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**UNIVERSITI TEKNOLOGI MARA**  
**CAWANGAN JOHOR KAMPUS PASIR GUDANG**

**FINAL YEAR PROJECT (EEE368)**

IOT based temperature and fire  
alarm system using blynk in office

**MUHAMMAD DANISH**

**HAZIQ BIN ZALIZAM**

**(2021479014)**

**DIPLOMA IN ELECTRICAL ENGINEERING (POWER)**

**SUPERVISOR:**

**DR FATIMAH KHAIRIAH BINTI ABD HAMID**

## **ACKNOWLEDGEMENT**

My supervisor's constant support and direction were crucial in helping me finish my assignment, thus I would want to express my gratitude and acknowledgement to her. Your knowledge, forbearance, and commitment have been crucial in determining the course and result of this project. Your guidance has been crucial all along the process. I've been pushed to think critically and approach issues from several perspectives by your informative criticism and helpful recommendations. Your ability to provide precise instructions and establish attainable objectives has given me the confidence to push myself and produce excellent outcomes. I genuinely appreciate your availability at all times and desire to offer your wisdom. My technical abilities have improved thanks to your mentoring, but it has also encouraged my personal development and confidence. I am extremely grateful to have had the chance to work with you because of your constant dedication to my accomplishment. Without your excellent assistance, this job could not have been completed successfully, and I genuinely appreciate it..

## **ABSTRACT**

The Internet of Things (IoT) and the Arduino microcontroller will be used in this project to construct a simple fire alarm system. To identify potential fire threats, the system uses temperature, smoke, and flame sensors. For remote management and real-time monitoring, it makes use of the Blynk platform. Through sirens, strobe lights, and voice alerts, the system offers quick and efficient alert methods. By turning on an exhaust fan and fire sprinkler system, it also incorporates automation and intelligent response. The project increases the efficiency and efficacy of fire alarm systems overall while also increasing the accuracy of fire detection, safety via real-time monitoring, and remote control. The simulation results show that IoT technology has been successfully incorporated into the fire alarm system. The system's capabilities may be increased in the future, and it might also be integrated with a centralised monitoring and administration platform. The importance of this work rests in its contribution to improving fire safety procedures, safeguarding lives, and minimising possible harm brought on by fire events. IoT, sensors, Blynk, an Arduino microcontroller, and fire alarm system.

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# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 Background**

In today's contemporary environment, ensuring the safety of individuals within buildings is of paramount importance. Fire alarm systems play a crucial role in detecting the presence of fires and promptly notifying occupants to evacuate. Traditional systems, comprising sirens, strobe lights, voice alarms, and various detectors, have been effective but exhibit limitations. The advent of Internet of Things (IoT) technology presents an opportunity to enhance the capabilities and efficiency of fire alarm systems, contributing to improved safety measures.

The integration of IoT technology in fire alarm systems offers advancements in quality and utility. This project leverages the mobile application platform Blynk to facilitate remote management and monitoring of hardware projects. Blynk's user-friendly interface and cloud-based architecture enable seamless integration of IoT devices, enhancing control and monitoring capabilities for fire alarm systems