

Novel Camera Security Alert IOT System

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Abstract:- Today, technology is developing for automation system IOT based automation use in our day by day life increase with a great pace, because help of automation most of the work is so much easy without need man power, today day by day industrial or houses move on IOT system for protection, Security, automation every one take interest on this field its very help full for everyone and this paper is made for helping everyone who is willing to know about how to utilize a smart automatic Protection system, Designed and realized in the project, using Camera Alert for industry and home areas if some one touch door help of this project on the spot Alert click automatic photo send to android device.

Keyword:-Raspberry pi, Power Supply, Camera, Android phone, led, Wire.

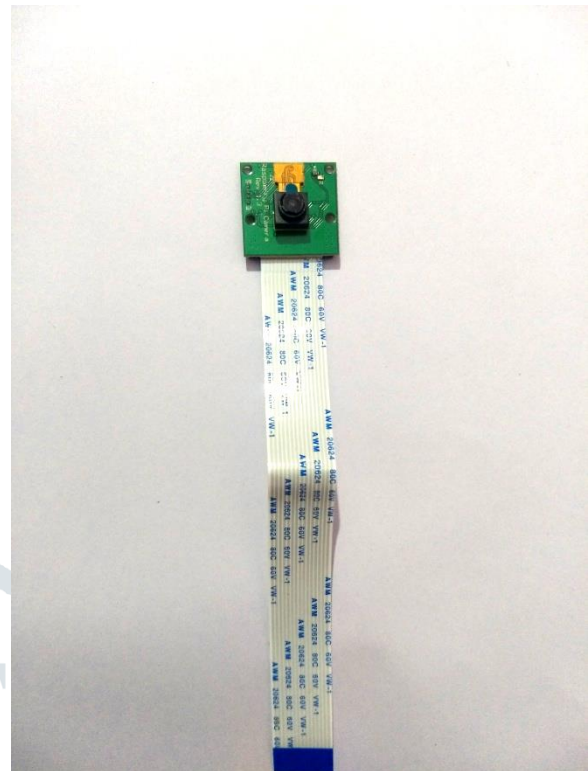
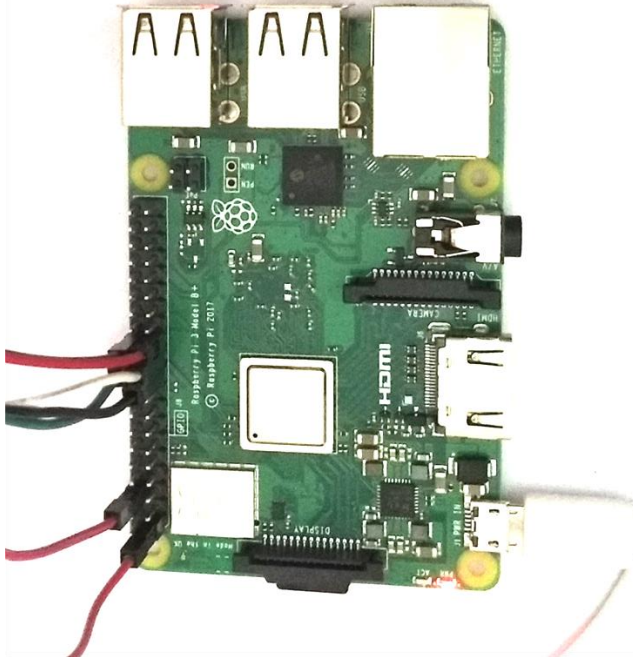
Introduction:-These days people always need reliable Alert automatic system This project implements on personal Room security alert system, when some one stand front of our Personal Door camera capture live photo on the spot without any delay at a time message send on Phone alert “someone standing front of you Door” this project based upon IOT.

Theoretical Consideration

Raspberry pi

The raspberry pi is a single computer developed in uk by the raspberry pi foundation. Mostly raspberry pi used in the mobiles phone and there is a increase mobile technology in mobile phone were use the ARM technology. Raspberry pi is a Iot device every internet project easy to make by raspberry pi with fully controlled, The raspberry pi board is a credit size computer and interlink with in TV and other devices in raspberry pi have no of ports for connecting a Mouse, Keyboard, Camera, Speaker, etc, Ultimate specification full fill every IOT project maker, in hardware specification have Memory, CPU, Ethernet Port, Power source, Graphics Processing unit, GPIO Pins, World best IOT hardware in this different type of language use for programming purpose we use python programming because python language is easy, we use raspberry pi 3 model B+ there have 1GB SDRAM, MicroSD card slot for boot and storage, 4 X USB 2.0 Ports,

Ethernet jack, 40pin GPIO interface, CSI(Camera), DSI (display) connectors, Linux Operating System.

