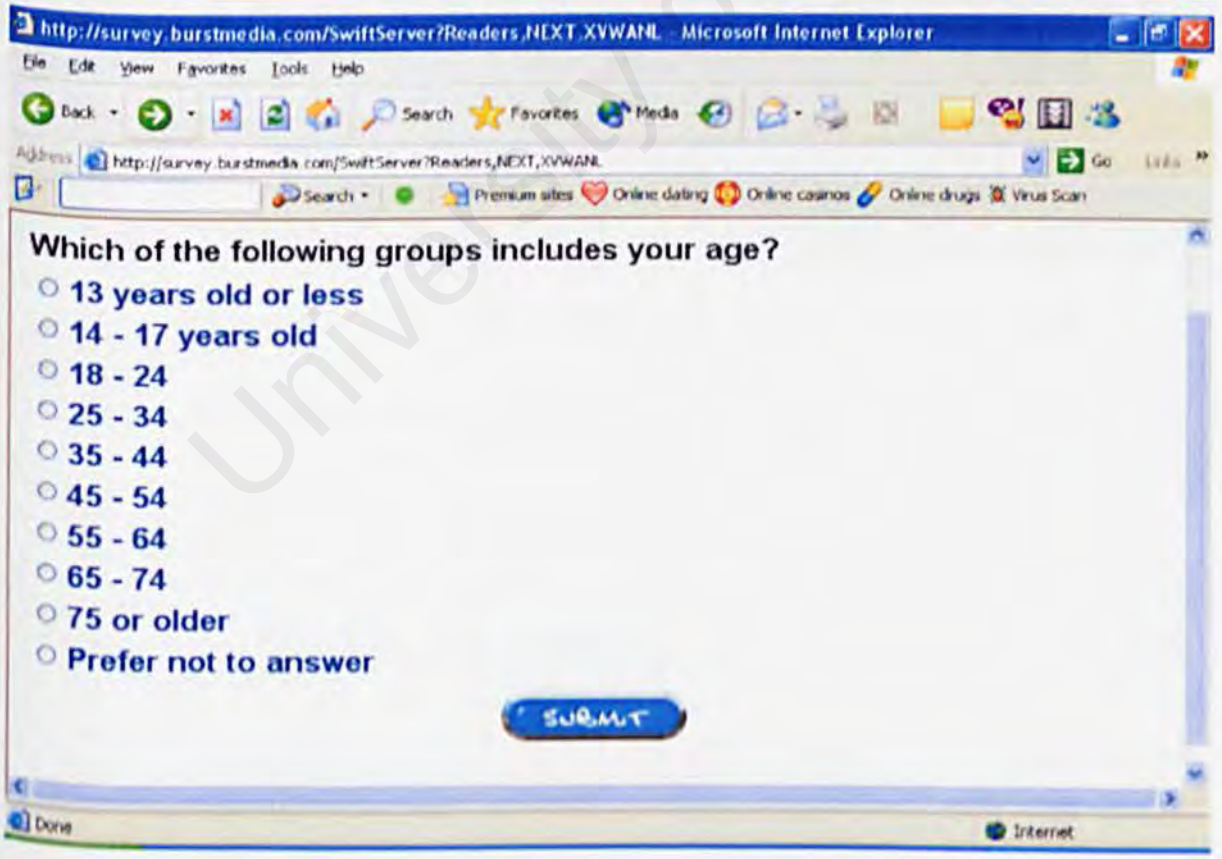




APPENDIX 5

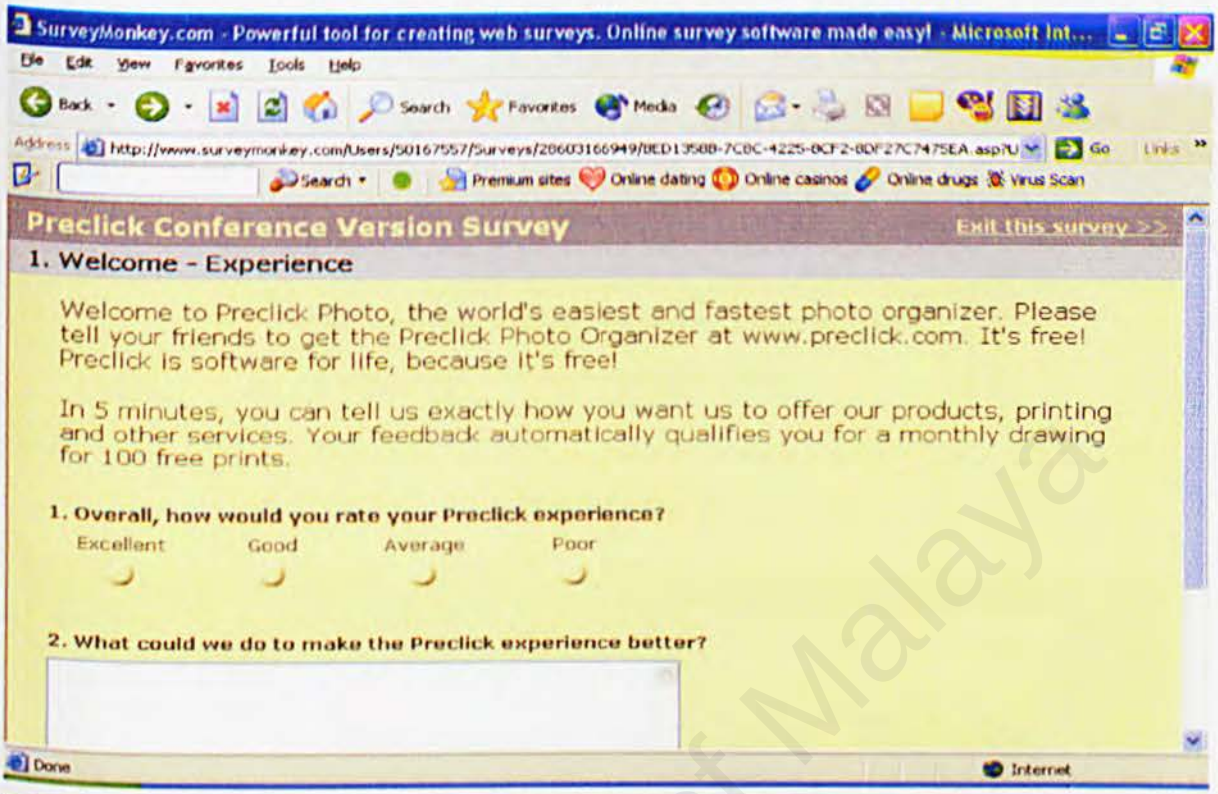
SURVEY CENTRAL





APPENDIX 6

PRECLICK CONFERENCE VERSION SURVEY



1. Welcome - Experience

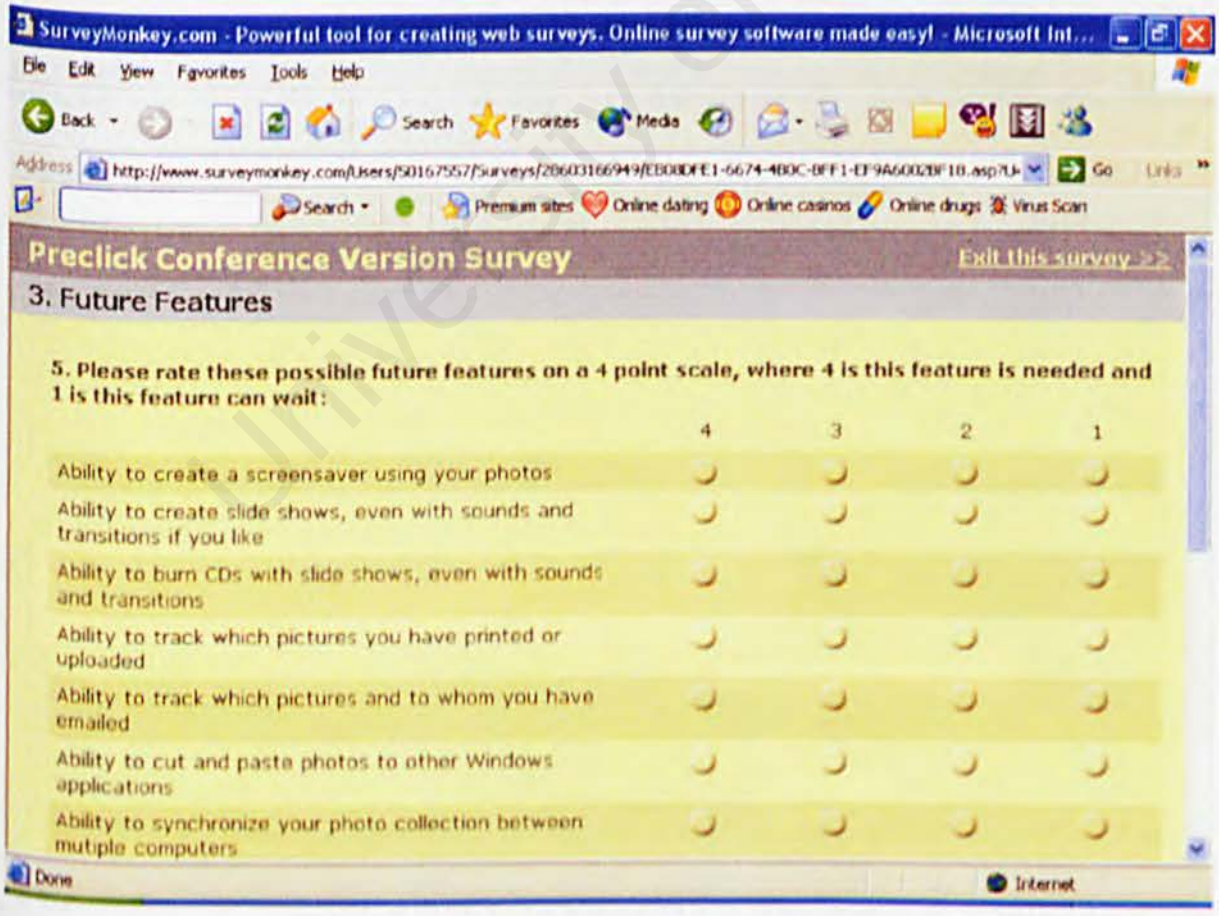
Welcome to Preclick Photo, the world's easiest and fastest photo organizer. Please tell your friends to get the Preclick Photo Organizer at www.preclick.com. It's free! Preclick is software for life, because it's free!

