ONLINE VIRTUAL CLASSROOM

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To mum, dad, family, friends and teachers.

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ABSTRACT

This project is to create an Online Virtual Classroom. Virtual classroom is an alternative way to attend classes rather than physical classes. The OVC consist multi-features such as log in or register button, attendance button, live video and audio, download or upload learning materials and also hand-up button. Nowadays, there are many students want to attend a course that probably not available in their own country or states. Not only the students, this situation may occur among the lecturers especially the international lecturers. They are facing obstacle which involves costs and time. An OVC is a brilliant idea to overcome this problem. The objective of this project is to create an alternative way to attend classes. Other than that, the OVC is build as an interactive teaching tools which involve both lecturers and students. As it is an online application, the OVC can provide an online learning experience to registered students. This project will be using Adobe Dreamweaver CS6 to design interfaces and features of the OVC and WampServer to develop the databases of students information.

ABSTRAK

Projek ini bertujuan untuk meghasilkan Bilik Kuliah Maya Dalam Talian (BKMDT). Bilik kuliah maya adalah salah satu cara alternatif untuk menghadiri kelas selain dari menghadiri bilik kuliah fizikal. Bilik kuliah maya mempunyai beberapa ciri-ciri seperti butang log masuk atau mendaftar, butang kehadirang, video dan audio secara langsung, butang memuat turun atau memuat naik bahan-bahan pembelajaran dan juga butang pertanyaan. Pada masa kini, terdapat ramai pelajar ingin menghadiri kursus yang berkemungkinan tidak terdapat di negara atau negeri mereka sendiri. Bukan sahaja pelajar, situasi ini juga berlaku di kalangan pensyarah khususnya pensyarah antarabangsa. Mereka berdepan dengan kekangan masa dan kewangan. BKMDT merupakan satu idea yang bernas untuk mengatasi masalah ini. Objektif prjek ini adalah untuk mewujudkan satu cara alternatif untuk menghadiri kelas. Selain daripada itu, BKMDT dibina sebagai alat bantu mengajar yang interaktif yang melibatkan pensyarah dan pelajar. Oleh kerana ia adalah aplikasi dalam talian, BKMDT menyediakan pengalaman pembelajaran dalam talian kepada pelajar-pelajar yang berdaftar. Projek ini menggunakan Adobe Dreamweaver CS6 untuk rekabentuk antara muka dan ciri-ciri yang terdapat dalam BKMDT dan WampServer untuk membangunkan pangkalan data maklumat pelajar.

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LIST OF ABBREVIATION

OVC	-	Online Virtual Classroom
BKMDT	-	Bilik Kuliah Maya Dalam Talian
PSIT	-	Pranveer Singh Institute of Technology
PC	-	Personal Computer
CS6	-	Creative Suite 6

CHAPTER I

INTRODUCTION

1.1 INTRODUCTION

Online Virtual Classroom (OVC) is similarly referred to E-Learning system or can be described as simulated classroom via Internet. This is a database project which is also a web application and can be accessed by users over the world by the internet. OVC also can be classified as teaching tools to assist lecturers or teachers for learning process in an interactive way.

With OVC, geographical barriers can be removed as everyone can enter or register the class from all around the world. For example, people nowadays prefer long-distance learning or part-time study while they are actually working. With OVC, they can save costs and time in order to complete their courses. OVC implies one-to-one communication where students can have a private chat with the lecturers regarding their doubt and the students can even chat among themselves to discuss about the courses.

As we know that there are plenty of virtual classroom available now on the Internet. The universities abroad mostly used virtual classroom as the replacement of physical classroom. They preferred this way because this is the easy way to learn or to attend a classes without moving to certain places. OVC operated in two way communication where the lecturers act as the server and the

students as the clients. To enhance the OVC, features that would make it better are the live video streaming and live chat to discuss about the class. By that mean, the student won't miss any important notes or topics during the class.

1.1 OBJECTIVE

i. To build an interactive teaching tools which involve both lecturers and students.
ii. To create an alternative way to attend classes in order to remove geographical barriers.
iii. To provide an online learning experience for registered students.

1.2 PROBLEM STATEMENT

Nowadays, there are many students want to attend a course that probably not available in their own country or states. Not only students, this situation may occur among the lecturers especially the international lecturers. A class with international or distance students or lecturers, facing a problem to attend the courses as it takes time and costly. An OVC is a brilliant idea to overcome this problem where the students can attend the online classes by registering on the subject offered. This will be a standalone application that will be made available to users once they have registered with the service. This application will be used to give users access to lessons.

1.3 SCOPE OF WORK

To complete the OVC project, there are several aspects that need to be implemented such as networking, programming and designing. As for programming and database, this system will be preceding with WampServer program which contain a package of independently-created programs such as Apache, MySQL and PHP. Other than that, Adobe Dreamweaver also will be used for web development as the project is a web-based application.

The networking that involves in this project related to server-clients relation. The system is designed that this application implies the teachers or lecturers act as the server and the students as the clients. In order to design this application, any web template available which suits the OVC well will be used and also Adobe Dreamweaver CS6 too.

