



HOME AUTOMATION SYSTEM USING IOT

GROUP MEMBERS

- 1) Kowshik deb robi (16-31547-1)
- 2) Samapon dey (16-31492-1)
- 3) Habib Khandaker Ahsan (16-32323-2)
- 4) Siddique , Sumaya (15-28456-1)
- 5) Asif-Jaman (16-32247-2)
- 6) Fahim hasan chowdhury (16-32473-2)



AGENDA

- What is IoT ?
- Why IoT ?
- Home Automation
- How to develop a low cost home automation
- Advantages
- Disadvantages
- Future scope.
- Conclusion
- Q/A



WHAT IS IoT?



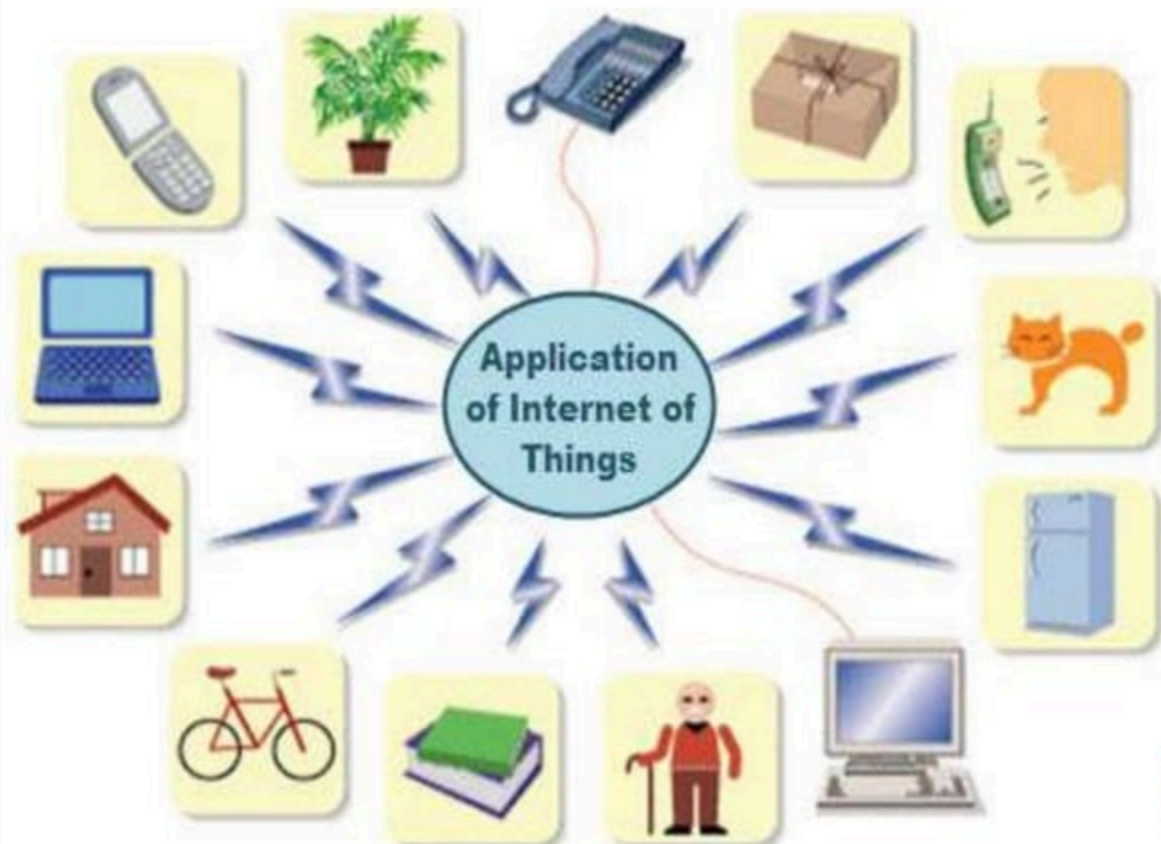
WHY IoT?