In 5 minutes, you can tell us exactly how you want us to offer our products, printing and other services. Your feedback automatically qualifies you for a monthly drawing for 100 free prints.

1. Overall, how would you rate your Preclick experience?

Excellent Good Average Poor

2. What could we do to make the Preclick experience better?



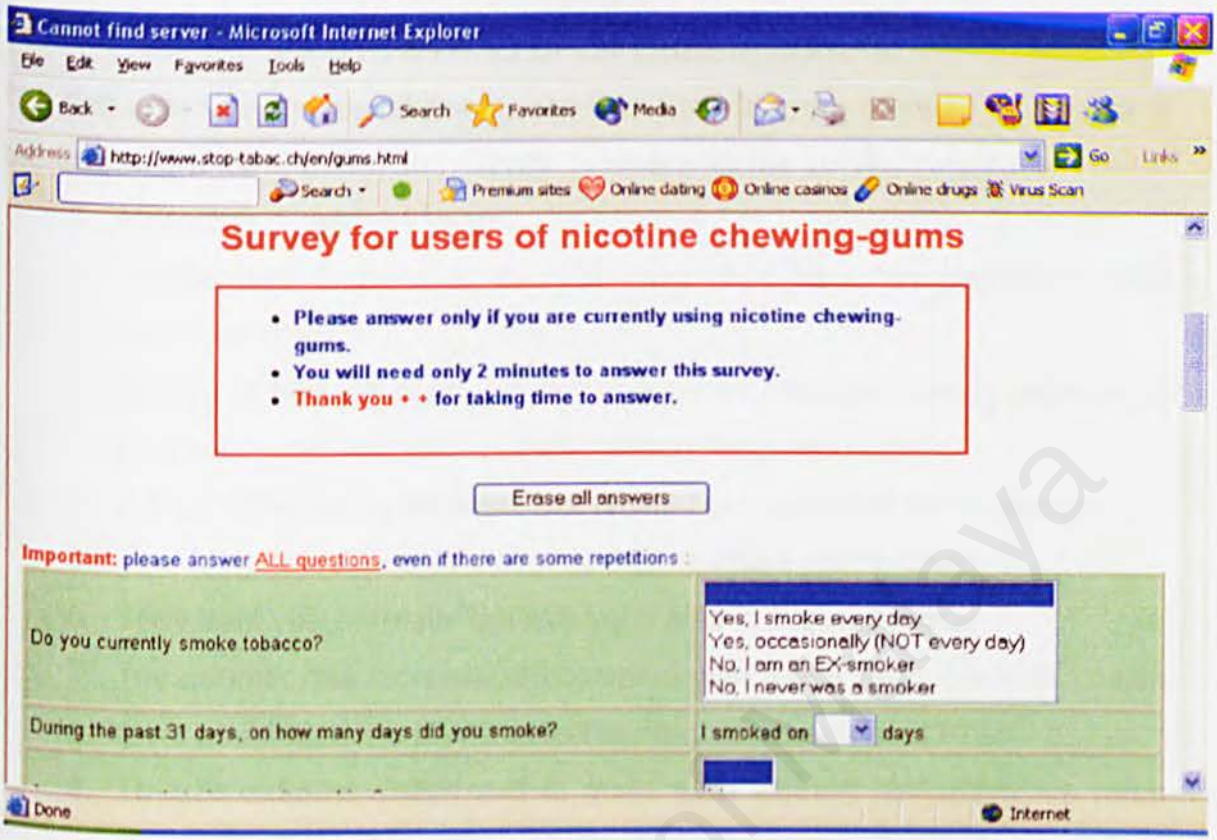
3. Future Features

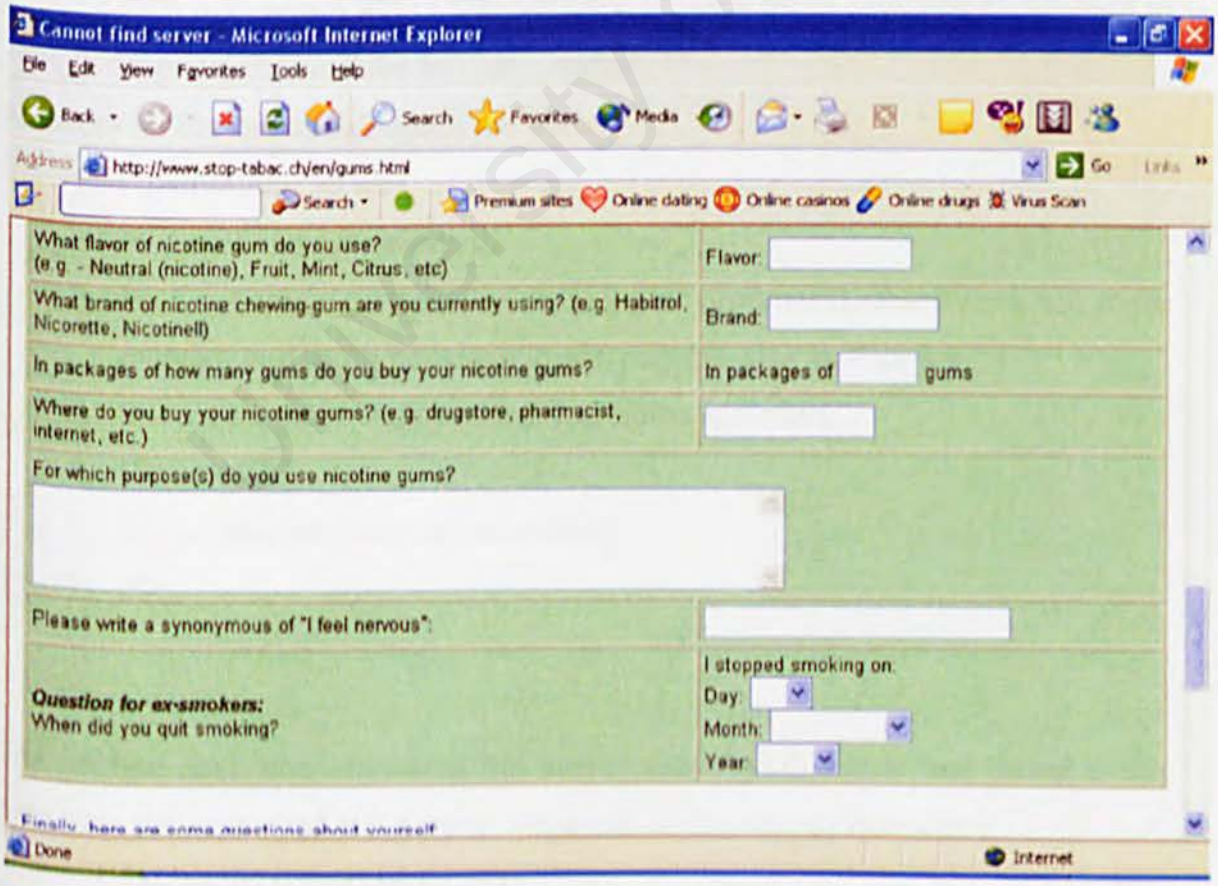
5. Please rate these possible future features on a 4 point scale, where 4 is this feature is needed and 1 is this feature can wait:

