**Kubernetes Assignment 1**

1. What is a Kubernetes cluster?

Ans: The master and worker node is known as Kubernetes cluster.

1. What are the different parts of the Kubernetes architecture?

Ans: User interface, Master node and the worker node are the two different parts of kubernetees architecture.

* + 1. User interface is used to connect to Kubernetes cluster, we can connect via CLI using kube ctl or we can use the web interface.
    2. Master node consist of below components

API server- Its an entry point for Kubernetes cluser, all the request from the user interface is handled by API server

Scheduler- Its job to create and maintain the containers(software update, restarting non responding containers, re-creating failed containers)

Control manager -- Multiple process has been combined as a single process as control manager,

* + - * Node controller -tracks the node health
      * Job Controller – Track the one off job schedules
      * Token controller- used to create default token and apis
      * Etcd- Used to store the key values and status of the containers.
    1. Worker node consist of below components

Kublet— Kublet manages the containers, it check the status of the containers at each pod

K-Proxy – used to create network rule

1. What exactly do you mean by "container orchestration"?

Ans: Container orchestration is the process of keeping the containers upto date with the software updates and making sure the containers run all the time without any issues.

1. What are the various features of Kubernetes?

Ans: create and maintain clusters for containerized applications. It make sure the containers are upto date with the software updates. It also make sure that containers state is up and healthy.

1. Explain the relationship between Kubernetes and Docker?

Ans: Docker is a tool to create containers, and Kubernetes used to create container clusters and manage the status of those containers.