**ABSTRACT**

The purpose of making a project entitled Automatic Fan Control System Based with Thermistor For Temperature Controller is to allow users to adjust the fan speed automatically. So it can save and streamline the work that is usually done manually which could then work automatically and effective for humans.

The study was conducted with the design and manufacture of Automatic Fan Control System. Further functional testing tools, as well as temperature sensor is used.

Fan can be controlled manually by pressing on the switch button where in this method, any change in the temperature will not give any change in the fan speed, except the usage change the speed of the fan which is manually.

Over the last decade, advances in digital electronics have made computers smaller, cheaper and faster. Throughout this revolution as well mobile computing environment such as PDA has been created and undoubtedly other advances in technology like smart home also play an important role towards better life in the future.

This project is about how we can control the fan based on temperature sensor regardless of traditional thermostat It is also part of smart home application where the fan will gradually increase live speed if the temperature of the environment is increasing. Besides that, the

component that made up the temperature sensor is known as Thermistor . A sensor is a type of transducer. In a broader sense, a transducer is sometimes defined as any device that converts energy from one form to another .There are two types of thermistor depend on the sign of k. Firstly is positive temperature coefficient (PTC). PTQ thermistor works by increasing the resistance will increasing temperature.

Secondly k negative temperature coefficient (NTC). NTC thermistor works by decreasing the resistance will increasing temperature. This project will focus on’ NTC’ type of thermistor. Experiment can be followed to evaluate whether this circuit can save energy through the use of temperature sensor and thus promote efficiency. Finally. After some experiments have done, the result of the experimentation and finding can be concluded.

**Keyword**–Op-Amp, Resistor, NTC Thermistor, Potentiometer, Transistor, Diode, Power supply, Dc Motor .