University Teknologi MARA

Security System for Housing Area Using Raspberry Pi and Web Hosting

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ABSTRACT

According to the technology today, there are many devices that connected to the internet. In additional, there a lot digital eyewitness that has develops today. Based on some product there are connecting to Bluetooth or Wi-Fi for example. Home security is one of the most important things to have. It allows people to monitor their home situation every day. The problem rise from the huge amount of memories that used to store the data. The objective of this project is to reduce the consumptions of memory that can be creating by the security system. This project is to collect the data that send from the Raspberry Pi (RPi). The methodology of this project is used Waterfall Model consists of Planning, Analysis, Development, Testing and Documentation. The data that sends is a timestamp and image file that captured by the Raspberry Pi camera. Then, This project utilizes Raspberry Pi, PIR sensor and Pi camera as the surveillance device and website as the monitoring system. The main purposes of this project are to reduce the consumption of storage for evidence keeping and also reducing the memory consumption of security system by using cloud as the directory for the data. There is PIR sensor that used to detect the motion and then it will trigger the camera module to capture an image. After that, the data will send to cloud storage and can be monitor by the user. This project needs an internet connection to locate anyway because it connected to web server.

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CHAPTER 1

INTRODUCTION

This chapter provides the background of the study to this research. It's also explained the details of this project proposal.

1.1   Background of Study

Today the digital technology is useful in our daily life. There are a lot of devices that can we found around us that using the technology of digital that connected thru Internet. The Internet of Things is not a new technology that we know. There are many developer have produce the digital devices that based on the Internet of Things (IoT). In additional, people now can manage they daily activity using the Internet of Things.

Nowadays, the investigation process during the criminal cases has intriguing the developer to produce the security system using the Internet of Things. According to the situation, providing the security system for forensic will bring benefits into the investigator to collecting more data and evidence about the cases. But the system needed some specialized tools and technique to successfully recover data and evidence from those devices. With the advantages of some product that based on investigation system, we can figure out what happened around us.

Home Security has now becoming a trend in residential houses, apartments and condominiums. The drawback of this trend is that the high implementation cost and maintenance. Surveillance are commonly made via CCTV and sensors. Normally, it would record the videos and saved into the Digital Video Recorder(DVR). According to it, there are many others items needed to complete