

UNIVERSITI TEKNOLOGI MARA

U-LEARN: VIRTUAL NETWORKING LAB (ViNEL)

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DECLARATION

I certify that this thesis and the project to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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“By the name of Allah, the Most Gracious and Most Merciful”

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ABSTRACT

Learning Management System (LMS) is a software application that has been used in many institutions for educational purpose. LMS helps administration to handle all aspects of learning processes. As for UiTM, i-Learn is used as a platform for lecturers and students enhancing online collaboration. Currently, i-Learn interface is quite bored since there are only words and tabs in order to do activities inside it such as downloading files, group forum and so on. Therefore, since networking students from Faculty of Computer & Mathematical Sciences having difficulties spending more time in lab either during lab session or during leisure time, a virtual lab will be produced to help them overcome their difficulties. A Virtual Networking Lab (ViNEL) is an enhancement of previous Virtual i-Learn Community (VIC). Previously, VIC focused on server development, isometric avatar based system, chatting and announcement module. Apart from those things, VIC had come out with attractive i-Learn environment by made it disclose from the general old i-Learn version to the virtual environment. Therefore, as extension to VIC, ViNEL is introduced. Basically, ViNEL adds-on virtual simulation labs that can be access by students at anytime they wish. The objectives of having virtual simulation lab are to have an interactive networking lab environment that can be access at any time within university range and can be access with multiple students at one time and it is also to provide flexible and active learning for students. This project will focus on the design and development of the virtual lab environment by using Flash technology. For the expected result, students will be more convenient to do the activities in the virtual simulation lab since they can access the lab at any time without worrying about booking procedure and they are able to enhance their learning experience via online learning.

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CHAPTER 1

INTRODUCTION

In this chapter it will tell about background of the project and explain more on the problems, aim, objectives, scope of project and the significant of this project.

1.0 Background of Study

Basically ViNEL is an enhancement from the previous system which is known as Virtual I-Learn Community (VIC). The aim of VIC is students can significantly improve online interaction between themselves and their lecturers. ViNEL is a system develops for UiTM student and it is focusing on students from Faculty of Computer & Mathematical Sciences. Because of VIC lack of features inside it, ViNEL has been introduced to improved VIC.

As the previous system, ViNEL will be developed into an interactive Learning Management System (LMS) that is represented by Massive Multiplayer Online Chat Community (MMOCC) that enable user to control the avatar independently and let them be surrounded by classroom environment. The MMOCC has the capability to enable student communicate with each other in ViNEL community.

As additional from VIC, a networking simulation lab will be designed. In this virtual lab, the devices are designed according to the real world networking devices in real lab. According to Agrawal and Chener (2008), an interactive