ESP32-CAM SMART HOME SECURITY SYSTEM WITH GMAIL ALERT

AIM:

Design and Development of ESP32-CAM smart home security system with Gmail alert.

PURPOSE:

Security is very necessary in these modern days. In this project we want to develop smart home security system which contains sensors to monitor intruder alert, smoke detection and fire detection. This security system can send alert mail by sending photo and sensors data to Gmail.

DESCRIPTION:

This project has ESP32 microcontroller. PIR sensor, MQ2 sensor and fire sensors are connected to ESP32-CAM digital pins. Sensors data transmitting to ESP32-CAM digital pins. ESP32-CAM can access web page and internet. When any sensor gets activated then it sends photo to Gmail along with sensors data.

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WORKING:

PIR sensor can detect intruder alert. Smoke sensor and Fire sensor can detect smoke and fire around the area. ESP32-CAM reads three sensors data. ESP32-CAM takes sensors data and send to Gmail along with photo. Google script procedure needed in receiver Gmail. We can see sensors data along with photo in Gmail. By getting photos, we can know the physical impact of smoke and fire. Also we can know who the intruder is by seeing photo. LED will be ON when any sensor gets activated.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Esp32-Cam
Intruder Detection Sensor	:	PIR sensor
Smoke Sensor	:	MQ2
Fire Sensor	:	IR Type
Power Source	:	12v 1 amp Adaptor

SOFTWARE:

Arduino IDE

APPLICATIONS:

- Home safety and security
- Industrial security

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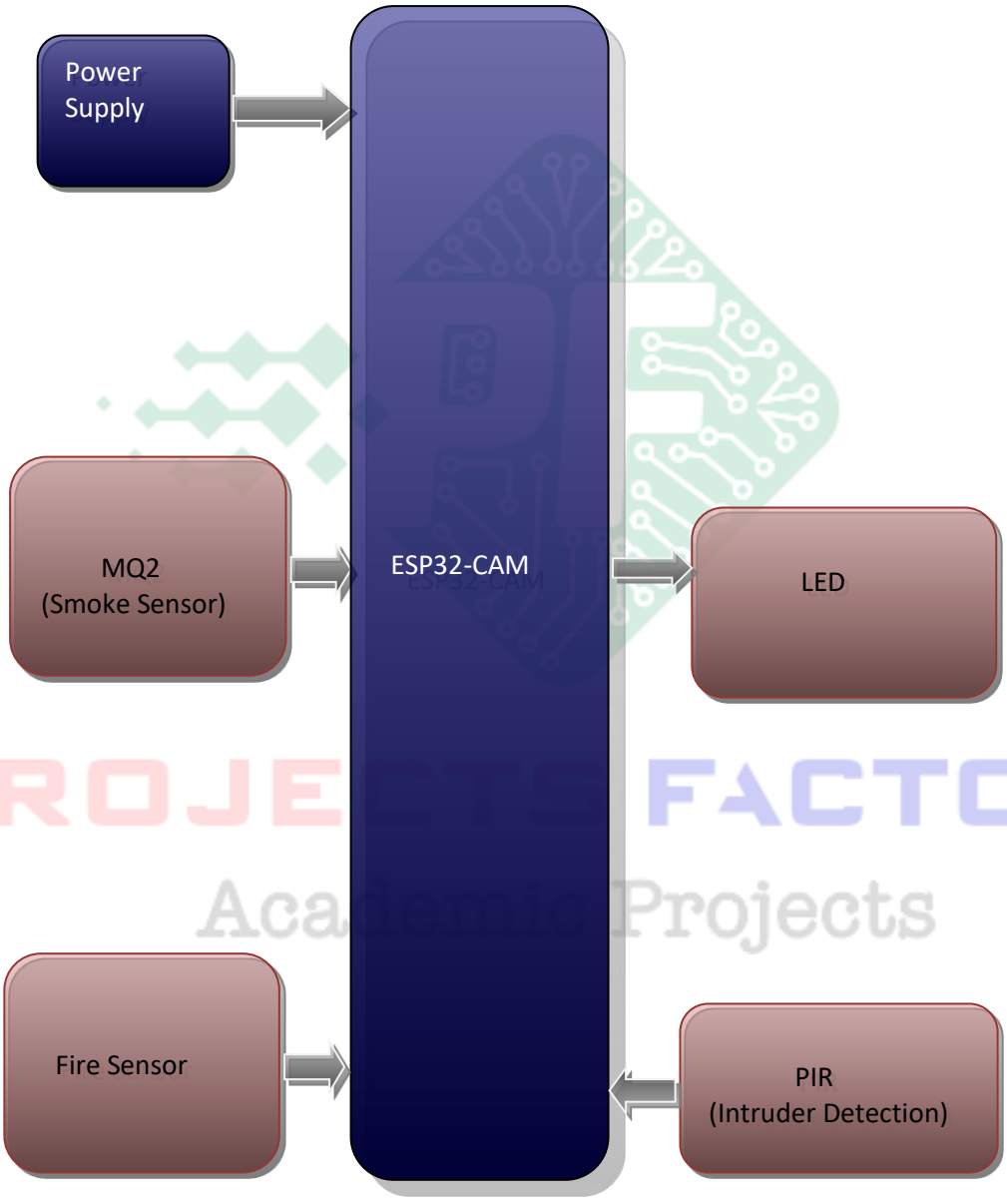
BLOCK DIAGRAM:



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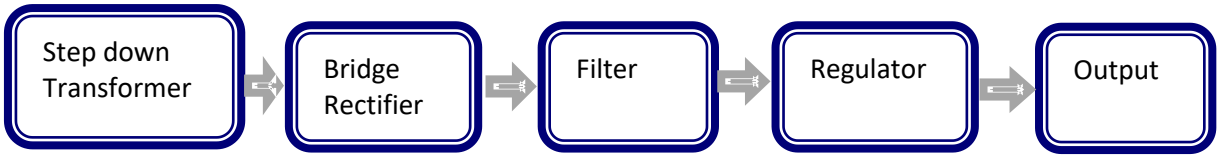
POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERD:

- We have covered Esp32-Cam
- Sensors like IR, PIR and smoke

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