	4	3	2	1
Ability to create a screensaver using your photos				
Ability to create slide shows, even with sounds and transitions if you like				
Ability to burn CDs with slide shows, even with sounds and transitions				
Ability to track which pictures you have printed or uploaded				
Ability to track which pictures and to whom you have emailed				
Ability to cut and paste photos to other Windows applications				
Ability to synchronize your photo collection between mutiple computers				

APPENDIX 7

NICOTINE CHEWING-GUMS SURVEY





APPENDIX 8

PILOT TESTING UPON QUESTIONNARE

The first user who answered the survey was Fatin Mazura Marzuki and below is her following answers upon the survey. Answers for the survey questions:

1. More than 1 year→5 years
2. Accidentally dropped in the ICT field. Had no other choices at that particular time.
3. Unable to give full concentration to improve one self at work because of pregnancy, menstruations, baby delivery leave and so on.
4. It is a challenging course/job but I think I can deal with the challenge.
5. Yes. Men get respected even more to compare with women.
6. They treat you normally like everyone else in the workplace.
7. The number has increased to compare with a few years back, but much more could be done to increase the number of women in ICT.
8. To take extreme action and to make sure women nowadays are more alert and aware about the problem. Provide more activities for women to improve themselves for this matter.

Answers for the questions about the survey:

1. I understand all well.
2. All questions are relevant.
3. No.5- people's perspective (working environment) where men are more creative and more convince in carrying out their task or job.
4. Should be more. Add another two /three question.
5. 10 minutes.
6. It's, simple and easy to understand.
7. 95%

The second user who answered the survey was Aqilah Anuar and below is her following answers upon the survey. Answers for the survey questions:

1. More than 1 year→5 years

2. Accidentally dropped in the ICT field. Had no other choices at that particular time.
3. Family attention. Hard to divide time and attention between family and career.
4. It is a challenging course/job but I think I can deal with the challenge.

5. No.
6. They treat you normally like everyone else in the workplace.
7. The number has increased to compare with a few years back, but much more could be done to increase the number of women in ICT.
8. N/A

Answers for the questions about the survey:

1. I don't quite understand question number 8 because I don't understand which situation the writer is referring to. Other questions are fine.
2. All questions are relevant.
3. Give a consistent number of answers to choose from.
4. Should be more questions, add another 3 to 4 question. The normal survey questions that I usually answer are about more than 10 questions.
5. 10 minutes.
6. It's easy to understand.
7. 90%.

The third user who answered the survey was Rohafiza Abd Razak and below is her following answers upon the survey. Answers for the survey questions:

1. More than 1 year→5 years
2. Accidentally dropped in the ICT field. Had no other choices at that particular time.
3. Family attention. Hard to divide time and attention between family and career.

4. It is a challenging course/job but I think I can deal with the challenge.
5. No.
6. They treat you with respect. There is no sense of rejection to you.
7. The number has increased to compare with a few years back, but much more could be done to increase the number of women in ICT.
8. The employers ought to have more faith in female ICT employees. This could be done by focusing on the employer's side, all the works could be done equally while sharpening the technical skills often found lacking in female ICT graduates.

Answers for the questions about the survey:

1. I understand.
2. Relevant.
3. Relevant but not enough questions.
4. More.
5. Approximately 5 minutes.
6. No.
7. 75%.

The fourth user who answered the survey was Dian Nurfitri M.Nasir Ahmad and below is her following answers upon the survey. Answers for the survey questions:

1. More than 1 year→5 years
2. Based on the current trend, the market for ICT is in a popular demand. In another way, jobs ICT related are well paid off.
3. Unable to give full concentration to improve one self at work because of pregnancy, menstruations, baby delivery leave and so on.
4. It is a challenging course/job but I think I can deal with the challenge.
5. No.
6. You do feel a bit left out at times by the men in your workplace but it is something that you can deal with.

7. The number has increased to compare with a few years back, but much more could be done to increase the number of women in ICT.
8. I see it as quite a serious problem because this issue didn't occur to me at all. When I saw the statistics, it was unbelievable. My suggestion is to train all gender equally from the beginning starting from school so that both men and women will have the same opportunity in this field. Women are also capable of handling or creating new ideas for this field as long as they are given the same opportunity as men.

Answers for the questions about the survey:

1. Yes, I understand.
2. Yes, they are all relevant.
3. Yes, they are all relevant.
4. Not enough. There should be more so that women will realize their situation.
5. Around ten minutes.
6. No, it makes me realize my situation in this field.
7. 50%-lack in quantity (the questions).

The fifth user who answered the survey was Nur Aisha Abd Hamid and below is her following answers upon the survey. Answers for the survey questions:

1. More than 1 year→5 years
2. Accidentally dropped in the ICT field. Had no other choices at that particular time.
3. Family attention. Hard to divide time and attention between family and career.
4. It is a challenging course/job but I think I can deal with the challenge.
5. No.
6. They treat you normally like everyone else in the workplace.
7. The number has increased to compare with a few years back, but much more could be done to increase the number of women in ICT.
8. N/A.

Answers for the questions about the survey:

1. Yes.
2. All are relevant.
3. All are relevant.
4. It is fair enough.
5. 10 minutes.
6. The questionnaire is fine.
7. 80%.

APPENDIX 9

PROJECT MANAGEMENT

DATE	TIMEFRAME	PROGRESS
16 June 2004	2 weeks (16 June→30 June 2004)	• The definition of research • Methods of collecting data • An overview of women in ICT
30 June 2004	2 weeks (30 June→14 July 2004)	• Elaborate more on the definition of research • Add up interview in methods of collecting data • Add in own opinion for overview of women in ICT • Final decision on development tools • Gantt chart for WXES3181 and WXES3182 • Project management consisting of timeframe and progress • Online web surveys, 5 examples together with strengths and weaknesses • Name list of women in ICT 500 email address (haven't reached 500 yet, still in progress) • There was more work given but I decided to carry it out

		for the next progress for Ms. Esyin gave me the option "if possible".
14 July 2004	(14 July→18 August 2004)	• Reference system between Harvard System and Numeric System. Decide which one to pick. • Come up with the User interface (UID). And do a pilot testing (test the design on a sample of people, family and friends for example) • Development method models • Work on reaching the target of 500 email addresses. • Elaborate more on interview. • Overview on women in ICT, elaborate more, more comprehensive. • Come up with the questionnaire including pilot testing. • Structure the whole report. • Include project management in the introduction part. • For the system part, develop the questionnaire only. • How people design the

		survey. • Expected answer from the users of the system. • Study pilot testing.
18 August 2004	(18 August →1 September 2004)	• First draft of the report. • Include system design. • Do comparison on the development tools.
1 September 2004	(1 September →15 September 2004)	• Make changes on the first draft of the report according to the changes that Ms. Esyin wrote down. • Change the reference system, not correct. • Do not use the word I in the report, instead use the author. No short form is allowed, for example don't, can't, shouldn't and so on. • Improve the prototype (system design). • Prepare for viva, with slides (power point), a draft of what to write in the email to the women in ICT.
October 2004	1 month	• Start with the implementation.
November 2004	1 month	• First look at a working prototype.
December	1 month	• The full working system with

2004		no errors that is ready to be published in to the internet.
January 2005	2 months	• Published the survey system and in the process of collecting data.
February 2005		• Pre-viva
7 March 2005		• Viva
11 March 2005		• Report Submission

