SYSTEM MODEL

In this project, microcontroller is most important and plays a vital role in the smart systems development. It has become an essential part in the current day to day technologies .Thissystem is responsible for control the cooling system automatically based on the room temperature. The system requires an Arduino board to implement a control system to this project. Since this is proposed to control the speed of the fan by varying the temperature with the help of the IOT technology. Most human feels the badly designed about changing the fan rate level physically when the room temperature changes. This project attendances the design and simulation of the fan speed control system by using PWM technique based on the room temperature. Along these lines, the programmed fan framework that consequently changes the velocity level as indicated by temperature changes is prescribed to be fabricated for tackling this issue. This project consists of three sections. One senses the temperature by using humidity and temperature sensor namely LM35.

Last part of system shows humidity and temperature on LCD. Today, microcontrollers are used in many disciplines of life for carrying out automated tasks in a more accurate manner. Almost every modern day device including air conditioners, power tools, toys, office machines employ microcontrollers for their operation. Microcontroller essentially consists of Central Processing Unit (CPU), timers and counters, interrupts, memory, input/output ports, analog to digital converters (ADC) on a single chip. With this single chip integrated circuit design of the microcontroller the size of control board is reduced and power consumption is low. This project presents the design and simulation of the fan speed control system using PWM technique based on the room temperature.

A temperature sensor has been used to measure the temperature of the room and the speed of the fan is varied according to the room temperature using PWM technique. The duty cycle is varied from 0 to 100 to control the fan speed depending upon the room temperature, which is displayed on Liquid Crystal Display.