UNIVERSITI TEKNOLOGI MARA
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FINAL REPORT OF DIPLOMA PROJECT

INTERFACE BETWEEN DIFFERENT SENSOR AND A COMPUTER MONITORING SCREEN

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Thank you,

Wasalam...

ABSTRACT

The name of this project is 'Interface Between Different Sensor And A Computer Or Monitoring Screen' which is the last part of the Smart home system.

In this project, LCD display as the output of the system is used. The LCD display circuit use PIC16F877 as the main source of the circuit. By doing this project, we can program the PIC18F877 by using MPLAB programming. The MPLAB programming is function to operate and display the character that has been desired and display it.

The PIC is still a new in electronic device and it is low in cost compare to other circuit, which doesn't use the PIC controller. The function of this project is to display whether all the system in the smart home is normally function. If the device cannot operate in the system, it will detect and display the section that have problem.

This project start by assembling all 8 devices in the smart home system in a single circuit which will detect the voltage of each device equal to 1V. Then the circuit connected to the LCD display circuit and it will display section (device) that not function or all system is functioning well. All of this operation is program in PIC16F877 which we program using the MPLAB software.

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INTRODUCTION

1.1 Background

Smart home system is a system that most people talk about nowadays. This system is attached to the house and almost all of the facilities is controlled by one main controller. The controller act as a CPU in the computer. So in this project, the main controller that will monitor the entire device in the smart home system will be invented. The monitoring system will assemble all devices such as motion sensor, smoke detector and other device in one system. Then it will monitor all devices whether there is a problem or it is normally functioning. The purpose of this system is easy for the owner or the manufacturer to detect problem to the system. Beside that, the LCD display will inform if all devices function normally or not. The rapid development of the Internet (and intranet) based applications provides totally new means for energy utilities to provide information services.

The Smart Home User Interface is a graphical interface to an automated household. It takes advantage of the latest advances in information technology, such as hypertext documents, downloadable programs that run on the client side, virtual reality models etc.

One of the most important features of the interface is the interaction with the appliances in the household. Once of the appliances does not function, the user interface will detect and display on the LCD display which appliances is not functioning.