APPENDIX 10

500 ACADEMIC WOMEN IN ICT IN AISA EMAIL LIST

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APPENDIX 11

SYSTEM'S SOURCE CODE

```
// ONE OF THE GRAPH PAGES
<%@LANGUAGE="VBSCRIPT" CODEPAGE="1252"%>

 <!--#include file="../Connections/womenICT.asp" -->
<%
Dim rs_total, Query_TotSub, TotSub, total_sub_a, total_sub_b, total_sub_c,
total_sub_d
Dim  Query_1a,  Query_1b, Query_Tot_c, Query_Tot_d
Dim rs_tot_a, rs_tot_b, rs_tot_c, rs_tot_d, Tot_a, Tot_b, Tot_c, Tot_d

a="a"
b="b"
c="c"
d="d"
e="e"

f="f"
g="g"
h="h"
yes="yes"
no="no"
in_between="in_between"


'*****************************************************************************************
**********
' question no 3
'*****************************************************************************************
**********
   Query_TotSub = "select count (*) as total_sub from question "
    set rs_total = adoCon.Execute(Query_TotSub)
  TotSub = rs_total("total_sub")

   Query_3a = "select count (three) as total_sub_a from question where three='"
&a& "' "
    set rs_tot_3a = adoCon.Execute( Query_3a)
  Tot_3a = rs_tot_3a("total_sub_a")

 Query_3b = "select count (three) as total_sub_b from question where  three='"
&b& "'"
    set rs_tot_3b = adoCon.Execute( Query_3b)
  Tot_3b = rs_tot_3b("total_sub_b")

  Query_3c = "select count (three) as total_sub_c  from question where three='"
&c& "' "
    set rs_tot_3c = adoCon.Execute(Query_3c)
```

```
  Tot_3c = rs_tot_3c("total_sub_c")

 Query_3d = "select count (three) as total_sub_d  from question where three='"
&d& "'  "
   set rs_tot_3d = adoCon.Execute(Query_3d)
  Tot_3d = rs_tot_3d("total_sub_d")

  Query_3e = "select count (three) as total_sub_e  from question where three='"
&e& "'  "
   set rs_tot_3e = adoCon.Execute(Query_3e)
  Tot_3e = rs_tot_3e("total_sub_e")


'%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%%%%%%%%%%%%%%%%%%%%%%%%%


'*******************************************************************************
**********
' question no 4
'*******************************************************************************
**********


   Query_4a = "select count (four) as total_sub_a from question where four='"
&a& "' "
   set rs_tot_4a = adoCon.Execute( Query_4a)
  Tot_4a = rs_tot_4a("total_sub_a")

 Query_4b = "select count (four) as total_sub_b from question where  four='"
&b& "'"
   set rs_tot_4b = adoCon.Execute( Query_4b)
  Tot_4b = rs_tot_4b("total_sub_b")

  Query_4c = "select count (four) as total_sub_c  from question where four='"
&c& "' "
   set rs_tot_4c = adoCon.Execute(Query_4c)
  Tot_4c = rs_tot_4c("total_sub_c")

 Query_4d = "select count (four) as total_sub_d  from question where four='"
&d& "'  "
   set rs_tot_4d = adoCon.Execute(Query_4d)
  Tot_4d = rs_tot_4d("total_sub_d")
```

```
  Query_4e = "select count (three) as total_sub_e  from question where four='"
&e& "' "
   set rs_tot_4e = adoCon.Execute(Query_4e)
  Tot_4e = rs_tot_4e("total_sub_e")


'%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

%>

<%
color_fill=""
'count the percentege of the each answer choosen by users

'--------------------------------------------------------------
'question three
'--------------------------------------------------------------
Tot_pctg_3a=Tot_3a/TotSub*(100)
Tot_pctg_3a= clng(Tot_pctg_3a)
'number of loop
num_loop_3a=cint(Tot_pctg_3a/2)

Tot_pctg_3b=Tot_3b/TotSub*(100)
Tot_pctg_3b=clng(Tot_pctg_3b)
num_loop_3b=cint(Tot_pctg_3b/2)

Tot_pctg_3c=Tot_3c/TotSub*(100)
Tot_pctg_3c=clng(Tot_pctg_3c)
num_loop_3c=cint(Tot_pctg_3c/2)


Tot_pctg_3d=Tot_3d/TotSub*(100)
Tot_pctg_3d=clng(Tot_pctg_3d)
num_loop_3d=cint(Tot_pctg_3d/2)

Tot_pctg_3e=Tot_3e/TotSub*(100)
Tot_pctg_3e=clng(Tot_pctg_3e)
num_loop_3e=cint(Tot_pctg_3e/2)
'-----------------------------------------------------------

'--------------------------------------------------------------
'question four
'------------------------------------------------------------
Tot_pctg_4a=Tot_4a/TotSub*(100)
```

```
Tot_pctg_4a= clng(Tot_pctg_4a)
'number of loop
num_loop_4a=cint(Tot_pctg_4a/2)

Tot_pctg_4b=Tot_4b/TotSub*(100)
Tot_pctg_4b=clng(Tot_pctg_4b)
num_loop_4b=cint(Tot_pctg_4b/2)

Tot_pctg_4c=Tot_4c/TotSub*(100)
Tot_pctg_4c=clng(Tot_pctg_4c)
num_loop_4c=cint(Tot_pctg_4c/2)


Tot_pctg_4d=Tot_4d/TotSub*(100)
Tot_pctg_4d=clng(Tot_pctg_4d)
num_loop_4d=cint(Tot_pctg_4d/2)

Tot_pctg_4e=Tot_4e/TotSub*(100)
Tot_pctg_4e=clng(Tot_pctg_4e)
num_loop_4e=cint(Tot_pctg_4e/2)
'---------------------------------------




%>

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   <td width="166"> </td>
   <td width="277"> </td>
   <td width="203"> </td>
   <td width="10"> </td>
 </tr>
 <tr>
   <td height="1393"> </td>
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cellspacing="0">
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       <td width="325"> </td>
       <td width="22"> </td>
```

```
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      <td width="66"> </td>
      <td width="64"> </td>
      <td width="54"> </td>
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    <tr>
      <td height="14"></td>
      <td rowspan="2" valign="top"><font face="Arial, Helvetica, sans-
serif">Number of
        corespondence :</font> <%=TotSub%></td>
      <td></td>
      <td></td>
      <td></td>
      <td></td>
      <td></td>
      <td></td>
    </tr>
    <tr>
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      <td> </td>
      <td> </td>
      <td valign="top"><a href="graph1_2.asp"><font face="Arial, Helvetica,
sans-serif"><strong>&lt;&lt; Back</strong></font></a><strong><font face="Arial,
Helvetica, sans-serif">          </font></strong></td>
      <td valign="top"><a href="graph5_6_7.asp"><font face="Arial, Helvetica,
sans-serif"><strong>Next &gt;&gt;</strong></font></a></td>
      <td></td>
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    <tr>
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          <td width="565"></td>
          <td width="6"></td>
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            <!--DWLayoutTable-->
            <tr>
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```
            <td height="19" colspan="6" valign="top"><p><font face="Arial,
Helvetica, sans-serif">Question 3</font></p>
              <p><font face="Arial, Helvetica, sans-serif">What is the biggest
constraint that you face as a working
            woman today?</font></p></td>
            <td width="46"></td>
           </tr>
           <tr>
            <td width="5" height="44"> </td>
            <td width="44"> </td>
            <td width="36"> </td>
            <td width="9"> </td>
            <td width="404"> </td>
            <td width="21"></td>
            <td></td>
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            <td height="6"></td>
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               <td valign="center"><font color="#333333" size="2" face="Arial,
MS Serif, MS Sans Serif, Impact, Century Gothic,
Verdana"><strong>A</strong></font></td>
              </tr>
              <tr>
               <td height="2"></td>
               <td></td>
              </tr>
              <tr>
               <td height="30"></td>
               <td valign="center"><font color="#333333" size="2"
face="Arial"><strong>B</strong></font></td>
              </tr>
              <tr>
               <td height="2"></td>
               <td></td>
              </tr>
              <tr>
```

```
                    <td height="30"></td>
                    <td valign="center"><font color="#333333" size="2"
face="Arial"><strong>C</strong></font></td>
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                  <tr>
                    <td height="2"></td>
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                  </tr>
                  <tr>
                    <td height="30"></td>
                    <td valign="center"><font color="#333333" size="2"
face="Arial"><strong>D</strong></font></td>
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                  <tr>
                    <td height="2"></td>
                    <td></td>
                  </tr>
                  <tr>
                    <td height="30"></td>
                    <td valign="center"><font size="2" face="Arial, sans-serif,
Haettenschweiler"><strong>E</strong></font></td>
                  </tr>
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                <td></td>
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```

```
                        <% Do while noa<num_loop_3a %>
                        <td width="19" height="20" valign="top"
bgcolor="#66CC66"><%=color_fill%></td>
                        <% noa = noa + 1 %>
                        <% Loop %>
                        <td width="1"> </td>
                        <td width="118" valign="top"> <font
size="2"><%=Tot_pctg_3a%>
                        %</font><font color="#666666"
size="2">(<%=Tot_3a%>)</font></td>
                        <td width="205"> </td>
                       </tr>
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cellpadding="0" cellspacing="0">
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                        <% nob = 1 %>
                        <% Do while nob<num_loop_3b %>
                        <td width="19" height="20" valign="top"
bgcolor="#66CC66">
                        <%=color_fill%> </td>
                        <% nob = nob + 1 %>
                        <% Loop %>
                        <td width="127" valign="top"><font
size="2"><%=Tot_pctg_3b%>
                         %</font> <font color="#666666" size="2">(<%=Tot_3b%>)
                        </font></td>
                        <td width="225"> </td>
                       </tr>
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                    </tr>
                    <tr>
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cellpadding="0" cellspacing="0">
                       <!--DWLayoutTable-->
                       <tr>
                        <% noc = 1 %>
                        <% Do while noc<num_loop_3c %>
                        <td width="19" height="18" valign="top"
bgcolor="#66CC66">
                        <%=color_fill%> </td>
                        <% noc = noc + 1 %>
                        <% Loop %>
```

