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**FINAL REPORT :**

**SMART FAN**

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## ABSTRACT

It is typical to said that when we feel so hot under the sunny days we will find a fan to cool down our body temperature by getting wind that came from the windows or if we had air conditioning at home we switch on the air conditioning at the low temperature to make get our body temperature comfortable with the temperature surroundings. We also will find a fan that can blows their wind only just in one direction and not rotating when we get near to the fan

So when the person get near to the fan, the sensor that we stick to the fan will detecting the person and will make the fan stop from rotating and just blows the winds into one direction. So when the person goes away from the fan make their own ways to other places the fan will continue rotating until the sensor detecting the person.

The fan also have temperature sensor that can increase the speed of the fan when the temperature surrounding getting hotter ( above than 25C) . If the temperature of the days below than 25C the speed of the fan will remains same and not rise up the speed. Both of the systems were simulated in Proteus 8.0 software which is simulating the circuit if it can produce the output that desired. The design of the circuit which is Printed Circuit Board (PCB) also designed in the Proteus 8.0

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# CHAPTER 1

## INTRODUCTION

### 1.0 INTRODUCTION

#### 1.1 Background of study

Smart Fan is a human tracking rotating platform that support a fan. Using a fan is the common way to reduce temperature people. Unfortunately fan do not have very efficient or useful features when it is desirable to change the direction of air flow. So, to solve this problem smart fan project could solve people daily stresses and inconveniences of fan use by automatic process. The platform using dual element Pyroelectric infrared sensor (PIR), rotates itself independently to direct air flow to whatever position a person move to. In addition, the fan includes another setting that allows precise rotation between two people. These modes are selectable by the user. The running LCD mode id displayed on LCD. The other feature about this smart fan is it rotate and operate like other fan, but it have sensor that can sense movement and it change it speed according to room temperature. This mode is more convenient than normal fan that need to be switch from rotate mode to stand mode. This fan uses two type of sensor which is movement sensor and heat sensor that can make people easy to use without need to change the fan speed because the heat sensor adjust to room temperature.

#### 1.2 Problems statements

Majority people in the world does not satisfied with operation of the fan because it cannot stop the rotation by itself when they need the fan. It will effect for those in elderly age or people that cannot stand which is maybe having problem with their leg. In addition it may require multiple attempts before actually getting the fan to redirect air flow in the exact desired direction. So, the automatic fan system that automatically changes the direction of airflow is recommended to be built to solve this problem. For the temperature we usually need to push the button at the fan to change the speed. The fan cannot automatically change it speed by observe the temperature surroundings