1.4 METHODOLOGY

This project will be use Adobe Dreamweaver CS6 as the interface designing platform and WampServer to develop databases. A free web template also will be used in order to guide the interface designing.

1.5 REPORT STRUCTURE

For Chapter I of this report will be explain on the introduction of the project, objective of the project and the scope of project. On Chapter II, the literature review on this project will be elaborated. The literature review consist of the research done and comparison between this project and previous projects. As for Chapter III, it explained on the methodology of this project. It is being emphasized on the steps upon completing the OVC that involve designing and programming. After succeed on Chapter III, the next chapter shows the results and discussion on this project. The results are shown and explained in details in Chapter IV. As for the last chapter, Chapter V concludes the project that have been successfully completed. In addition, there are also suggestion and recommendation for future work.

CHAPTER II

LITERATURE REVIEW

A virtual classroom is a teaching and learning environment within a computer-mediated communication system. Rather than attending physical classes, all are accessed, not by travelling to the university but by typing and reading from a PC which connected to the internet. The term virtual used in computer science to referto something whose existence is simulated with software rather than actually existing in hardware or some other physical form.

The virtual classroom was first created on 1977 at Princeton University during a postgraduate seminar on the Sociology of Architechture, led by Professor Suzanne Keller. One difference between physical classes and virtual classes is that in the physical classes, most interaction takes place by speaking and listening but in virtual classroom, interaction currently takes place almost entirely by typing and reading from a computer terminal. Table 2.1 shows the difference between physical classes and virtual classes.

Nowadays, there are various type of online or virtual classes available on the internet over the world. Some of them are system that being used by some of the universities abroad such as University of Colorado Denver, University of Michigan, Oxford University, LaTrobe University, University of California Press and many more. They offered several courses for anybody to attend or interested on leaarning

something different or new or even for some courses that not available on our country.

Physical Classes	Virtual Classes
Speaking & listening: One person at a time. Mostly, the teacher talks and the students listens	Typing & reading: Multilogues in which students actively participate as co-learners
Entire class must move at the same speed	Self-pacing
Set time & place	Anytime, anyplace
Socializing inappropriate	Socializing mixed with 'serious' exchanges
Mostly individual assignments	Mostly group assignments & exercises
Students must take notes	Complete transcript automatically saved and reviewable
Computer resources generally not available to each student in the classroom	Computer resources an integral part of the facility

Table 2.1: Comparison between physical classes and virtual classes

Usually, an online classes can be define as student portal where they can learn and having discussion among students related to that course. Among all the online classes, they have their own speciality which makes them differ from other product or project. Despite that, they are having quite similar features in their systems. Two types of online classes are whether it is an online application or software program that need to be installed.

For this project, three product are chosen; which is one of them is previous project from Pranveer Singh Institute of Technology, Kanpur and the other two are the software of online classes that provided by WizIQ and E-Lecta Communication, to be compared and the features of those three project had been studied and the new version of OVC have come out after research are done.

Online classes normally consist of login or register button, attendance button, download or upload button (for learning materials) and also discussion room (chat; private or group). Table 2.2 and Table 2.3 shows the comparison between the product choosed.

Criteria/ Product	Software Program	Online Application	Log in / Registration	Attendance	Record Discussion
Virtual Classroom (WizIQ)	Yes	-	-	Yes	Yes
Virtual Classroom Software (E-Lecta Live)	Yes	-	Yes	-	Yes
Virtual Classroom Sytem (PSIT)	-	Yes	Yes	-	-
Online Virtual Classroom (OVC)	-	Yes	Yes	-	-

Table 2.2: Comparison between previous project and OVC

Criteria/ Product	Whiteboard	Live Audio & Video	Discussion Room	Hands-up Button	Download / Upload Learning Materials
Virtual Classroom (WizIQ)	Yes	Yes	Yes	-	Yes
Virtual Classroom Software (E-Lecta Live)	Yes	Yes	-	-	-
Virtual Classroom Sytem (PSIT)	-	Yes	Yes	-	Yes
Online Virtual Classroom (OVC)	-	Yes	Yes	Yes	Yes

Table 2.3 : Comparison between previous project and OVC

First of all, this project is an online application system while the product from WizIQ and E-Lecta Live are software program which need to be installed for use. Login or register button are compulsory in order to make the application works only for registered users. If the application allows public to access or use the system then no registration or log in required. As for this project, according to one of the objective, only registered users can experience the online learning system. WizIQ's Virtual Classroom did not provide the login and register button while the rest have.

The attendance button is used to record students attendee which when the students logged in, they have to click the attendance button then they are considered as attending the classes. Only WizIQ's Virtual Classroom provide this features. As for learning materials, normally E-learning system provides downloadable files for notes, tutorial, assignments and also the assesments such as quizzes and tests. In addition, certain E-learning system allow users to upload any documents for example when the students need to submit their assignments in softcopy, instead of using e-mails, they can simply upload the materials to the system using the features provided. The Virtual Classroom Software from E-Lecta Live did not provide this features.