```
                    <td width="126" valign="top"><font
size="2"><%=Tot_pctg_3c%>
                    %</font> <font color="#666666"
size="2">(<%=Tot_3c%>)</font></td>
                    <td width="226"></td>
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cellpadding="0" cellspacing="0">
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                     <% Do while nod<num_loop_3d %>
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bgcolor="#66CC66"><%=color_fill%></td>
                     <% nod = nod + 1 %>
                     <% Loop %>
                     <td width="125" valign="top"><font
size="2"><%=Tot_pctg_3d%>
                     %</font> <font color="#666666"
size="2">(<%=Tot_3d%>)</font></td>
                     <td width="228"> </td>
                    </tr>
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                     <td height="0"></td>
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cellpadding="0" cellspacing="0">
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                     <% Do while nod<num_loop_3e %>
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bgcolor="#66CC66"><%=color_fill%></td>
                     <% nod = nod + 1 %>
                     <% Loop %>
                     <td width="125" valign="top"><font
size="2"><%=Tot_pctg_3e%>
```

```
                    %</font> <font color="#666666"
size="2">(<%=Tot_3e%>)</font></td>
                    <td width="228"> </td>
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                   <tr>
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                    <td></td>
                    <td></td>
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                  </table></td>
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                </table></td>
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                <td> </td>
               </tr>
               <tr>
                <td height="4"></td>
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                <td></td>
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               <tr>
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                   <td width="495"></td>
                  </tr>
                  <tr>
                   <td height="22" valign="top"><strong><font face="Arial,
Helvetica, sans-serif">A</font>.</strong></td>
                   <td rowspan="10" valign="top"><p align="left"
class="style3"><font color="#666666" size="2"><font face="Arial, sans-serif,
```

```
Haettenschweiler"><strong><span class="style14"><span class="style4"><font
color="#000000">Family
                    attention. Hard to divide time and attention between
                    family and career.</font></span></span><font
color="#000000"> </font></strong></font></font></p>
                  <p align="justify" class="style14"><font color="#000000">
<font size="2" face="Arial, sans-serif, Haettenschweiler"><strong>
                   <span class="style4">Workplace difficulties. Sexual
                    harassment, discrimination against women, and inequality
                  between men and women.</span>
</strong></font></font></p>
                  <p align="justify" class="style14"><font color="#000000"
size="2" face="Arial, sans-serif, Haettenschweiler"><strong><span
class="style4">
                    Social limitations. Not able to socialize as much as
                    men can. Men get paid higher compared to women in your
                  community.</span></strong></font></p>
                  <p align="justify" class="style3"><font color="#000000"
size="2" face="Arial, sans-serif, Haettenschweiler"><strong>
                    <span class="style4">Unable to give full concentration
                    to improve one self at work because of pregnancy,
menstruations,
                  baby delivery leave and so on.</span></strong></font></p>
                  <p align="justify"><font color="#000000" size="2" face="Arial,
sans-serif, Haettenschweiler"><strong><span class="style3">
                 <span class="style4">Others.</span></span></strong>
</font><font color="#666666" size="2" face="Arial, sans-serif,
Haettenschweiler">                    </font></p></td>
                </tr>
                <tr>
                  <td height="29"> </td>
                </tr>
                <tr>
                  <td height="19" valign="top"><strong><font face="Arial,
Helvetica, sans-serif">B</font>.</strong></td>
                </tr>
                <tr>
                  <td height="30"> </td>
                </tr>
                <tr>
                  <td height="21" valign="top"><strong><font face="Arial,
Helvetica, sans-serif">C</font>.</strong></td>
                </tr>
                <tr>
                  <td height="29"> </td>
                </tr>
```

```
                <tr>
                  <td height="21" valign="top"><strong><font face="Arial,
Helvetica, sans-serif">D</font>.</strong></td>
                </tr>
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                  <td height="29"> </td>
                </tr>
                <tr>
                  <td height="23" valign="top"><strong><font face="Arial,
Helvetica, sans-serif">E.</font></strong></td>
                </tr>
                <tr>
                  <td height="15"></td>
                </tr>
                <tr>
                  <td height="23"></td>
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```
            <td height="19" colspan="5" valign="top"><p><font face="Arial,
Helvetica, sans-serif">Question 4</font></p>
              <p><font face="Arial, Helvetica, sans-serif">Do you think that ICT
education and ICT work is challenging?
            If so, how challenging could it be to you?</font></p></td>
            <td width="50"></td>
           </tr>
           <tr>
            <td width="11" height="35"> </td>
            <td width="45"> </td>
            <td width="29"> </td>
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MS Serif, MS Sans Serif, Impact, Century Gothic,
Verdana"><strong>A</strong></font></td>
              </tr>
              <tr>
               <td height="2"></td>
               <td></td>
              </tr>
              <tr>
               <td height="30"></td>
               <td valign="center"><font color="#333333" size="2"
face="Arial"><strong>B</strong></font></td>
              </tr>
              <tr>
               <td height="2"></td>
               <td></td>
              </tr>
              <tr>
               <td height="30"></td>
```

```
                    <td valign="center"><font color="#333333" size="2"
face="Arial"><strong>C</strong></font></td>
                  </tr>
                  <tr>
                    <td height="2"></td>
                    <td></td>
                  </tr>
                  <tr>
                    <td height="30"></td>
                    <td valign="center"><font color="#333333" size="2"
face="Arial"><strong>D</strong></font></td>
                  </tr>
                  <tr>
                    <td height="2"></td>
                    <td></td>
                  </tr>
                  <tr>
                    <td height="30"></td>
                    <td valign="center"><font size="2" face="Arial, sans-serif,
Haettenschweiler"><strong>E</strong></font></td>
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bgcolor="#CCCC66"><%=color_fill%></td>
                        <% noa = noa + 1 %>
                        <% Loop %>
                        <td width="1"> </td>
                        <td width="118" valign="top"> <font
size="2"><%=Tot_pctg_4a%>
                        %</font><font color="#666666"
size="2">(<%=Tot_4a%>)</font></td>
                        <td width="205"> </td>
```

```
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                      <% nob = 1 %>
                      <% Do while nob<num_loop_4b %>
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                      <%=color_fill%> </td>
                      <% nob = nob + 1 %>
                      <% Loop %>
                      <td width="127" valign="top"><font
size="2"><%=Tot_pctg_4b%>
                       %</font> <font color="#666666" size="2">(<%=Tot_4b%>)
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size="2"><%=Tot_pctg_4c%>
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size="2">(<%=Tot_4c%>)</font></td>
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```
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bgcolor="#CCCC66"><%=color_fill%></td>
                      <% nod = nod + 1 %>
                      <% Loop %>
                      <td width="125" valign="top"><font
size="2"><%=Tot_pctg_4d%>
                      %</font> <font color="#666666"
size="2">(<%=Tot_4d%>)</font></td>
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                      <% nod = nod + 1 %>
                      <% Loop %>
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size="2"><%=Tot_pctg_4e%>
                      %</font> <font color="#666666"
size="2">(<%=Tot_4e%>)</font></td>
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```

```
            <td> </td>
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Helvetica, sans-serif">A.</font></strong></td>
                <td rowspan="10" valign="top"> <p align="justify"
class="style3"><font color="#666666" size="2" face="Arial, sans-serif,
Haettenschweiler"><strong><span class="style11"><font color="#000000">It
                    is not challenging at all.
</font></span></strong></font></p>
                <p align="justify" class="style3"><font color="#000000"> <font
size="2" face="Arial, sans-serif, Haettenschweiler"><strong><span
class="style4">
                  It can be challenging at times, but overall it's moderate.
                </span></strong></font></font></p>
                <p align="justify" class="style3"><font color="#000000"
size="2" face="Arial, sans-serif, Haettenschweiler"><strong>
                  <span class="style11">It is a challenging course/job
                but I think I can deal with the challenge.
</span></strong></font></p>
                <p align="justify" class="style3"><font color="#000000"
size="2" face="Arial, sans-serif, Haettenschweiler"><strong>
                  <span class="style11">It is very challenging that I
                do give up at times. </span></strong></font></p>
                <p align="justify" class="style3"><font color="#000000"
size="2" face="Arial, sans-serif, Haettenschweiler"><strong>
                  <span class="style4">This would be the most challenging
```

```
                course/job I have ever encountered with</span>.
</strong></font></p></td>
                </tr>
                <tr>
                 <td height="14"></td>
                </tr>
                <tr>
                 <td height="19" valign="top"><strong><font face="Arial,
Helvetica, sans-serif">B</font>.</strong></td>
                </tr>
                <tr>
                 <td height="13"></td>
                </tr>
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Helvetica, sans-serif">C.</font></strong></td>
                </tr>
                <tr>
                 <td height="14"></td>
                </tr>
                <tr>
                 <td height="21" valign="top"><strong><font face="Arial,
Helvetica, sans-serif">D</font>.</strong></td>
                </tr>
                <tr>
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                </tr>
                <tr>
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```

