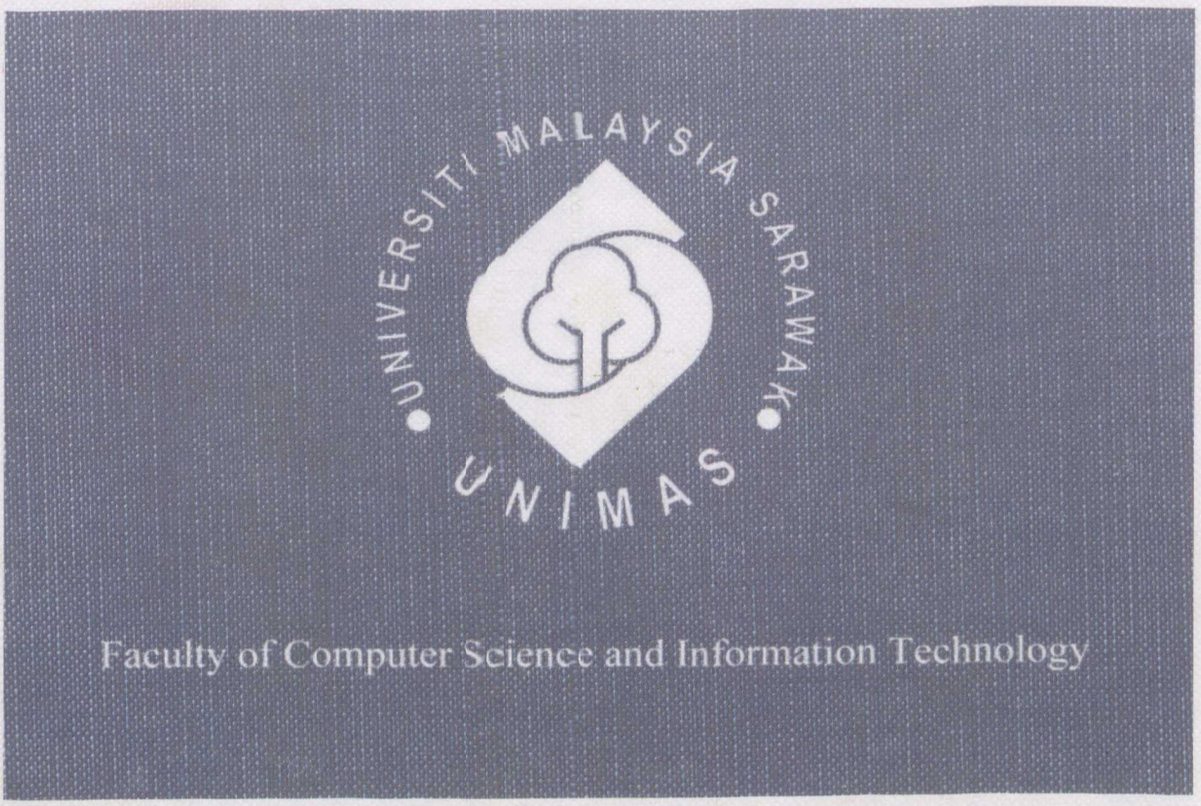


# *FCSIT NOTES SHARING SYSTEM*

Chin Pooi Yau

Bachelor of Computer Science with Honors
(Software Engineering)
2014


# FCSIT NOTES SHARING SYSTEM

**CHIN POOI YAU**

This project is submitted in partial fulfillment

of the requirements for the degree of

Bachelor of Computer Science with Honors

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Faculty of Computer Science and Information Technology

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2014

# SISTEM PERKONGSIAN NOTA FSKTM

**CHIN POOI YAU**

Projek ini merupakan salah satu keperluan untuk

Ijazah Sarjana Muda Sains Komputer dengan Kepujian

(Perisian Kejuruteraan)

Fakulti Sains Komputer dan Teknologi Maklumat

UNIVERSITI MALAYSIA SARAWAK

2014

## DECLARATION

I certify that all work on this thesis was carried out between February 2014 and June 2014 and no portion of the work has been submitted for academic award at any other College, Institutes or Universities. The work presented was carried out under supervision of Mr. Norfadzlan bin Yusup. All other work in the thesis is my own except where acknowledgement in the dissertation.

Signed by,

.....

