

Internet Of Things

Bsc.CSIT Group II-D

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Agenda

- What is Internet Of Things ?
- Why we need Internet of Things ?
- How does Iot Work?
- Applications
- Example of Internet of Things
- Conclusion



What is IoT ?

- Internet of Things (IoT) is a concept or a technology which aims to connect all the devices to the internet and help them communicate with each other without human intervention.
- The devices in IoT could be anything like TV, Refrigerator, Air Conditioner, mobile phones, your cars or even a person with heart monitor.



Why we need IoT ?

- We are lazy
- We want to automate everything
- We want to control everything remotely
- We want to see data in real time



How does IoT Works ?

- IoT devices contain sensors and mini-computer processors for collecting real time data.
- Each device has its own unique IP address to make the communication possible.



If every device are connected to the internet is it possible to assign a unique IP to each of them?

- ❖ To solve this problem IPV4 was replaced by IPV6 which gives unbelievable amount of unique IP addresses.



- Data are collected from devices and stored on cloud which are analyzed to extract meaningful information from big data.
- Processed data is delivered to the user.



Sensors
Collecting data



Connectivity
Sending data to cloud



Data Processing
Making data useful



User Interface
Delivering information to user



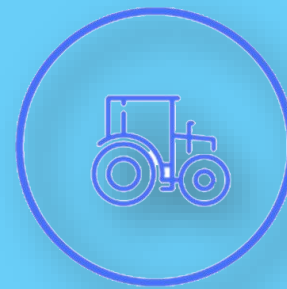
Applications



Home Appliance



Smart Environment



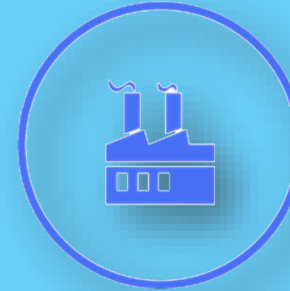
Smart Vehicles



Smart Farming



Connected Devices



Smart Industry



Example

Simple Home Automation with Google Assistance and NodeMCU



Conclusion

- While IoT is complex and poses some risk and is still evolving, many pioneers have started adopting this technology.
- IoT can help innovative new process and initiatives that could transform business, lives and the world
- We are also trying to understand what the many opportunities and challenges are going to be as more and more devices starts to join IoT.



