

(e) What is Kubernetes (K8S) and Explain architecture in detail?

→ (i) It is open-source architecture / system is also called K8S.

(ii) It is mostly used for automatic deployment and management of containerized application and

scaling.

• Mostly used in appⁿ:- (main purpose)

(a) For container orchestration.

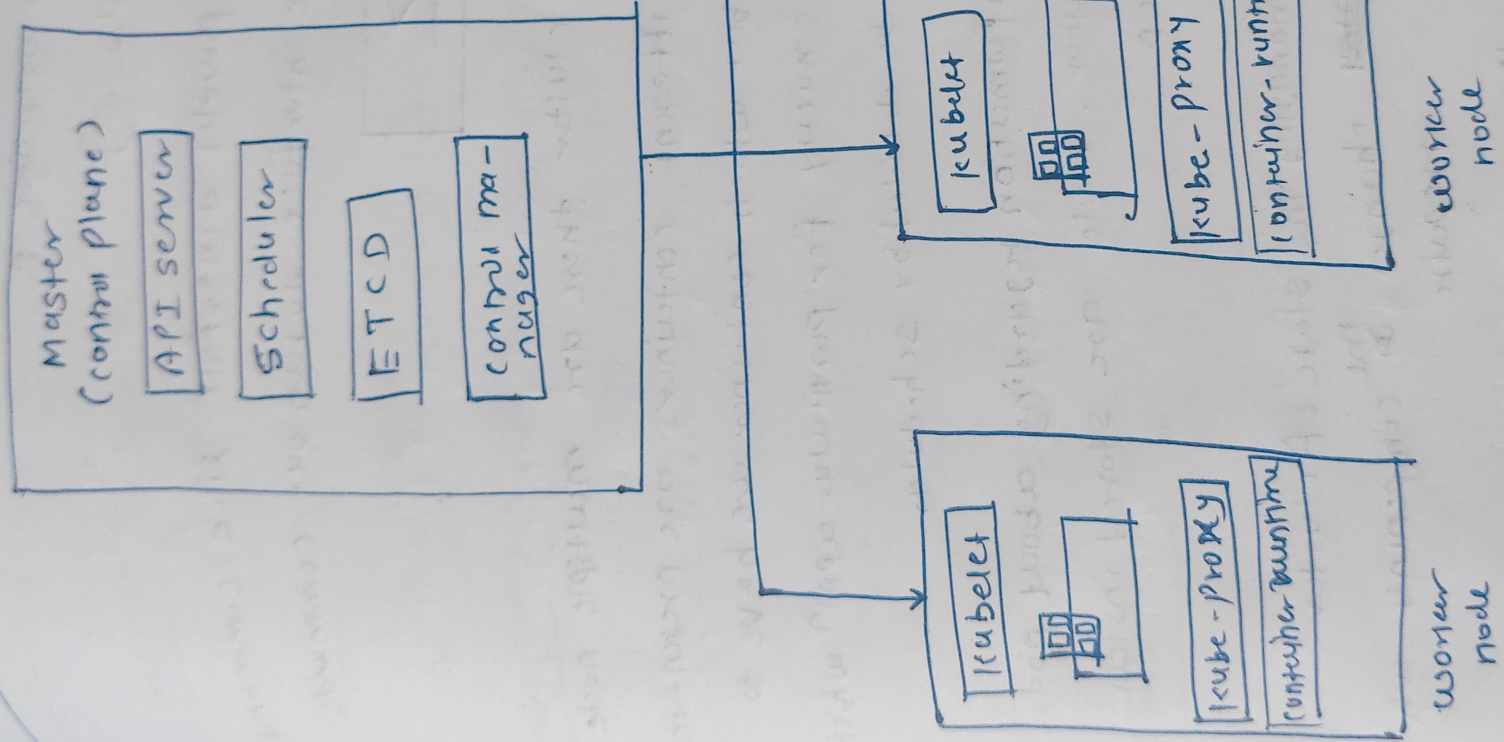
(b) Load balancing.

(c) High ~~availability~~ availability.

(d) Scalability

(e) Roll out and Roll back purpose.

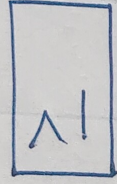
Cluster



1) API server! - It's ~~api~~ like p

[Master components!:-]

1) API server! - It provides a interface like Command line interface to run our commands.



2) scheduler!:-

In cluster there are multiple node & different containers are present in it but which container we have to run exactly for particular app? which can be decided by scheduler.

3) ETCD!:-

All information regarding about pod, container, node are stored inside

ETCD

4) control manager!:-

It managing the state of cluster.

& ~~control~~ changes the components which require

damage or not working properly.

Worker
Node :-]

1] Kubelet :- It's like agent & it make sure that container running in pods properly or not.

2] Pod :- It is isolated environment in which container base application is running

3] Kube-Proxy :- In node these In cluster there is (i) outside as well as inside network present (ii) In pod website/app is running which is maintained present inside network. so to access our website from outside via internet and following some rules & conditions for that which rules maintained | managed by kube-proxy.

4] Container-runtime :- It's a tool responsible to run the container (e.g. docker)