# Basic knowledge About Cloud Services:

## IBM Watson Iot Platform.

It is a powerfull web Development Dashboard Flexible Scalable and easy to use. It provides a clean and Simple us where we can simply and easily add and manage devices control access to Iot Services monitor the usage. It is fully managed cloud hosted Service that is designed to simply and derive Value from Iot Device

## Device Management:

Using device Management service, we can perform device actions like rebooting (or) updating firmware, receive device diagonistics and metadata. a perform bulk device addition and removal.

## Responsive, Scalable Connectivity:

It uses the industry-standard MQTT protocol to connect device and application MQTT is designed for efficient exchange of data to and form device in realtime.

## Secure Communication:

Securely receive data from and send Commands to your devices. Do this Using MQTT with TLS to Secure all Communication between Your device and out Service

## Data lifecycle Management:

Having accessed to real-time data coming from our device, you can opt to store data for a period of our choice, allowing you to have access to historical and real time data for your device.

# Node - Red Service :

Node Red Service is a Programming tool for wiring together hardware device, Api's and Online Service in New and interesting ways. It provides a browser based Editor that makes it easy to wire together flows Using wide range of Nodes in its Parallel Palette that can be deployed it into runtime.

## Browser - Based Flow Editing :

Node - Red Provide a browser based flow Editor that makes it easy to wire together flow Using wide range of Nodes in the palette.

Javascript function can be Created within the Editor using a rich Text editor.

A built in library allows You to save useful function template or flows for re-use.

## Built on Node js:

The light weight runtime is built on node js taking full advantage of its event driven, Non blocking model. this Makes its ideal to uses at the Edge of the network on low cost hardware such as raspery Pi, as well as in the cloud.

## Social Development:

The flows created in Node-Red are stored Using Json which can be easily imported and Exported for sharing with other.

An Online flow library allows you to share You best flows with the would.

## IBM CLOUDANT:

IBM Cloudant is a fully managed, distributed database optimized for heavy workloads and fast growing web and mobile apps. IBM cloud Service with a 99.99 %. SLA. cloudant elastically scales throughput and storage, and its API and replication protocol are Compacible with Apache couch DB for hybrid (or) Multicloud Architecture.

## Serverless Web App And API:

It'll create a serverless web application by hosting static website content on Github Pages and

implementing the application bank and using IBM cloud Applications.

## Mobile App with Serverless:

It uses IBM cloud functions along with Cognitive and data services to build a serverless back end for a mobile App.

## Find Anomalies in IoT Data:

It sets up an IoT Device and Gather data in IBM watson IoT platform. It will create the visualization and use advanced ML Service to analyse historical data and detect Anomalies.

## Open Hybrid Multi Cloud:

It shows how to pair the API and Powerfull replication protocol of cloudant with Apache couch DB in a hybrid cloud Environment.