June 2014

(Chin Pooi Yau)

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**Abstract**

Collaborative E-Learning is the advancement of the collaborative learning with the usage of Internet and electronic communications. The FCSIT Notes sharing system allows students to exchange knowledge, discuss and solve problems among each other via online web. Students can create and share the notes with other students who are using the system. Students can upload and download the notes to local media for offline readings. Upon from that, students can ask questions through the FCSIT Notes Sharing System and obtain answers and comments from other students. Besides that, students can recommend useful references such as online references (e.g tutorial videos) and books which worth to buy and read. These features allow students to discuss, exchange and construct knowledge to enhance the depth of learning.

## Abstrak

E-Pembelajaran kolaboratif merupakan perkembangan pembelajaran kolaboratif dengan penggunaan Internet dan komunikasi elektronik. Sistem Perkongsian Nota FSKTM membolehkan pelajar berkongsi ilmu pengetahuan, berbincang dan menyelesaikan masalah secara atas talian. Pelajar boleh membuat dan berkongsi nota dengan pelajar lain yang menggunakan system ini. Pelajar boleh memuat naikkan nota ke sistem, dan memuat turunkan nota pelajar lain untuk penggunaan sendiri. Selain itu, pelajar boleh menanyakan soalan-soalan dalam Sistem Perkongsian Nota FSKTM dan mendapatkan jawapan dan komen pelajar lain. Pelajar juga boleh mengesyorkan rujukan yang berguna seperti rujukan atas talian (contohnya video tutorial) dan buku yang berbaloi untuk dibeli dan dibaca. Ciri-ciri ini membolehkan pelajar membincang, berkongsi dan membina ilmu pengetahuan serta meningkatkan kedalaman pembelajaran.

# CHAPTER 1

# INTRODUCTION

## 1.1 Introduction

Nowadays, students share their notes and files through digital and hard copy. This file sharing process usually happens when they meet each other or via other method such as using e-mail, file sharing (eg. Dropbox) and etc.

When the students did not understand about a certain topic or subject, students usually have to make appointments with lecturers or ask for helps from their friends through messaging, calling, or any other communication media. The scopes of the answers received is limited among their friends and the lecturer only.

The Notes Sharing System reduced the problems mentioned above to minimum. The students can share their notes and knowledge online in the digital format, such as .pdf, .pptx, .docx, and others. Students can view and read the notes online through smart phones, tablets, laptops and Personal Computer (PC) anytime. Besides, students can rate the notes and leave comments if they find out that the notes are useful.

With a question and answer module, students can ask the questions and wait for the answers and comments from other students. Students also can refer to the questions asked by other students which may provide hints and solutions to them. In addition, the answers are not limited within the friends and lecturers only, but with all Faculty of Computer Science and Information Technology (FCSIT) students.

Senior students can recommend useful reference books by providing book details such as images, brief contents and reference code from University Malaysia

Sarawak (UNIMAS) Centre for Academic Information Services (CAIS), if it is available.

## 1.2 Problem Statement

Currently, FCSIT, UNIMAS does not have a platform where students can share their knowledge and notes among each other. Also, there are less interaction and communication between senior students and junior students due to time constraints, different class schedule and etc.

Sometimes, junior students do not know what kind of good reference materials (lecturer notes, books etc.) that they should be referred. Besides that, junior students have more classes compared to the seniors, and hence they have less time to meet and discuss with senior students.

## 1.3 Objectives

The objectives of the project are :

I. To design and develop a platform where students can share their knowledge and notes in digital formats.
II. To recommend useful and good reference materials to the students.
III. To create a module where students can ask questions to improve their understanding.
IV. To allow students upload and download examples and references with the provided links.

## 1.4 Scope

The scopes of this project are:

I. The users of this system are FCSIT students and staff.
II. The system is developed as a web-based system.

## 1.5 Significance of Project

This system is significance to be built to provide a platform for the FCSIT students to share their knowledge, experience and notes to each other. Even though there is a discussion option currently available in the Morpheus UNIMAS, but there are limitations in the Morpheus system, such as no HyperText Markup Language (HTML) editor, comment system, and rate system. Most importantly, all participants in a course will received the notifications from the Morpheus system by email, where this is a bit annoying as it is such a spamming when there are many students discussing about a certain topic.

Hence, this system provided an online platform for the students to discuss by asking a question, and students are able to choose whether they want to add the question to favorite list or not. Besides, senior students are able to guide to junior students about the references, courses, and questions. Furthermore, senior students are able to upload some useful notes or references into the system, and other students are able to download it and view it online.

## 1.6 Expected Outcome

A web-based FCSIT student sharing notes system is developed and students can access it online through computer, smartphones and tablets.

