What is IOT ?

The **Internet of things** (**IoT**) is the network of devices such as vehicles, and home appliances that contain electronics, software, sensors, actuators, and connectivity which allows these things to connect, interact and exchange data.

The IoT involves extending Internet connectivity beyond standard devices, such as desktops, laptops, smartphones and tablets, to any range of traditionally *dumb* or non-internet-enabled physical devices and everyday objects. Embedded with technology, these devices can communicate and interact over the Internet, and they can be remotely monitored and controlled.

HOT SHOTS:

- Internet of Things (IoT) comprises things that have unique identities and are connected to the Internet
- The focus on IoT is in the configuration, control and networking via the Internet of devices or "Things" that are traditionally not associated with the internet Eg: pump, utility meter, car engine
- IoT is a new revolution in the capabilities of the endpoints that are connected to the internet

Evolution of IOT:

The Three C's of IOT:

Communication: IoT communicates information to people and systems, such as state and health of equipment (e.g.it's on or off, charged, full or empty) and data from sensors that can monitor a person's vital signs. In most cases, we didn't have access to this information before or it was collected manually and infrequently. For example, an IOT-enabled HVAC system can report if its air filter is clean and functioning properly. Almost every company has a class of assets it could track. GPS-enabled assets can communicate their current location and movement. Location is important for items that move, such as trucks, but it's also applicable for locating items and people within an organization. In the healthcare industry, IoT can help a hospital track the location of everything from wheelchairs to cardiac defibrillators to surgeons. In the transportation industry, a business can deliver real-time tracking and condition of parcels and pallets. For example, Maersk can use sensors to track the location of a refrigerated shipping container and its current temperature.

Control And Automation: In a connected world, a business will have visibility into a device's condition. In many cases, a business or consumer will also be able to remotely control a device. For example, a business can remotely turn on or shut down a specific piece of equipment or adjust the temperature in a climate-controlled environment. Meanwhile, a consumer can use IoT to unlock their car or start the washing machine. Once a performance baseline has been established, a process can send alerts for anomalies and possibly deliver an automated response. For example, if the brake pads on a truck are about to fail, it can prompt the company to take the vehicle out of service and automatically schedule maintenance.

Cost Savings: Many companies will adopt IoT to save money. Measurement provides actual performance data and equipment health, instead of just estimates. Businesses, particularly industrial companies, lose money when equipment fails. With new sensor information, IoT can help a company save money by minimizing equipment failure and allowing the business to perform planned maintenance. Sensors can also measuring items, such as driving behavior and speed, to reduce fuel expense and wear and tear on consumables. New smart meters in homes and businesses can also provide data that helps people understand energy consumption and opportunities for cost savings.

Leading IOT Platform :

1. Amazon Web Services (AWS IOT CORE)
2. Google Cloud IOT
3. Microsoft Azure IOT Suite
4. SAP
5. Salesforce IOT
6. Oracle Internet Of Things
7. Cisco IOT Cloud Connect
8. Bosch IOT Suite
9. IBM Watson Internet Of Things

Leading Indian IOT Platform:

BOLT is an **Internet of Things** platform (Hardware + Cloud) that enables user to build IoT products and projects. Using BOLT, users can control and monitor devices from any part of the world. It provides the ability to embed Wi-Fi/GSM capabilities within other systems, or to function as a standalone application.

BOLT is developed by **Inventrom Pvt Ltd**, an India-based IoT startup. BOLT was showcased at the **INDO-US Startup Konnect** in Sep 2015 held in the Silicon Valley on sidelines of the visit of **Prime Minister of India Shri.Narendra Modi**.

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