UNIVERSITI TEKNOLOGI MARA

INTERNET ACCESS USING ENCRYPTED MEMBERCARD

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ABSTRACT

Cybercafe is popular to some people because it provides public accessibility with high specification equipment provided by the entrepreneur. The cybercafé use token system to generate user id and password by purchasing token according to the hours of use. It brings many disbenefit to the user in term of time consuming, security and availability of equipment. Therefore, the system based on token ring topology controlled by software makes the maintenance difficult by configuring wire and pc. The solution to this problem is to use encrypted member card to access internet by using captive Wi-Fi portal of Arduino ESP8266.This system is developed in Arduino ESP8266 by using C++ languages and Arduino platform. The main function of this device is to control input user of client and to also encrypt it with AES algorithm. User need to input the data using barcode scanner that contain ID and password of user. The server is controlled by PHP and MySQL database. The server includes user database and pc information. Manager can manage user and pc information if there in increasing or decreasing number of user and pc. It is connected to Arduino device.

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CHAPTER 1

INTRODUCTION

A brief overview of the project context and other relevant components for detailing the proposed project will be explained in this chapter.

1.1 BACKGROUND STUDY

Today, the internet is highly in demand nowadays compared to a few decades back (Ahmed Sagar, 2016). Cybercafé is one of main place to accessing internet by pay money to using it. But the cybercafé use token system to generate user id and password by purchasing according of hour. It brings many disbenefit to the user in term of time consuming, security and available of equipment. So, using member card to accessing internet, it reducing the problem arise from using token system.

Connecting internet by using encrypted password refer to the idea of accessing network by securing user database information. According to Xi-Mei Zhang (2016), in normal operation, the systems are open to many attackers such hacker are illegal login system with secret technology will cause damage to information system. The encrypted concept makes it possible for reducing attacker to gain free access to internet and prevent from user information from being expose. There are many ways to connecting internet by using secure protocol such Wi-Fi Protected Access (WPA), virtual private network, Wired Equivalent Privacy (WEP), and captive Wi-Fi portal. We will focus on using captive Wi-Fi portal that be encrypted in AES.

Most cybercafe use software to control user and also computer. It has benefit in term of effectiveness and control. But the maintenance of the software is