Students able to create a note by using the HTML editor provided in the system or by uploading files (.pdf, .docx, .pptx and other digital formats) and share a video from Youtube. When the students find out that the notes are useful, students can rate and follow the notes if they are interested.

Besides, the students able to ask a question in the system. The questions such as requesting complete programming codes and assignments answers are prohibited. The questions can be answered by the students, and also they can rate the questions either it is a good or bad questions.

In addition, students also can recommend references such as reference books, journal and e-book by providing images and brief descriptions in the system. Students can comment and rate the recommendation if it is useful.

Students can report the notes and questions if they found the notes and questions violated the rules and regulations. System administrator will review the notes and questions, and appropriate actions will be taken, such as closing the notes and questions, and suspend the student's account.

System administrator will able to maintain and update the student accounts, monitoring the content of the system, view and print statistic of user login and notes created, manage users uploaded files, and create system announcement.

## 1.7 Project Outline

A brief description of each chapter is given below to let readers a better understanding of this project.

Chapter 1 is Introduction which is to explain the overview of this project. This chapter includes introduction to the project, problem statements, objectives, scope, significant, and expected outcome of FCSIT Notes Sharing System.

Chapter 2 is Background Study which is focused on the literature review for the existing notes sharing systems. This chapter consists of the introduction of literature review, and followed by reviewing of existing notes sharing systems and similar student collaborative e-learning systems that can be referred to develop a notes sharing system for FCSIT. Besides, comparison and drawbacks of reviewed systems and FCSIT Notes Sharing System are included and concluded in this chapter.

Chapter 3 is Requirement Analysis and Design which describes the analysis of logical design and requirement needed in the FCSIT Notes Sharing System. A deeper explanation on the software development methodology used will be included in this chapter. Requirement and specifications, architecture design, features of the FCSIT Notes Sharing System, database and stakeholders roles are concluded at the end of this chapter.

Chapter 4 is Implementation and Testing, which emphasizes on the physical implementation of the system on a platform. Testing strategies are designed to test every functions of the system to confirm the FCSIT Notes Sharing System meets the requirements and objectives.

Chapter 5 is Conclusion and Future Works. This chapter concluded the FCSIT Notes Sharing System and included future enhancements of this system. Constraints and data collected during implementation and testing phase are highlighted. Besides, the performance and efficiency of the FCSIT Notes Sharing System are included too. An overall conclusion on the project will be written and included in this chapter.

## 1.8 Summary

In conclusion, this chapter has provided an overview of the whole project. Project statement, objectives, scopes, significance of project, expected outcome and project outline are included in this chapter. As stated, this project is to develop a platform for students to share their knowledge and experience in the form of digital formats (eg. .PDF, .DOCX, .PPTX and more) and HTML. Students are able to review the notes drom other students and improve their own knowledge. If files are provided, students can download the files and store in their own storage for study purpose.

Question and Answer module is good for students as students can ask questions on the problems they faced. The question and answer rating is provided to let the others know that the question and answer are useful. Rate system is practical when it comes to display recommended question and answer, instead of displaying random question and answer.

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# CHAPTER 2

# BACKGROUND STUDY

## 2.1 Introduction

This chapter emphasizes on the general background and study on similar existing systems and the features of the systems.

### 2.1.1 Computer-Supported Collaborative Learning System

Computer-supported collaborative learning is an approach that using computer technology and art of education. The learning takes place through social interaction using a computer or through the Internet. Participants are using technology as their main communications to share and construct the knowledge. Computer-supported collaborative learning can be implemented in online and classroom learning environments and can take place synchronously or asynchronously.

There are several academic disciplines drawn by the study of computer-supported collaborative learning, including instructional technology, educational psychology, sociology, cognitive psychology, and social psychology.

### 2.1.2 E-Learning

E-Learning uses electronic media and ICT (Information and Communication Technologies) in education. E-Learning includes all forms of educational technology

in learning and teaching. E-Learning emphasizes a particular aspect, component or delivery method.

E-Learning includes various types of media that deliver text, audio, images, animation, and streaming videos, and includes technology applications and processes such as audio or video tape, satellite TV, CD-ROM, and computer-based learning, as well as local intranet/extranet and web-based learning.

E-Learning can occur in or out of the classroom. It can be self-paced, asynchronous learning or may be instructor-led, synchronous learning. E-Learning is suitable for distance learning and flexible learning.

