#### **CHAPTER 1**

### **INTRODUCTION**

# 1.1 Background

The background of this problem, some families who have babies, parents do not always always look after the baby. There are other activities that must be done. Such as cooking, washing, working out of the house and other activities. From the bustle there are problems when the baby sleeps in the room. His parents left him to do other work. But parents do not know when the baby is awake. And around the crib there is no barrier from the edge of the mattress so that the baby does not fall.

With this case, this project was created by providing security around the baby's bed. And gives an alarm to his parents when the baby wakes up. By installing an infrared sensor on the edge of the mattress and PIR sensor to find out the baby is awake.

From this the project offers a system for baby safety when the baby sleeps and wakes up the parents knowing the baby's condition.

#### 1.2 Problem Formulation

In this case there are several things that make the topic of problems in the execution of this project;

- 1. How does the device work to find out the baby has woken up?
- 2. How to prevent the baby from falling out of bed?

## 1.3 Scope

Limitation of problems in this project;

1. record a baby who has fallen asleep

- 2. in the baby's bedroom there is no one else but the baby as the object
- 3. The size of the nursery is 3.5 meters long, 2.5 meters wide, and 2 meters high

# 1.4 Objective

The purpose for this project is to anticipate babies who have been awakened not falling out of bed. Parents know the baby has woken up. Record the baby's sleep time.