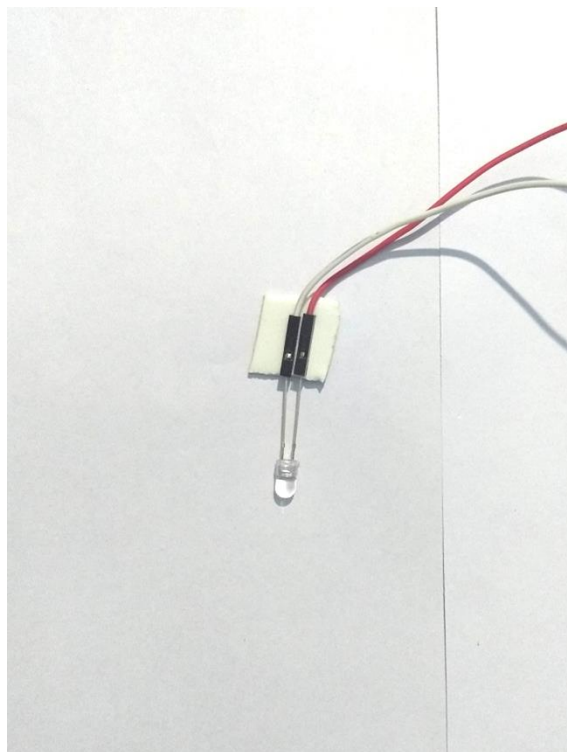


Raspberry Pi Camera

The raspberry pi camera board plugs directly into the CSI connector on the Raspberry pi. It's able to deliver a crystal clear 5MP resolution image, HD video recording at 30fps, This module attaches to Raspberry pi, by way of a 15 pin Ribbon camera to the dedicated 15-pin MIPI camera serial interface(CSI), Fully compatible with both the model A and model B Raspberry pi.

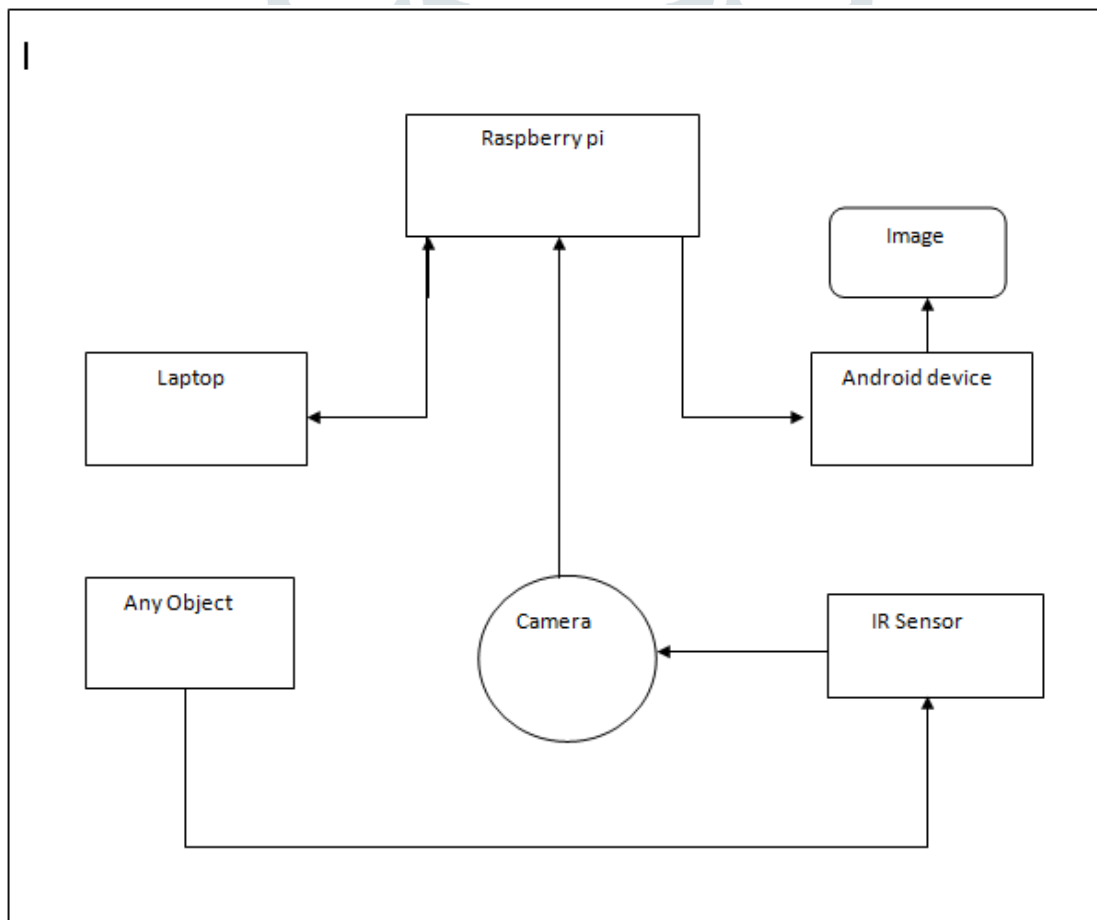
LED

Led for checking command or signal transfer to each other if signal transfer led give status "ON" otherwise "OFF" its only for modification different type of led have different specification every small led operate different voltage if we use direct to 9v battery at a time they damage, small led need less V than max. Rating.