```
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sans-serif"><strong>&lt;&lt; Back</strong></font></a></td>
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Helvetica, sans-serif"><strong>Next &gt;&gt;</strong></font></a></td>
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```

```
  <td valign="top"><strong><a href="RESEARCH.doc"><font face="Arial,
Helvetica, sans-serif">View
   my research on women in ICT</font></a></strong></td>
 <td> </td>
  <td> </td>
 </tr>
</table>
<%

rs_tot_3a.Close
rs_tot_3b.Close
rs_tot_3c.Close
rs_tot_3d.Close
rs_tot_3e.Close
rs_tot_4a.Close
rs_tot_4b.Close
rs_tot_4c.Close
rs_tot_4d.Close
rs_tot_4e.Close


adoCon.Close

Set rs_Total = Nothing

Set rs_tot_3a = Nothing
Set rs_tot_3b = Nothing
Set rs_tot_3c = Nothing
Set rs_tot_3d = Nothing
Set rs_tot_3e = Nothing
Set rs_tot_4a = Nothing
Set rs_tot_4b = Nothing
Set rs_tot_4c = Nothing
Set rs_tot_4d = Nothing
Set rs_tot_4e = Nothing

Set adoCon = Nothing
%>
```

```
// PAGE VALIDATE
<%@LANGUAGE="VBSCRIPT" CODEPAGE="1252"%>
 <!--#include file="../Connections/womenICT.asp" -->
<%

myname=request.form("name")
mypassword=request.form("password")

Set rstemp = Server.CreateObject("ADODB.Recordset")
sqltemp="select * from Acc where user_id='" & myname & "';"
 set rstemp=adoCon.execute(SQLTemp)

If rstemp.eof then

   rstemp.close
   adoCon.close
   set rstemp=nothing
   set adoCon=nothing

        Session("Message") = "Invalid username. Please try again."
        response.redirect "index.asp"
end if

if mypassword="" then
Session("Message") = "Please insert Password"
        response.redirect "index.asp"

end if

If rstemp("Pass")=mypassword then


     session("login")="yes"
    'Then reroute to appropriate page
     response.redirect "survey1.asp"


          end if


%>
```

```
//MAIN INDEX
<%@LANGUAGE="VBSCRIPT" CODEPAGE="1252"%>
<% Option Explicit

 Sub DrawPage%>
<html>
<head>
<title>Untitled Document</title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
</head>

<body bgcolor="#666666">

<table width="800" border="0" align="center" cellpadding="0" cellspacing="0"
bgcolor="#000000" style="BORDER-RIGHT: #ff99cc 1px solid; BORDER-TOP:
#ff99cc 1px solid; BORDER-LEFT: #ff99cc 1px solid; BORDER-BOTTOM:
#ff99cc 1px solid">
 <!--DWLayoutTable-->
 <tr>
  <td height="122" colspan="8" valign="top"><table width="100%" border="0"
cellpadding="0" cellspacing="0">
      <!--DWLayoutTable-->
      <tr>
       <td width="657" height="98" align="center" valign="center"><img
src="header3d.gif" width="543" height="74"></td>
       <td width="147" valign="top"><img src="um.bmp" width="99"
height="98"></td>
      </tr>
      <tr>
       <td height="24" colspan="2" valign="top"><hr></td>
      </tr>
  </table>
  </td>
 </tr>
 <tr>
  <td width="23" height="11"></td>
  <td width="259"></td>
  <td width="110"></td>
  <td width="20"></td>
  <td width="68"></td>
  <td width="64"></td>
  <td width="243"></td>
  <td width="11"></td>
 </tr>
 <tr>
  <td height="76"></td>
```

```
   <td colspan="5" valign="top"><table width="100%" border="0" cellpadding="0"
cellspacing="0">
      <!--DWLayoutTable-->
      <tr>
       <td width="520" height="71" valign="top"><img src="surveyheader.gif"
width="520" height="71"></td>
      </tr>
      <tr>
       <td height="5"></td>
      </tr>
                                    </table>
   </td>
  <td> </td>
   <td></td>
  </tr>
  <tr>
   <td height="7"></td>
   <td></td>
   <td></td>
   <td></td>
   <td></td>
   <td></td>
   <td></td>
   <td></td>
  </tr>
  <tr>
   <td height="134"> </td>
   <td colspan="2" rowspan="2" valign="top"><table width="100%" border="0"
cellpadding="0" cellspacing="0" style="BORDER-RIGHT: #ff99cc 1px solid;
BORDER-TOP: #ff99cc 1px solid; BORDER-LEFT: #ff99cc 1px solid; BORDER-
BOTTOM: #ff99cc 1px solid">
      <!--DWLayoutTable-->
      <tr>
       <td width="367" height="308" valign="top"><img src="womenpic.gif"
width="367" height="308"></td>
      </tr>
   </table>
   </td>
   <td> </td>
   <td colspan="3" valign="top"><table width="375" border="1" align="center"
bordercolor="#FF99cc">
         <!--DWLayoutTable-->
         <form name="login" method="post" action="validate.asp"
onSubmit="return ValidateForm()">
          <tr bgcolor="#FFB9E7">
           <td height="41" colspan="2" valign="top"><div align="center"></div>
```

```
              <div align="center" class="style2">
                <span class="style2"> <font color="#FFFFFF"><strong><font
face="Arial, Helvetica, sans-serif">Please
                  Login </font></strong></font></span>
                <div align="left" class="style1"> <%=message%></div>
              </div>
            </td>
          </tr>
          <tr>
            <td width="171" height="27" valign="top" bordercolor="#FFFFCC">
<p
class="style4">         &
nbsp; <font
color="#FFFFFF">        <font
face="Arial, Helvetica, sans-
serif"><strong>Username:</strong></font></font></p>
            </td>
            <td width="188" valign="top" bordercolor="#FFFFCC">  <input
name="name" type="text" id="name">
            </td>
          </tr>
          <tr>
            <td height="26" valign="top" bordercolor="#FFFFCC"> <p
class="style4">         &
nbsp;       <font color="#FFFFFF"
face="Arial, Helvetica, sans-serif">  
<strong>Password:</strong></font></p>
            </td>
            <td valign="top" bordercolor="#FFFFCC">  <input
type="password" name="password">                    </div>
            </td>
          </tr>
          <tr>
            <td height="28"></td>
            <td valign="top"
bordercolor="#FFFFCC">       &nbs
p;   
              <input type="submit" name="Submit" value="Log in">
            </td>
          </tr>
        </form>
      </table>
  </td>
 <td> </td>
 </tr>
 <tr>
```

```
    <td height="176"> </td>
    <td> </td>
    <td> </td>
    <td> </td>
    <td> </td>
    <td> </td>
  </tr>
  <tr>
    <td height="59"></td>
    <td> </td>
    <td> </td>
    <td></td>
    <td></td>
    <td></td>
    <td></td>
    <td></td>
  </tr>
  <tr>
    <td height="34"></td>
    <td> </td>
    <td colspan="3" align="center" valign="top"><p><font color="#CCCCCC"
size="2">&copy;2005
        Survey on Women in ICT Created By Farah Hazwani</font><font
color="#CCCCCC"><br>
    </font></p>
    </td>
    <td> </td>
    <td> </td>
    <td></td>
  </tr>
</table>
</body>
</html>
<%
    End Sub

'-----------------------------------------------
' END OF PROCEDURES AND START OF MAIN CODE
'-----------------------------------------------

    dim message

    'Get any incoming message/title
    message = Session("Message")

    'Then clear out the message Session variable
```

```
    Session("message") = ""

    'Draw the form
    Call DrawPage

%>
```

```
// ONE OF THE SURVEY PAGES
<% option explicit
    if Session("login")="" then

    Session("Message") = "You must log in before viewing that page!"
       response.redirect "index.asp"

    end if
        if Session("login") <> "yes" then

    Session("Message") = "You must log in before viewing that page!"
       response.redirect "index.asp"

    end if
        sub DrawPage()



%>

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"

<html>
<head>
<title>A SURVEY ON WOMEN IN ICT</title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
</head>

<body bgcolor="ff99cc">
<table width="677" border="0" align="center" cellpadding="0" cellspacing="0">
 <!--DWLayoutTable-->
 <form name="form3" method="post" action="test.asp">
  <tr>
   <td width="15" height="10"></td>
   <td width="50"></td>
   <td width="68"></td>
   <td width="403"></td>
   <td width="69"></td>
   <td width="52"></td>
   <td width="20"></td>
  </tr>
  <tr>
   <td height="171"></td>
   <td colspan="5" valign="top"><table width="100%" border="0"
cellpadding="0" cellspacing="0">
      <!--DWLayoutTable-->
```

```
        <tr>
          <td width="642" height="108" valign="top"><p align="justify" class="style5
style4"><strong><font face="Arial, MS Serif, MS Sans Serif, Impact, Century
Gothic, Verdana">I
                am Farah Hazwani Zulkafli, a student from University Malaya,
                Malaysia. In completing my Degree in Information Technology,
                I am currently doing a research on <font
color="#FFFFFF">Academic
                Women in ICT in Asia</font>. This survey below is a survey
                based on the topic mentioned. This survey will help me determine
                these women's challenges, the problems they face, their opinion
                about women in ICT and their recommendations on how to
encourage
                women today to get involved in ICT. After answering the survey
                a graph, chart or text form will appear in real-time to summarize
                the research. My personal research based on the study of
                Academic Women in ICT in Asia is also available in this
website.</font></strong></p></td>
        </tr>
      </table></td>
    <td></td>
  </tr>
  <tr>
    <td height="40"></td>
    <td> </td>
    <td> </td>
    <td valign="top"> </td>
    <td> </td>
    <td> </td>
    <td></td>
  </tr>
  <tr>
    <td height="223"></td>
    <td> </td>
    <td colspan="3" valign="top"><table width="100%" border="0"
cellpadding="0" cellspacing="0">
        <!--DWLayoutTable-->
        <tr>
          <td width="41" height="43" valign="top"><!--DWLayoutEmptyCell--
> </td>
          <td colspan="3" valign="top"><span class="style5 style2"><strong><font
face="Arial, Helvetica, sans-serif">1.
                How long have you been working or studying in the Information
                and Communication
            Technology (ICT) field?</font></strong></span></td>
          <td width="37"> </td>
```

```
      </tr>
      <tr>
        <td height="16"></td>
        <td width="27"></td>
        <td width="331"></td>
        <td width="104"></td>
        <td></td>
      </tr>
      <tr>
        <td height="141"></td>
        <td></td>
        <td valign="top"><p align="left" class="style3"><span class="style17">
          <strong><font color="#FFFFFF" face="Arial, sans-serif,
Haettenschweiler">
          <input name="question_1" type="radio" value="a">
          <span class="style3">1 month a 1
year.</span></font></strong></span></p>
        <p align="left" class="style14"><font face="Arial, sans-serif,
Haettenschweiler"><strong><font color="#FFFFFF"><span class="style4">
          <input name="question_1" type="radio" value="b">
          More than 1 year to 5 years. </span></font></strong></font></p>
        <p align="left" class="style14"><font face="Arial, sans-serif,
Haettenschweiler"><strong><font color="#FFFFFF"><span class="style4">
          <input name="question_1" type="radio" value="c">
          More than</span> <span class="style4">5 years to 10
years.</span></font></strong></font></p>
