

# Abstract

Indoors and outdoors, the human body expends heat energy. If there is no wind, heat it up a thin layer on the skin. This makes the sultry, with the air flow from the fan moves around the body so that the hot layer was lifted and replaced it with a layer of cold . The fan can be a solution for the cool in the room were good air circulation. The purpose of this study is to simplify the work that is usually done manually to be automatic and save electrical energy.

This project that I made will operate automatic when temperature reach 30 degree celcius, this project controlled use temperature sensor and android aplication that I've created by myself, therefore communication between android through arduino is independent then fan turned on or off through bluetooth. while to control fan rotation speed I use L298N Motor Driver which control motor that connected to the fan, this project I use Arduino Mega 2560 as microcontroller which is use c language.

Based on the test results when the longest bluetooth connected is a voice menu with 4.5s delay delay and the fastest time is connected text, button, temperature and timer menu with 3s delay. The fan will turn on automatically when dht11 detects temperature above 30 degrees. While Bluetooth does not work at a distance of 10 meters, so this application only works at a distance of less than 10 meters. The farther bluetooth hc-06 with bleetooth android it will be longer bluetooth connected.

**Key Words:** DHT11, Automatic fan, Android, Bluetooth , Arduino Mega 2560