

Project Title:

Home Surveillance with Automation

Batch ID:

15241A0461

Functional Requirements:

- The System must contain a Raspberry Pi Camera module connected to the Raspberry Pi 3 Board via the dedicated 15-pin MIPI Camera Serial Interface.
- The System must contain four Channel 5V Relay Module which is connected the main Pi Board via the 40 pin extended GPIO.
- Relay board must used to change the status of the switch
- The System should continuously refresh the frames of the Camera module.
- The system must use a wireless communication interface.
- The surveillance feed should also be accessible via a web view based mobile app.

Non-Functional Requirements:

- The system should be compact in size since it should be mounted on wall or ceiling.
- The whole unit should be inside a protected concealed case.
- The power consumed by the system should be low.
- The system should be easily configurable.
- Mounting arrangement should be simple and sturdy.
- External wiring required should be minimal.
- Phone interface should be compact.

Deliverables:

Hardware:

Item No. 1: Raspberry Pi 3 Model B micro controller

Item No. 2: 4 Relay Module

Item No. 3: Pi camera

Item No. 4: Mobile Phone

Item No. 5: LCD with HDMI connection input

Item No. 6: Raspberry pi 3 official charger.

Item No. 7: Micro SD card (storage space for OS)

Item No. 8: LEDS

Item No. 9: GPIO Breakout

Software:

Item No. 1: Python IDE

Item No. 2: Eagle Software

Item No. 3: Raspbian OS

Item No. 4: NOOBS for Pi

Item No. 5: Android Studio IDE

Item No. 6: MIT App Inventor 2

Item No. 7: Linux Based Terminal