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

**FINAL YEAR PROJECT (EEE368)**

**BABYSAFE REMINDER: PREVENTING FORGOTTEN BABIES  
USING IOT**

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## **ABSTRACT**

The "BabySafe Reminder" project takes advantage of the Internet of Things to tackle the pressing issue of protecting children from being left alone in vehicles. This all-inclusive solution incorporates temperature and weight sensors, an Arduino microcontroller, and a GSM module. The system is notable for including a DS18B20 temperature sensor to track the interior temperature of the car and a HX711 load cell to measure weight and confirm the presence of a child. One significant contribution to the project's sustainability is the use of a solar cell as an environmentally friendly power source. If the temperature increases above a certain threshold while the child is present, the technology reminds parents through mobile phone. The GSM module notifies caretakers of the emergency by phoning them simultaneously. The "BabySafe Reminder" program strives to lower the risks involved in leaving young children alone by providing a reasonably priced, dependable, and easily navigable solution. The project's adoption potential is increased by enhancing safety and aligning with environmental consciousness through the integration of IoT technologies and a solar cell for sustainable power.

### **Keywords:**

BabySafe Reminder, IoT (Internet of Things), DS18B20 Temperature Sensor, HX711 Load Cell, Arduino Microcontroller, GSM Module, Child Safety, Vehicle Monitoring, Temperature Threshold, Weight Threshold, Visual and Auditory Alerts, Remote Notification, Caregiver Alert System, Arduino Programming, Affordable Solution, Immediate Attention, User-Friendly, Infant Safety, Sensor Integration, Call Initiation

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# CHAPTER 1

## INTRODUCTION

### 1.1 Background

Recently, the accidental act of leaving a child in a car has become a major issue namely, "Forgotten Baby Syndrome." It's easy to see how these kinds of oversights can have devastating results. This syndrome highlights the frightening fact that caretakers may inadvertently fail to notice a child in a car, putting them in serious peril. These caregivers are frequently overburdened with everyday obligations.

The "BabySafe Reminder" project uses cutting-edge technology, particularly the Internet of Things (IoT), because it recognizes how urgent it is to address this issue. The project's main component is the seamless interface between an Arduino microcontroller and the DS18B20 temperature sensor and HX711 load cell. These parts work together to continuously evaluate the outside temperature of the car and determine whether a child is there by weighing the vehicle. Combining many sensor technologies goes beyond traditional methods, aiming to prevent possible problems before they arise. By strategically placing these features inside the car, dangers are reduced locally, and instantaneous on-site alerts are provided. The addition of a GSM module guarantees remote notification at the same time, allowing caretakers to get alerts on time even when they are not physically near the automobile.

The "BabySafe Reminder" initiative aims to improve child safety awareness while also developing a dependable and cost-effective solution to the problems caused