

## Assignment 2 Exp. 1

Q. What is DevOps?

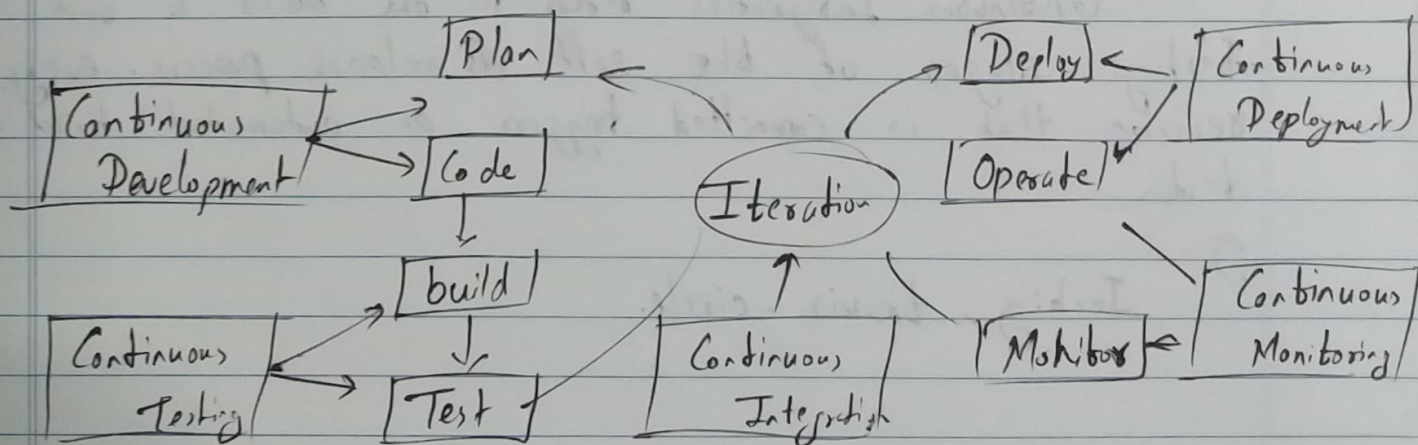
Ans.

DevOps is a collaborative approach where teams work together to build & deliver secure software efficiently. It consists software development & Operations. To decide how to accelerate delivery through automation, collaboration, fast feedback & iterative. Improvements built on Agile methodology. DevOps creates a culture of collaboration & shared responsibilities for business outcomes.

### Core principle:

1. Develop and Test in production like environment
2. Deploy builds frequently
3. Continuously validate operational quality

### DevOps Practices:



- Continuous Development:

This is the phase that involves planning and coding versioning & managing build of the software applications functionally

Eg:

GIT, Github, maven, etc.

- Continuous Testing:

Executing automated tests, continuous & repeatedly against the code base and the various deployment env.

eg.

Bamboo, appium

- Continuous Integration:

Continuous Integration refers to the build & unit testing stages of the soft ~~to~~ release process. every revision that is committed triggers an automated build & test.

eg.

Jenkins, Travis, circle.



- Microservice Architecture :

Docker is tool designed to make it easier to create, deploy and run applications by using ~~continuous~~ containers. Containers allow a developer to package up an application with all of the parts it needs, such as binaries, and other dependencies & deploy it as a package by doing so.

eg.

Nagios, Spinnaker, etc

- Cloud based DevOps :

DevOps automation is becoming cloud centric. Most public and private cloud computing providers support DevOps. Systematically on their platform, including continuous integration and continuous dev tools.

eg.

Amazon web services, Google Cloud, etc.

- DevOps Engineers Roles

Technical responsibilities:

- i) Implement, development, testing & automation tools
- ii) Setup infrastructure and tools
- iii) Code review & responsiveness
- iv) Build & maintain CI/CD pipelines

Management Responsibilities:

- i) Manage stakeholders
- ii) Mentor team members
- iii) Understand customer ~~req.~~ requirements and APIs
- iv) Define development and operational processes
- v) Provide periodic progress reports