        <p align="left" class="style3"><font face="Arial, sans-serif,
Haettenschweiler"><strong><font color="#FFFFFF"><span class="style19">
          <input name="question_1" type="radio" value="d">
          More 10 years and above</span></font></strong><span
class="style19">.</span>
          </font> </p></td>
        <td></td>
        <td></td>
      </tr>
      <tr>
        <td height="23"></td>
        <td></td>
        <td> </td>
        <td></td>
        <td></td>
      </tr>
    </table></td>
    <td> </td>
    <td></td>
  </tr>
```

```
  <tr>
    <td height="443"></td>
    <td></td>
    <td colspan="3" valign="top"><table width="100%" border="0"
cellpadding="0" cellspacing="0">
      <!--DWLayoutTable-->
      <tr>
        <td width="38" height="41"> </td>
        <td width="463" valign="top"><span class="style9"><font
color="#000000" face="Arial, Helvetica, sans-serif"><strong>2.
          What makes you interested to get involved in
ICT?</strong></font></span></td>
        <td width="39"> </td>
      </tr>
      <tr>
        <td height="20"> </td>
        <td> </td>
        <td> </td>
      </tr>
      <tr>
        <td height="58"> </td>
        <td valign="top"><p align="left" class="style5"><strong> <font
color="#FFFFFF">
            <input name="question_2" type="radio" value="a">
            <font face="Arial, sans-serif, Haettenschweiler"><strong><span
class="style2">Self
            interest based on self awareness in ICT. Wanting to know more
            about the technology a .step ahead.</span> </strong>
</font></font></strong></p>
          <p align="left"><font color="#FFFFFF" face="Arial, sans-serif,
Haettenschweiler"><span class="style3"><strong>
            <input name="question_2" type="radio" value="b">
            <strong><span class="style4">Based on the current trend, the market
            for ICT is .....in a popular demand. In another way, jobs ICT
            related are well paid off.</span> </strong>
</strong></span></font></p>
          <p align="left"><font color="#FFFFFF" face="Arial, sans-serif,
Haettenschweiler"><span class="style3"><strong>
            <input name="question_2" type="radio" value="c">
            <strong><span class="style4">Family background. Since you were
            young your parents have been encouraging you to pursue your studies
            in ICT.</span> </strong> </strong></span></font></p>
          <p align="left"><font color="#FFFFFF" face="Arial, sans-serif,
Haettenschweiler"><span class="style3"><strong>
            <input name="question_2" type="radio" value="d">
            <strong><span class="style4">Accidentally dropped in the ICT field.
```

```
          Had no other choices at that particular time.</span> </strong>
          </strong></span></font></p>
        <p align="left"><font color="#FFFFFF" face="Arial, sans-serif,
Haettenschweiler"><span class="style3"><strong>
          <input name="question_2" type="radio" value="e">
          <strong><span class="style4">Peer pressure. Influenced by
peers.</span>
          </strong></strong></span></font></p>
        <p align="left"><font color="#FFFFFF" face="Arial, sans-serif,
Haettenschweiler"><span class="style3">
          <input name="question_2" type="radio" value="f">
          <span class="style11"><strong>Others</strong>.
</span></span></font></p></td>
        <td> </td>
      </tr>
      <tr>
        <td height="14"></td>
        <td></td>
        <td></td>
      </tr>
    </table></td>
    <td></td>
    <td></td>
  </tr>
  <tr>
    <td height="20"></td>
    <td></td>
    <td> </td>
    <td> </td>
    <td> </td>
    <td></td>
    <td></td>
  </tr>
  <tr>
    <td height="414"></td>
    <td></td>
    <td colspan="3" valign="top"><table width="100%" border="0"
cellpadding="0" cellspacing="0">
      <!--DWLayoutTable-->
      <tr>
        <td width="39" height="19"> </td>
        <td width="459"> </td>
        <td width="42"> </td>
      </tr>
      <tr>
        <td height="47"> </td>
```

```
        <td valign="top"><span class="style9"><strong><font color="#000000"
face="Arial, Helvetica, sans-serif">3.
          What is the biggest constraint that you face as a working woman
          today?</font></strong></span></td>
        <td> </td>
       </tr>
       <tr>
        <td height="13"></td>
        <td></td>
        <td></td>
       </tr>
       <tr>
        <td height="122"></td>
        <td valign="top"> <p align="justify">
          <input name="question_3" type="radio" value="a">
          <font color="#FFFFFF" face="Arial, sans-serif,
Haettenschweiler"><strong><span class="style14"><span class="style4">Family
          attention. Hard to divide time and .....attention between family
          and career.</span></span> </strong></font></p>
         <p align="justify" class="style14"> <font color="#FFFFFF" face="Arial,
sans-serif, Haettenschweiler"><strong>
          <input name="question_3" type="radio" value="b">
          <span class="style4">Workplace difficulties. Sexual harassment,
          discrimination against women, and inequality between men and
women.</span>
          </strong></font></p>
         <p align="justify" class="style14"><font color="#FFFFFF" face="Arial,
sans-serif, Haettenschweiler"><strong><span class="style4">
          <input name="question_3" type="radio" value="c">
          Social limitations. Not able to socialize as much as men can.
          Men get paid higher compared to women in your
community.</span></strong></font></p>
         <p align="justify" class="style3"><font color="#FFFFFF" face="Arial,
sans-serif, Haettenschweiler"><strong>
          <input name="question_3" type="radio" value="d">
          <span class="style4">Unable to give full concentration to improve
          one self at work because of pregnancy, menstruations, baby delivery
          leave and so on.</span></strong></font></p>
         <p align="justify"><font color="#FFFFFF" face="Arial, sans-serif,
Haettenschweiler"><strong><span class="style3">
          <input name="question_3" type="radio" value="e">
          <span class="style4">Others.</span></span>
</strong></font></p></td>
        <td></td>
       </tr>
       <tr>
```

```
        <td height="12"></td>
        <td></td>
        <td></td>
       </tr>
      </table></td>
    <td></td>
    <td></td>
   </tr>
   <tr>
    <td height="281"></td>
    <td></td>
    <td colspan="3" valign="top"><table width="100%" border="0"
cellpadding="0" cellspacing="0">
      <!--DWLayoutTable-->
      <tr>
        <td width="38" height="46"> </td>
        <td width="456" valign="top"><strong class="style4"><font face="Arial,
Helvetica, sans-serif">4.
          Do you think that ICT education and ICT work is challenging? If
          so, how challenging could it be to you?</font></strong></td>
        <td width="46"> </td>
      </tr>
      <tr>
        <td height="14"></td>
        <td></td>
        <td></td>
      </tr>
      <tr>
        <td height="186"></td>
        <td valign="top"><p align="justify" class="style3"> <font face="Arial, sans-
serif, Haettenschweiler"><strong><font color="#FFFFFF">
          <input name="question_4" type="radio" value="a">
          <span class="style11">It is not challenging at all.
</span></font></strong></font></p>
          <p align="justify" class="style3"> <font face="Arial, sans-serif,
Haettenschweiler"><strong><font color="#FFFFFF"><span class="style4">
          <input name="question_4" type="radio" value="b">
          It can be challenging at times, but overall it's moderate.
</span></font></strong></font></p>
          <p align="justify" class="style3"><font face="Arial, sans-serif,
Haettenschweiler"><strong><font color="#FFFFFF">
          <input name="question_4" type="radio" value="c">
          <span class="style11">It is a challenging course/job but I think
          I can deal with the challenge. </span></font></strong></font></p>
          <p align="justify" class="style3"><font face="Arial, sans-serif,
Haettenschweiler"><strong><font color="#FFFFFF">
```

```
            <input name="question_4" type="radio" value="d">
            <span class="style11">It is very challenging that I do give up
            at times. </span></font></strong></font></p>
           <p align="justify" class="style3"><font face="Arial, sans-serif,
Haettenschweiler"><strong><font color="#FFFFFF">
            <input name="question_4" type="radio" value="e">
            <span class="style4">This would be the most challenging course/job
            I have ever encountered with</span>.
</font></strong></font></p></td>
          <td></td>
        </tr>
        <tr>
          <td height="12"></td>
          <td></td>
          <td></td>
        </tr>
      </table></td>
    <td></td>
    <td></td>
  </tr>
  <tr>
    <td height="234" colspan="7" valign="top"><table width="100%" border="0"
cellpadding="0" cellspacing="0">
        <!--DWLayoutTable-->
        <tr>
          <td width="15" height="30"> </td>
          <td width="240"> </td>
          <td width="68"> </td>
          <td width="22"> </td>
          <td width="77"> </td>
          <td width="235"> </td>
          <td width="20"></td>
        </tr>
        <tr>
          <td height="24"> </td>
          <td> </td>
          <td valign="top"> <input type="reset" name="Reset" value="Reset">
          </td>
          <td> </td>
          <td valign="top"> <input type="submit" name="Submit2" value="Next">
          </td>
          <td> </td>
          <td></td>
        </tr>
        <tr>
          <td height="30"> </td>
```

```
        <td> </td>
        <td> </td>
        <td> </td>
        <td> </td>
        <td> </td>
        <td></td>
      </tr>
      <tr>
        <td height="114"> </td>
        <td colspan="5" valign="top"><p class="style11"><strong><font
face="Arial, sans-serif, Haettenschweiler">REFERENCE</font></strong></p>
          <p class="style11"><font face="Arial, sans-serif,
Haettenschweiler"><strong>1.
          URL=(http://www.cdgema.com/cdg_news3.asp) , (Community
Development
          Group, 2003)</strong></font></p>
          <p class="style11"><font face="Arial, sans-serif,
Haettenschweiler"><strong>2.
          URL= (http://www.cra.org/Activities/craw/) , (G. R. Andrews, 1994)
          </strong></font></p></td>
        <td></td>
      </tr>
      <tr>
        <td height="36"> </td>
        <td> </td>
        <td> </td>
        <td> </td>
        <td> </td>
        <td> </td>
        <td></td>
      </tr>
    </table></td>
  </tr>
  <tr>
    <td height="24"> </td>
    <td></td>
    <td></td>
    <td></td>
    <td></td>
    <td></td>
    <td></td>
  </tr>
 </form>
</table>
</body>
</html>
```

```
<%
End Sub
'-----------------------------------------------
' END OF PROCEDURES AND START OF MAIN CODE
'-----------------------------------------------

 Call DrawPage()

%>
```