APPLICATIONS OF IOT

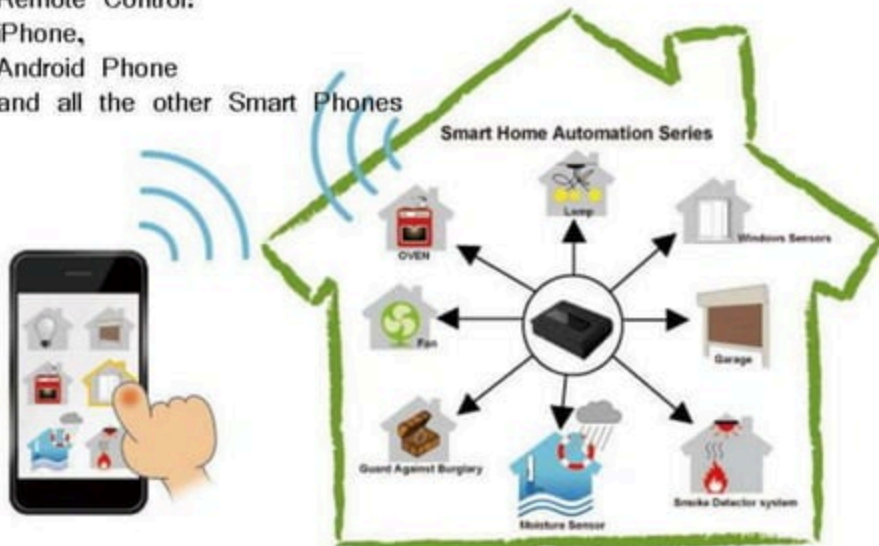
- Smart home
- Wearables
- Smart City
- Industrial internet
- Connected car
- Connected Health (Digital health/Telehealth/Telemedicine)
- Smart retail
- Smart supply chain
- Smart farming





HOME AUTOMATION

Remote Control:
iPhone,
Android Phone
and all the other Smart Phones



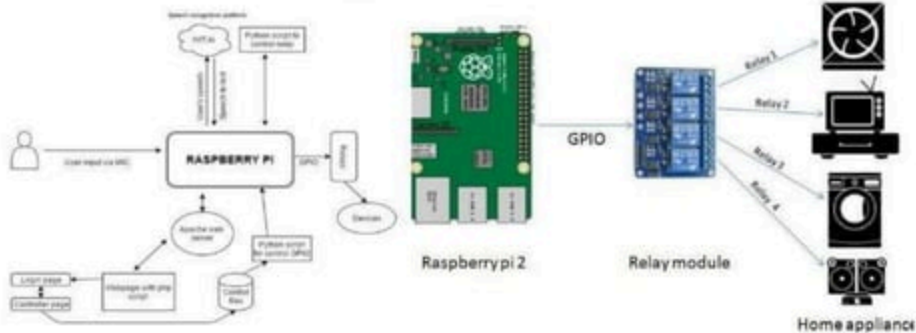
HOME AUTOMATION FIELDS

- With HA you control and monitor devices and information
- Monitor email Temperature, email or something else.
- Security
 - Monitoring doors and windows
 - Fire, smoke, water
- Entertainment
 - Music
 - Juke box
 - Streaming Podcasting
- TV
 - Live TV
 - Recorded (VCR, DVR)
 - Streaming video
 - Video casting (YouTube)



