CONTACTLESS TEMPERATURE READING ANNOUNCEMENT FOR COVID-19

AIM:

Design and Development of Contactless Temperature Reading announcement for covid-19.

PURPOSE:

Covid-19 brings lot of changes in human life. It creates lot of impact on human health. Still virus impact ended and we have to take precautions every day. But taking daily tests is not possible and it is expensive for daily workers. To resolve this issue we can read temperature of human body. Body temperature raise when affected with Covid virus. Contact based temperature measurement is not suggestible and chance to get virus from one to one while measuring. Also announcement is also important for alerting. This kind of temperature announcement helps in industries, offices, schools and colleges. Here project title is contactless temperature reading announcement for covid-19.

DESCRIPTION:

This project includes IR sensor which is connected to Arduino digital pin. Temperature sensor (MLX90614) interfaced to Arduino I2C pins. SD card interfaced to Arduino SPI pins. PAM8403 amplifier interfaced to Arduino PWM pin.

WORKING:

In this project we are going to read body temperature with MLX90614 sensor. Temperature always display on 16X2 LCD display. This sensor placed beside IR sensor. When anyone comes near to IR sensor then buzzer will ON. Until buzzer off user has to keep hand in front of sensor. Then Arduino plays audio of temperature value through Amplifier. Temperature value will be playing in digit wise.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller   :   Arduino Uno

LCD   :   16X2 LCD Display

Crystal   :   16 MHz

Temperature Sensor :   MLX90614

Audio Amplifier   :   PAM8403

IR Sensor   :   DC 5V

SD Card   :   SPI Type Adaptor and Micro SD Card
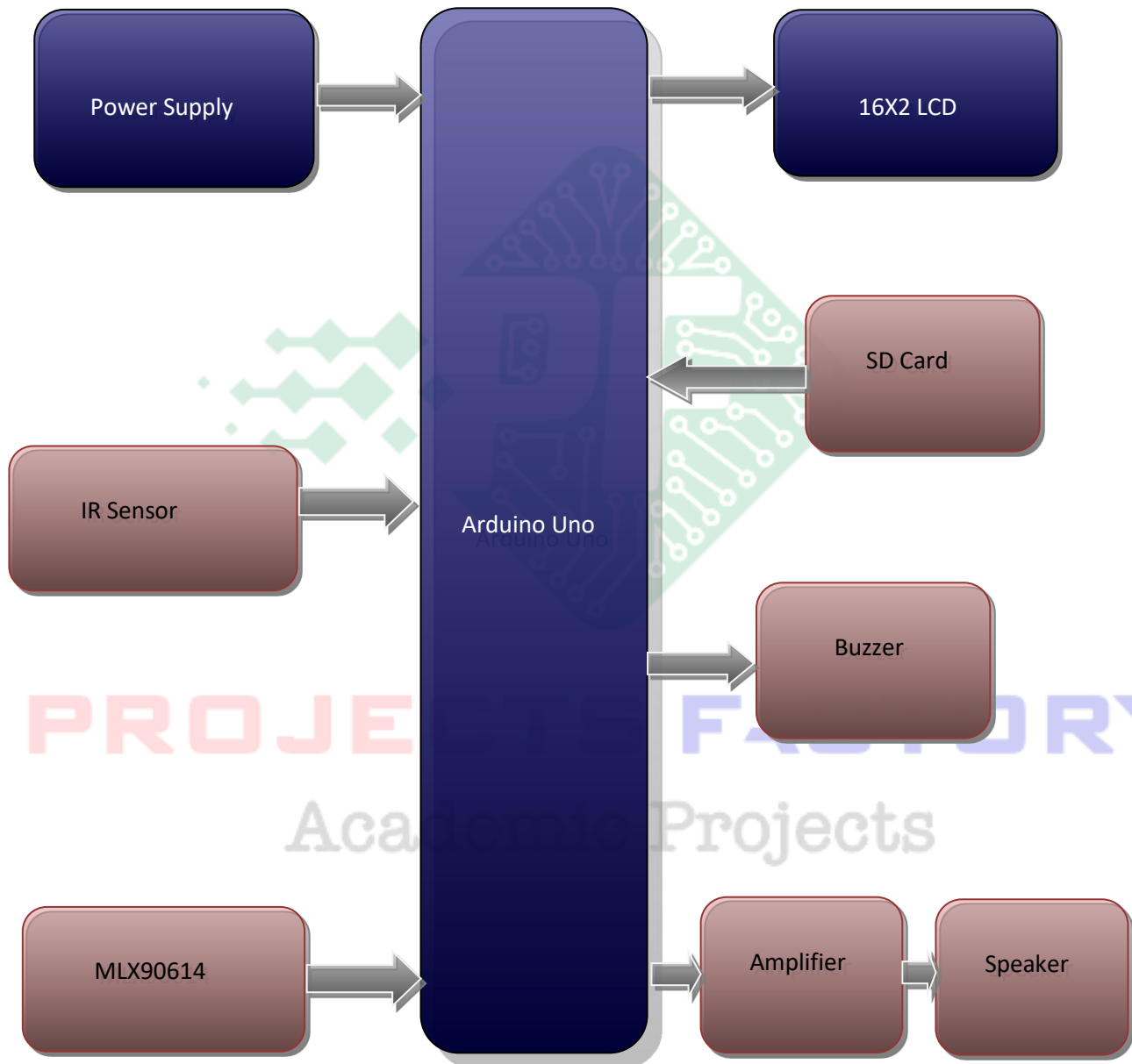
Power Source   :   12v 2 amp Adaptor

SOFTWARE:

Arduino IDE

Proteus based circuit diagram

APPLICATIONS:

- Covid-19 precautionary Application
- Body temperature Announcement Applications
- Medical Applications
- Virus spreading precaution Application

BLOCK DIAGRAM:

POWER SUPPLY BLOCKDIAGRAM:

| Step down Transformer | → | Bridge Rectifier | → | Filter | → | Regulator | → | Output |

INTERFACES COVERD:

- IR sensor and SD card interface
- MLX90614 interface