

# CHAPTER 1

## INTRODUCTION

### 1.1 Background

In this 2020, a lot of theft happened in Indonesia, especially for student or people who lived in boarding house. Because they are not only one who got the key to open another people's room.

Because of that, I want to make a prototype to make sure the room in their boarding house is safe. So we can reduce this incident to make people feel safer.

In my prototype, I will use Arduino Uno for the base, then use flame sensor and place it over the electric socket and infrared sensor as the sensor to detect the thief. Then I use ESP8266 Module as the Wi-Fi receiver to send data to Thingspeak ([www.thingspeak.com](http://www.thingspeak.com)). So we can monitor the room everywhere and anytime.

### 1.2 Problem Formulation

1. Can infrared sensor detect the thief?
2. How can we read the data and concluding that the room is safe or not?

### 1.3 Scope

- This project is about make the security the house or the room at boarding house.
- The mockup is describing a boarding house's room.
- The data will send to website called thingspeak.
- The system for build this project is Arduino IDE Ver 1.8.12

### 1.4 Objective

The purpose of this project is making an embedded device to monitor room at boarding house and make sure the room is safe