

SMART SECURITY FOR ENTRY GATE WITH FACE MASK DETECTION AND TEMPERATURE CONTROL

AIM:

Design and Development of Smart Security for Entry gate with Face Mask Detection and Temperature Control.

PURPOSE:

Any kind of virus will spread automatically. Especially in schools, colleges and crowded areas it will spread easily. Here we proposed a system that can allow people who have desired temperature and face mask wearing. This system can be installed at entry point of any premises. This system designed by ESP32-CAM and it has temperature sensor and gate control. Project title is smart security for entry gate with face mask detection and temperature control.

DESCRIPTION:

Arduino and ESP32-CAM connected through UART port. Contactless temperature sensor (MLX90614) connected to Arduino I2C port. DC gear motor controlled by L293d, which is connected to Arduino digital pins. Button and buzzer interfaced to Arduino digital pins.

WORKING:

Here ESP32-CAM can detect face mask wearing. It will send information of face mask to Arduino through serial communication. Arduino can read temperature with the help of MLX90614. If face mask detected and temperature less than desired limit then gate will be open. Otherwise buzzer will be ON and gate will not open.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Esp32-Cam and Arduino
LCD	:	16X2 LCD display
Temperature Sensor	:	MLX90614
Motor	:	DC gear motor 10 r. p. m
Buzzer	:	DC 5V
Power Source	:	12v 1 amp DC battery

SOFTWARE:

Arduino IDE

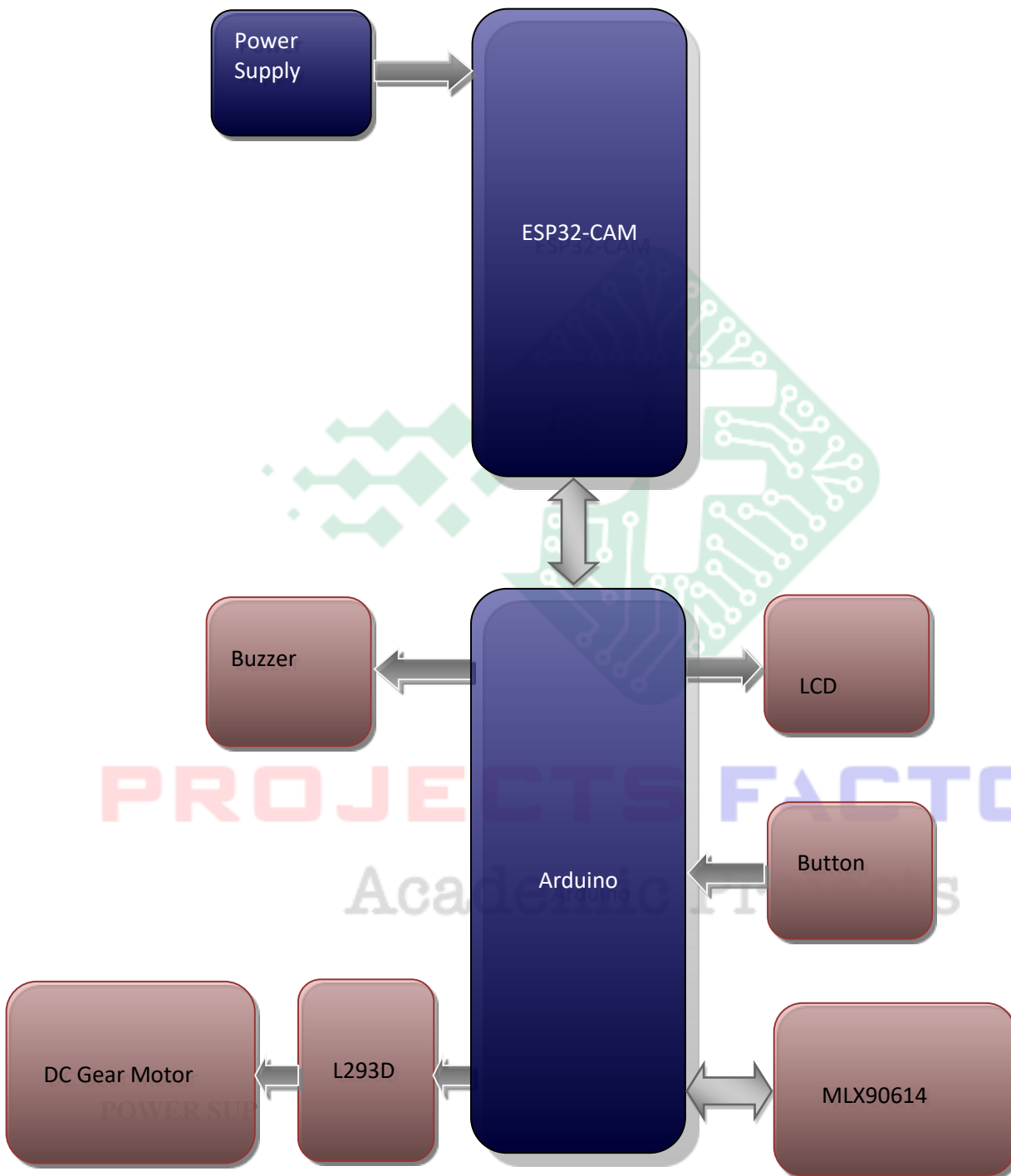
APPLICATIONS:

- Smart Access
- Smart gate applications



PROJECTS FACTORY
Academic Projects

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- We have covered Esp32-Cam and Arduino
- DC gear motor with H-Bridge
- MLX90614 contactless temperature sensor

PROJECTS FACTORY
Academic Projects