SENSORS DATA LOGGER TO TELEGRAM ALERT USING ESP32-CAM

AIM:

Design and Development of sensors data logger to telegram alert using ESP32-CAM.

PURPOSE:

Data loggers are widely used in many applications like Industries, Railways, Aero services, and defense application….etc. Data loggers can read sensors data and can transmit that data to anywhere. Monitoring of data is very important for taking further action. Normal monitoring systems can display data on static LCD and it will be visible on that place only. Here we want to send data to any application that could support web and mobile. We choose telegram app to send sensors data. Now days everyone has smart phone with internet access. By installing this system anywhere we can read and send data to telegram app. Also based on request we can get image taken by ESP32-CAM.

DESCRIPTION AND WORKING:

ESP32-CAM can be connected to DHT11 and IR sensor. IR sensor installed at door entry and it can identify any intruder. It gives signal to ESP32-CAM. Also DHT11 connected to ESP32-CAM digital pin. DHT11 can read temperature and humidity values and sends to ESP32-CAM. With WIFI or hotspot connectivity ESP32-CAM established internet access through SSID and password. We can access live video streaming through IP address. If sensor crosses threshold value then buzzer will be ON. Based on request command from telegram we will get image snap on app.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Esp32-Cam
Temperature Sensor	:	DHT11
Humidity Sensor	:	DHT11
Intruder Detection	:	IR sensor DC 5V
Power Source	:	12v 2 amp Adaptor

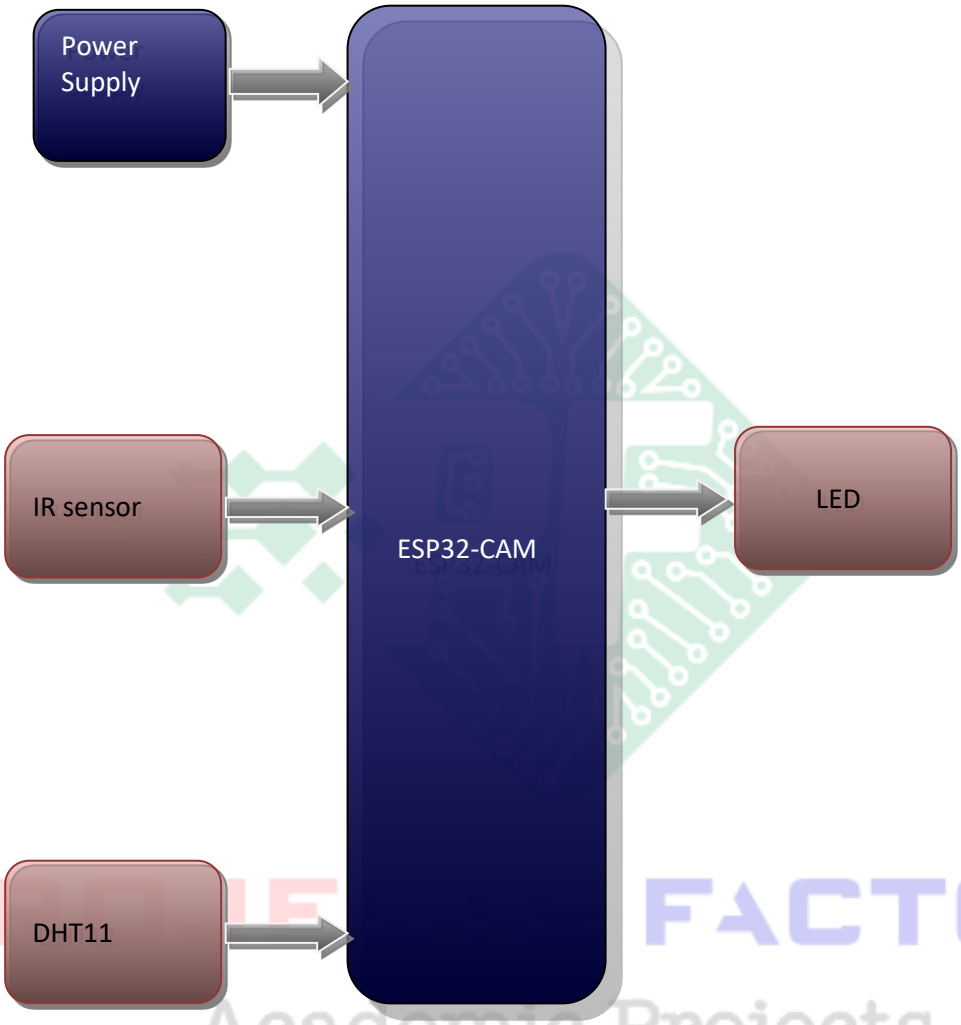
SOFTWARE:

Arduino IDE

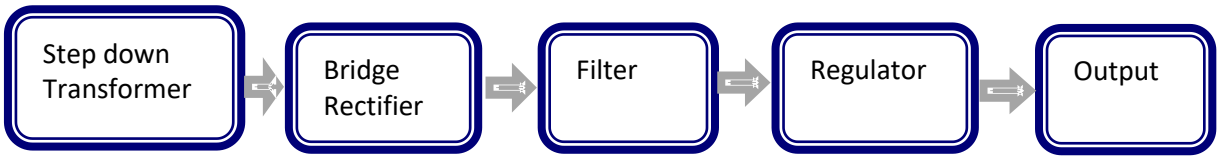
APPLICATIONS:

- Data Logger Applications
- Sensors monitoring applications
- Aviation sector
- Manufacturing companies processing applications

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERD:

- We have covered Esp32-Cam
- DHT11 and IR sensor interfacing