Block Diagram

In block diagram we know which instrument interlink to other, first raspberry pi interlink with laptop, laptop interlink with raspberry pi, next IR sensor sense any object give signal to camera, camera take picture send to raspberry pi, raspberry pi give signal to android device "text message some one standing front of your door", open android phone check image who is standing front of your door.



Methodology

This project based on IOT in raspberry pi Novel Camera Alert IOT System, unique project using this project beneficial for those who make a personal Security in house and other important or personal room.

- First give supply to raspberry pi.
- Make connection or interface raspberry pi camera.
- Connect LED to raspberry pi camera.

Using different command to interface every component in raspberry pi open pi terminal stepwise-step enter command:-

- `Sudo apt-get install python-picamera.`
- `Sudo apt-get install python3-picamera.`
- Make a simple camera python program
- Next interlink same program with cloud.

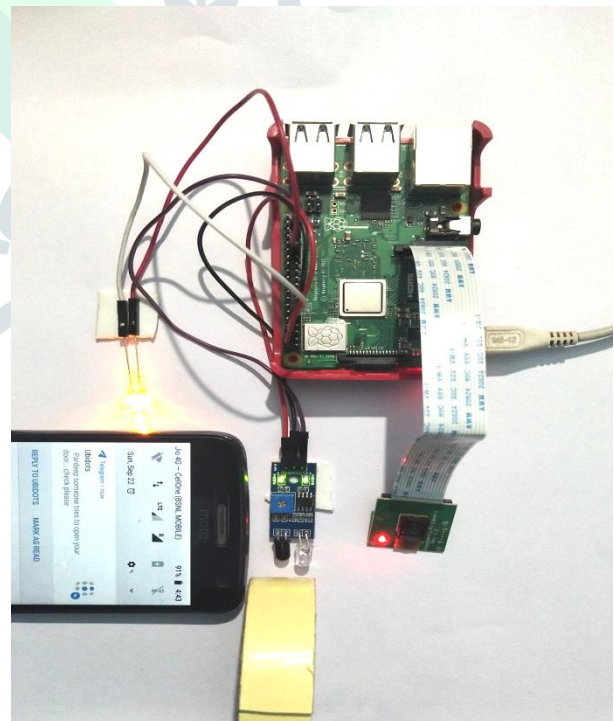
Connection

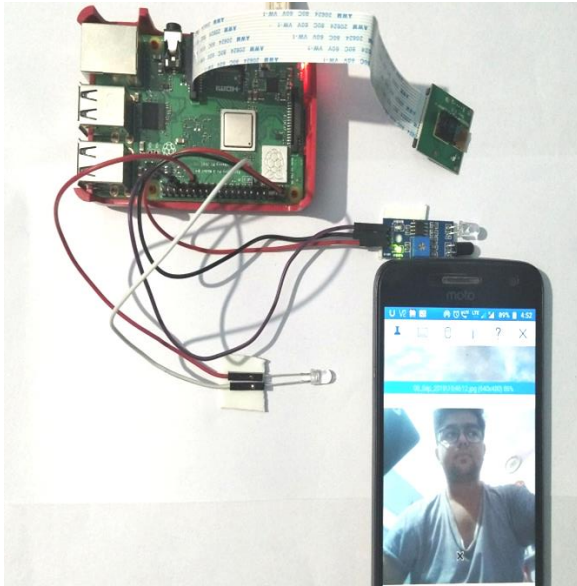
- Connect raspberry pi to laptop for programming or attach lcd.
- Connect pi camera to raspberry pi port.
- Led connect to GPIO 17
- Interface android phone for alert in message.

After complete connection or interfacing enter command system will activate, New

feature add in this system for alert because simple camera send pic to phone but without alert that's not sufficient system, for alert add a novel feature help of cloud if camera click pic send to android device or raspberry pi that's time cloud send data or message to your android device using this system its more unique or smart way for security alert.

Note: Led indicate when someone standing front of IR sensor led ON its means camera click pic led for digital indication, Next for android alert using cloud interface mobile number modify programming.





<https://www.ijrte.org/wp-content/uploads/papers/v7i6s/F02080376S19.pdf>

<https://ieeexplore.ieee.org/document/8286658>

<https://pdfs.semanticscholar.org/157e/0e0cdf462c68df3307d75e4bd7505d71cab0.pdf>

Conclusion:-

Chances from thief are minimize, implementation this project we can protect our personal instruments...Etc, full protect novel security system.

Result:-

Project is successfully complete, full security protection system these project implementations on there have need a security or whose person try to interface with personal Room there have security system at that time click pic send to our android device with easy to know who person is this those try to enter personal room.

References

<https://ieeexplore.ieee.org/document/7380661>

https://www.researchgate.net/publication/316699790_Raspberry_Pi_Based_Security_System_on_IoT_Platform