## 2.2 Collaborative E-Learning System

According to Salmons (2008), a working definition for collaborative E-learning is constructing knowledge, negotiating meanings and/or solving problems through mutual engagement of two or more learners in a coordinated effort using Internet and electronic communications.

Active and collaborative learning provides a powerful mechanism to enhance depth of learning, increase material retention, and get learners involved with the learning process instead of passively participate in it. Besides, there is additional avenue such that E-Learning support teaching and learning practice.

Many opportunities are offered including online delivery modules and courses in large scale. It engages students to use the system as a source of research material which to support study. Furthermore, it can be a platform for discussion where extra materials may be obtained.

Collaborative E-Learning can be used in tutoring and coaching situations to increase their change of deeper learning, but in a more radical departure situation. Mastery and retention of study materials are higher in a collaborative learning environment. The transference of learning from a group to individual is higher, and production of new ideas is greater.

### 2.2.1 StudyUp

StudyUp.com is a web-based collaborative E-learning system. The system allows students and teachers to store and share lecture notes online. Other students and teachers who using the system and taking similar courses can share their learning and teaching experience.

StudyUp has an academic integrity to help students and teachers optimize the learning environment by allows students and teachers study the notes anywhere, anytime with the connection to the Internet. Figure 2.1 is the screenshot of the StudyUp.com homepage.

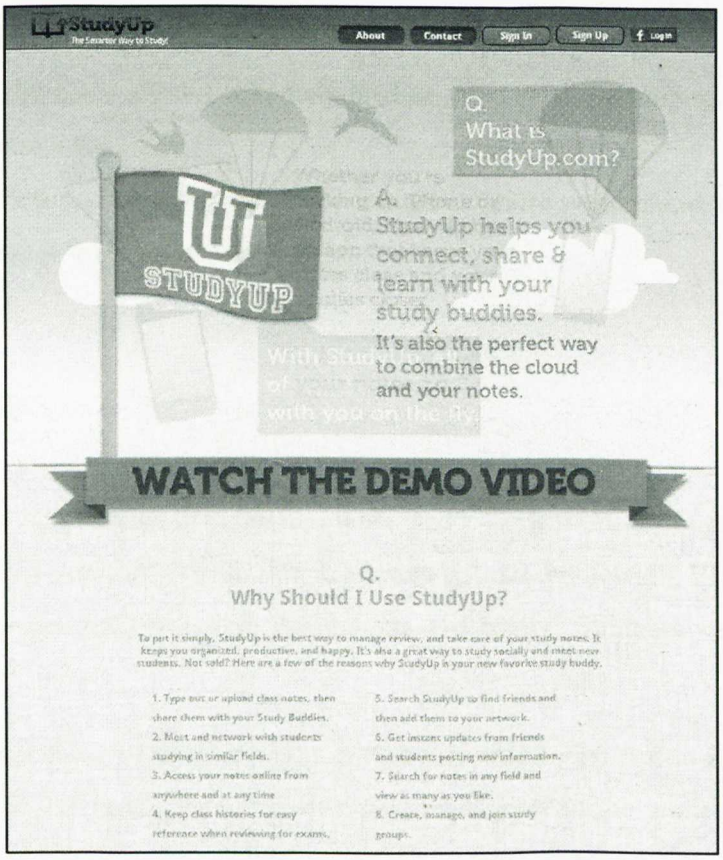


Figure 2.1 Homepage of StudyUp.com

StudyUp consists of the following features :

i. Students and teachers can register as the participants with no charges.

ii. Participants can type out or upload the lecture notes.

iii. Participants can share the notes with Study Buddies.
iv. Simple HTML editor is provided.
v. Participants can access the notes online anytime.
vi. Participants can find friends and add them to own network.
vii. Participants will get instant updates from friends.
viii. Class histories are kept for easy reference when reviewing for exams.

StudyUp consists of the following weakness :

i. No comment or reply function for the notes.
ii. Participants cannot to download the notes in digital copy.
iii. Notes are not categorized.
iv. The notes are not acknowledged or rated as all participants can create a new notes.
v. There is no reporting abuse function, where participants can report the notes that violated the rules.

### 2.2.2 Notable

Notable.ac is asynchronous-learning web-based collaborative learning system. Notable is free to use and easy to use. Lecturers upload the notes in PDF format and with simple steps required, and the classes are ready. Students can take notes collaboratively.

Students can take notes by just next to the slides. The realtime collaboration allows the notes to be shared with your classmates in realtime while lecturers in a lecture room. Figure 2.2 is the screenshot of the Notable.ac homepage.