In order to make the virtual classroom different from normal E-learning system, a live video or audio should be implemented in the system. Refer to Table 2.3, all four project include the live video and audio streaming. Other than that, discussion room or chatting room is necessary to help students interact with the lecturers or teachers. In case of any question need to be asked or discussion among the students themselves, the discussion room let them share their knowledge between them.

CHAPTER III

METHODOLOGY

3.1 INTRODUCTION

This chapter will explain detail on the method, procedures and processes that will be used in this project. All research are based on previous project from various institutes. Free web template is used to make as a guide to develop the interfaces. The software used for this project are Adobe Dreamweaver CS6 and WampServer. As for the hardware, this project only need a PC or laptop and internet connection.

3.2 OPERATION FLOWCHART

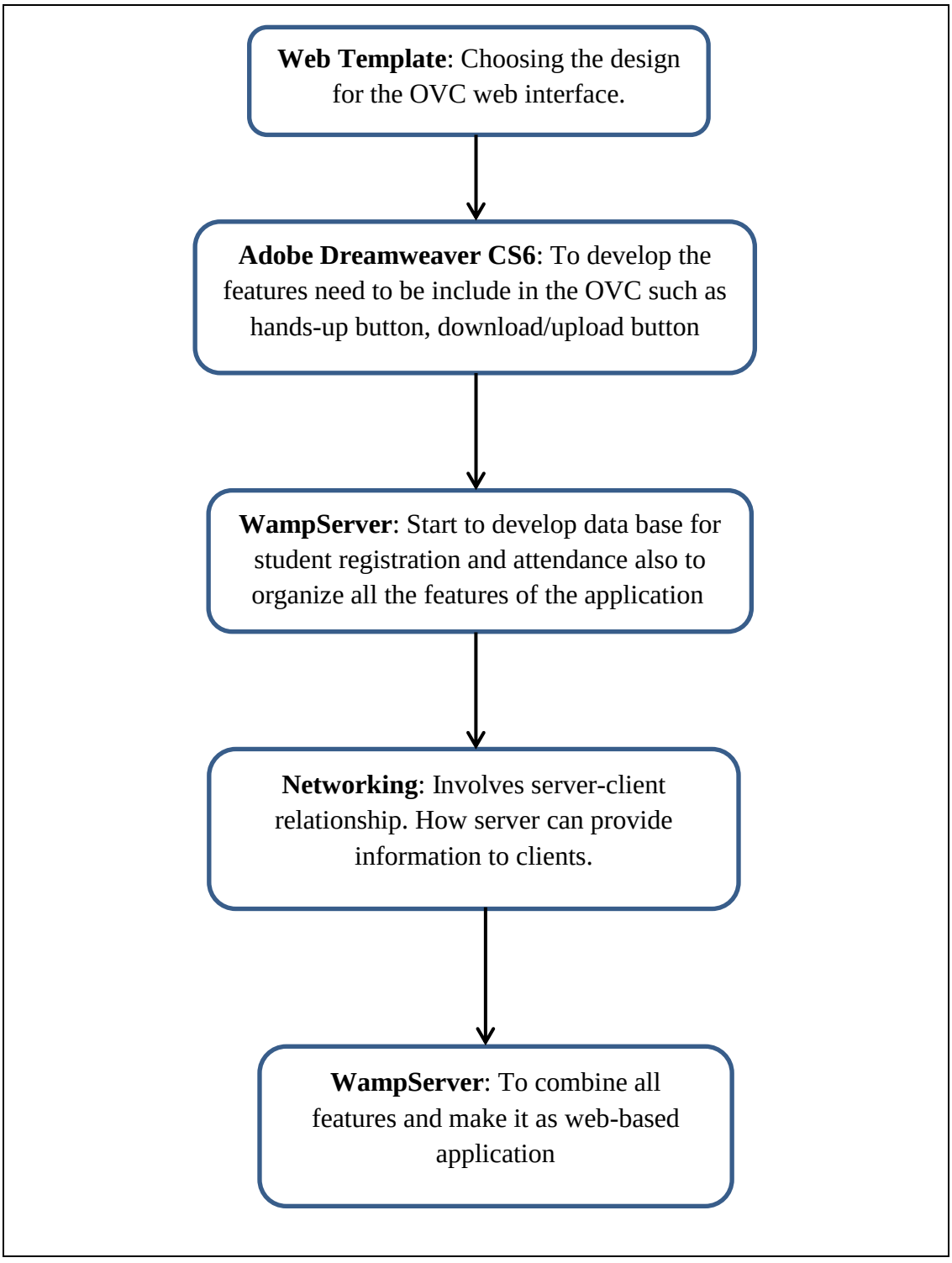

Figure 3.1: Operation Flowchart

Figure 3.1 shows the operation flowchart of this project. Research are done right after this project is choosed. After researching, the literature review is constructed which consist of comparison between previous projects and OVC.