// INSERT ANSWER

```
<%@LANGUAGE="VBSCRIPT" CODEPAGE="1252"%>
<!--#include file="../Connections/womenICT.asp" -->

<%
question_1= request.QueryString("question_1")
question_2 = request.QueryString("question_2")
question_3 = request.QueryString("question_3")
question_4 = request.QueryString("question_4")
'question_5 =request.QueryString("question_5")
question_5 = trim(Request.Form("question_5"))
question_5_sub = trim(Request.Form("question_5_sub"))
question_6 = trim(Request.Form("question_6"))
question_7 = trim(Request.Form("question_7"))
question_8 = trim(Request.Form("question_8"))


if question_5="" then %>
<!-- #Include File="field_empty3.asp" -->
<%response.End
end if
if question_5="yes" then
if question_5_sub="" then %>
<!-- #Include File="field_empty3.asp" -->
<%response.End
end if
end if
if question_6="" then %>
<!-- #Include File="field_empty3.asp" -->
<%response.End
end if


if question_7="" then %>
<!-- #Include File="field_empty3.asp" -->
<%response.End
end if

Dim rsAdd_a, rsAdd_b, rsAdd_c, rsAdd_d, strSQL_a, strSQL_b, strSQL_c,
strSQL_d


Set rsAdd_a = Server.CreateObject("ADODB.Recordset")
strSQL_a = "SELECT * FROM question;"

'Set the cursor type we are using so we can navigate through the recordset
```

```
rsAdd_a.CursorType = 2

'Set the lock type so that the record is locked by ADO when it is updated
rsAdd_a.LockType = 3

'Open the recordset with the SQL query
rsAdd_a.Open strSQL_a, adoCon

'Tell the recordset we are adding a new record to it
rsAdd_a.AddNew

'Add a new record to the recordset
rsAdd_a.Fields("one") = question_1
rsAdd_a.Fields("two") = question_2
rsAdd_a.Fields("three") = question_3
rsAdd_a.Fields("four") = question_4
rsAdd_a.Fields("five") = question_5
rsAdd_a.Fields("fivesub") = question_5_sub
rsAdd_a.Fields("six") = question_6
rsAdd_a.Fields("seven") = question_7
rsAdd_a.Fields("eight") = question_8

'Write the updated recordset to the database
rsAdd_a.Update
rsAdd_a.Close
Set rsAdd_a = Nothing



%>

<%

adoCon.Close
Set adoCon = Nothing
Response.Redirect "graph1_2.asp"
%>
```

```
// TEST
<%@LANGUAGE="VBSCRIPT" CODEPAGE="1252"%>
<%
question_1= trim(Request.Form("question_1"))
question_2 = trim(Request.Form("question_2"))
question_3 = trim(Request.Form("question_3"))
question_4 = trim(Request.Form("question_4"))

if question_1="" then %>
<!-- #Include File="field_empty2.asp" -->
<%response.End
end if


if question_2="" then %>
<!-- #Include File="field_empty2.asp" -->
<%response.End
end if
if question_3="" then %>
 <!-- #Include File="field_empty2.asp" -->
<%response.End
end if

if question_4="" then %>
<!-- #Include File="field_empty2.asp" -->
<%response.End
end if

response.Redirect"survey2.asp?question_1="&question_1&"&question_2="&que
stion_2&"&question_3="&question_3&"&question_4="&question_4&""

%>
```