CHAPTER 9

CONCLUSION

9.0   Introduction

A completion of a project did not mean a creation of a perfect and useful system. It might be perfect for the current time but not for the future. This is because the technology in ICT are always improving from time to time. In this chapter, project strength, limitation and enhancement is discussed.

9.1   Project Strength

The completion of this project has met the software requirement specification and the project objectives that had been discussed in chapter 5 and chapter 1. The system of this project is ready for use for those people who want to learn C programming. The best potential for the system of this project is the personal learning content that can be accessed from anywhere that has computer with LOOOP installed and Internet access. It enabled user to study at anywhere and did not need to bring along the book always.

LOOOP not only can be used with the existing learning contents, a new learning contents can be added inside the database as sharable learning content for future studies. The learning contents added are not limited to one subject. Users may use LOOOP with other learning contents that they wanted. The sources of sharable learning contents are either saved from Internet or other registered users.

Information searching agent also provides user to search information faster and easier to save the information found. LOOOP provides auditory learner that studies well by

hearing another resource in study where LOOOP is provided as a reader agent for them. LOOOP, which can also play certain multimedia file and give visual, auditory learner a better environment to study.

9.2   Project Limitation

There are a few limitations during LOOOP development. The main limitation is the using of COM component in the system. Some COM component functioned well in one operating system, but could not operate in other operating system. For example, the reader agent component could function on Microsoft Window 2000, but could not function in lower version operating system. Besides, the client machine is also needed to support COM component installation and execution.

Thus, lack of experience in programming COM component and DLL file can also caused a short delay in the progress of the system implementation. LOOOP language that is used as data passing statement can also caused a limitation in this project. Some of the HTML code is confused when it is used together in LOOOP language. The code needed to repair before merged in LOOOP language.

The other limitation for this project is the learning contents that are recorded are not transferable within online database and offline database. This would be a point that supported project enhancement in future. This limitation can cause learner not being able to retrieve the personal learning contents on online database when they are on offline mode and vice versa. They are limited to use the offline database if they had chosen to use offline mode. Internet searching also had limitation when some system environment condition needed to be met. The conditions are the computer must access to Internet, Google.com server status was not down and the transfer bit was moderate. Furthermore, the component

or control used in this project had limited functions. More powerful components were needed to replace the existing component used in this project.

9.3   Project Enhancement

Learning is a long processes that never stop. At the same time, the technology in Information Technology has improved from time to time. With the integration of ICT and learning process, learning could be more easily understand. This has similarity to this project. When technology improves, Learning Objects can be more powerful and more usable in support learning. The system of this project that developed based on Learning Objects approach had the space to enhancement. The identified project enhancements are as follows:

1.   Includes a multi-language reader agent.

With a multi-language reader agent, the system could read multi-language contents. The contents may contain only one type of language or in mixed languages. Recently, the system can only read English text to user.

2.   Includes a multi-language dictionary or thesaurus.

With a dictionary or thesaurus, learners could search word or phrase definition or descriptions direct from the system database. Recently, the word definitions and its descriptions are provided via Internet searching from Google.com.

3.   Improves editing tools.

Recently, there are just a few tools that are developed for text editing. More editing tools can be developed to improve text editing.

4.   Improves Internet searching.

Recently, the results are retrieved from Google.com. Results from other Internet search engine might increased the numbers of results found. Besides, the results

retrieved needed to be categorized and reviewed before listed out to user. This ensured all the results listed out were compatible with the term's search.

5. Improves highlight text tool.

   More and more highlight text shape needed to be included in the system. This provided user more selection in highlight text. Recently, the highlighted text was highlighted on the text background.

6. Improves the speed of data transfer bits by compress the data

   Recently, the data transferred from database to system and vise versa were not compressed.   A large length of data caused a slow processing on data passing. With a data compression technology, the process could be done faster.

7. Learning contents are transferable within online database and offline database.

   This feature gives benefit to users who have both registered as online and offline accounts. The online learning contents could be added to or replaced by offline learning contents and vice versa. User did not need to modify again on the same learning contents but in different system runtime mode.

9.4   Summary

This concludes the last chapter for this project report. In this chapter, the project strengths, project limitations and project enhancements are discussed. Project strength discussed about the benefit of LOOOP. Project limitations discussed some problems occurring due to the development and implementation. Project enhancements suggested some of the new features that supported future upgrade for the system.