A HOME AUTOMATION SYSTEM

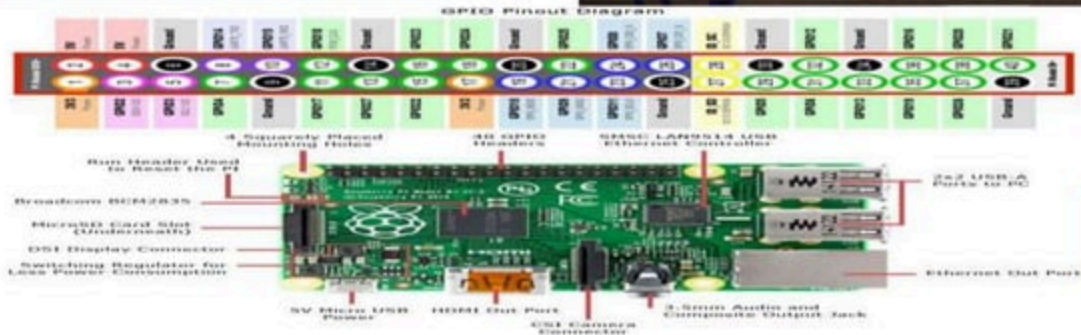
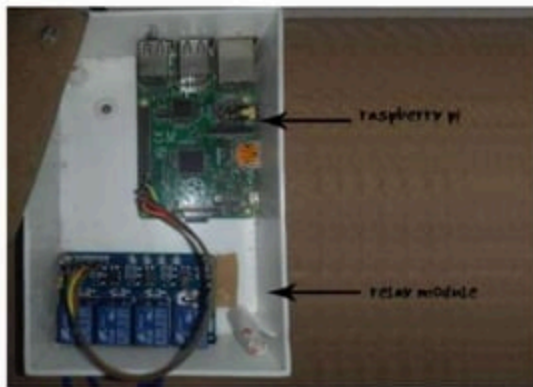
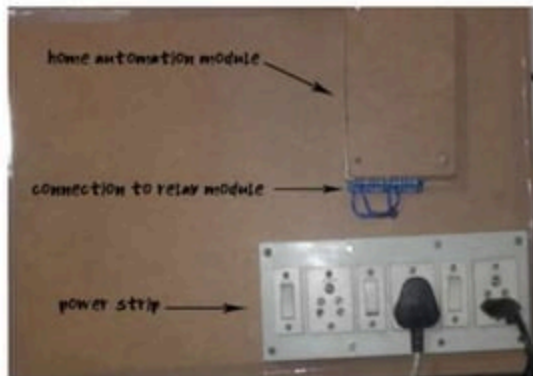
Step 4: Basic Architecture



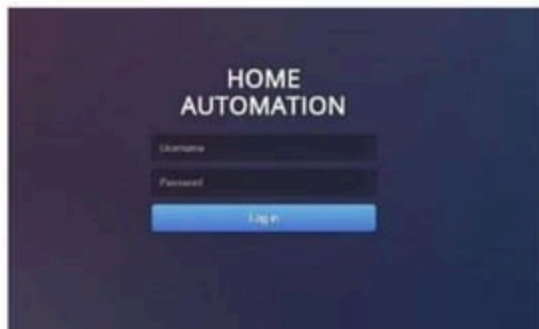
The entire system consists of two parts:



HOW A HA SYSTEM WORKS



- Go to the IP address on a local device on same network, you will get the home page.
- Enter the username : **admin** and password : **iot**
- If you provide command like "light on" then relay connected to gpio 5 will turn on and "light off" for switching off

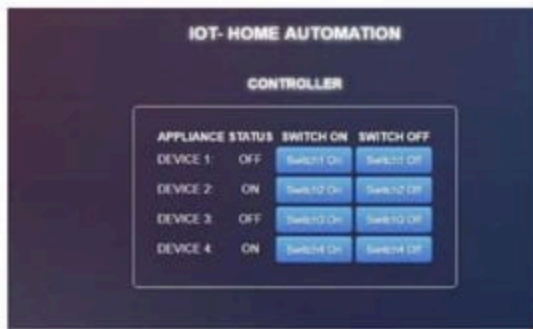


HOME
AUTOMATION

Username

Password

Log In



IOT- HOME AUTOMATION

CONTROLLER

APPLIANCE STATUS	SWITCH ON	SWITCH OFF
DEVICE 1: OFF	Switch On	Switch Off
DEVICE 2: ON	Switch On	Switch Off
DEVICE 3: OFF	Switch On	Switch Off
DEVICE 4: ON	Switch On	Switch Off

ADVANTAGES

- Low-cost
- Flexible.
- Easy to operate.
- Android compatible smart phone app



DISADVANTAGES

- System crashes due to any damage in the interconnection
- Human errors
- Reliability



FUTURE SCOPE

- The various future applications may be used by controlling various household devices of house with internet.
- In the future work, the persons other than the residents will also be considered.
- Industrial automation and management through internet.
- Improvement of security problems
- Used in extremely restricted areas.



CONCLUSION

The Internet of Things involves an increasing number of smart interconnected devices and sensors (e.g. cameras, biometric and medical sensors) that are often non-intrusive, transparent and invisible. IoT has been bringing new set of technological changes in our daily lives, which in turn helping us to make our life simpler and more comfortable.



REFERENCE.....

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- <https://iot-analytics.com/10-internet-of-things-applications/>
- <https://pdfs.semanticscholar.org/e9ff/fb16cb33198b207305e562135f4b0866b5fc.pdf>
- <http://expert-corner.com/2010/05/disadvantages-of-home-automation/>





Thank you for
your time.

Any questions?

