SFPM Assignment 2

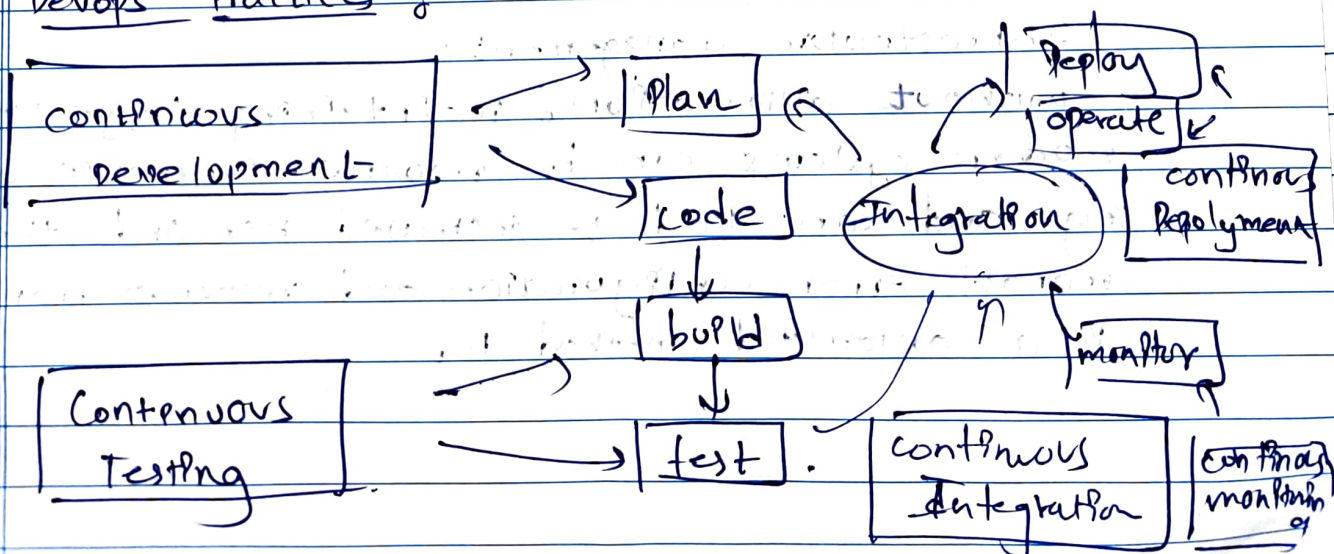**Aim :-** To understand Devops : Principles, pratices, and Devops Engineer Role and Responsibility.

What is Devops ?

→ Devops is a collaborative apporach where teams work together to build and delivers secure software efficiently. It combines software development (dev) and operation's (ops) to decide how to accetvate delivery through automations, collaboration, fast feedback, and iterative improvement. Build on Agile Methodology. Devops aceates a culture of accountancity, collaboration, and mared responsibilies for business outcomes.

Core Principles :

(1) Devop and test in production like environments.

(2) Deploy builds frequently.

(3) Continously validate operational quality.

Devops Practices :

Continuous Development

→ This is the phase that involves planning and manging build of the software application's functionally.

ex git, github, maven etc.

continuous Testing

→ continuous testing is executing automated tests, continuously and repeatedly against the base and the various depolyment environment. It is a software testing methodology. while focuses on acheiving continuous quality and improvement

ex → Bamboo, appium.

continuous Integration

→ continuous Integration refers to the build and unit testing stages of the software releases process. Every revision that is committed triggers an automated build and test.

Ex:- Jenkins, Travis (), circle.

Infrastruture management

→ without automation, maintaining large scale modern systems can be resource - intensive undertaking and can lead to increased risk and the manaul error. configuration and resources management is a automated method for.

DevOps Engineer Roles

A DevOps engineer manages a company's IT ~~the~~ infrastructure, bridging development and operation key responsibility.

Include :-

Technical Responsibility.

tools.
- Implement development, testing and automation
- Set up infrastructure and tools.
- code review and responsibilities.
- Bug ~~review~~ fixing and trouble rooting.
- Build and maintain a/co pipeline.
- Security implementation and monitoring.

Management Responsibilites

→ Understand customers requirements and RPLs.
→ Dan team Part structure and activities.
→ Manage stakeholders
→ Define development and operational processes.
→ coordinate team communication
→ Mointor customers experience.
→ Provide periodic progress reports.
→ Mentor team members.

configuration management

→ Infrastructure as code is the pratise of describing a software runtime environment and networking settings and parameters in simple textual format, that can be stored in your version control system (vcs) and versoned on request there test file are called manifest acid are used by Devops tools to automatically provision and configure valid servers.

Microservice Archecture

→ Dockers is a tool designed to make it eaiser to create, disp depoly and run application by using containers. Containers allows a developer to package up an application with all of the part it near, such as libraries and others dependenices and depoly it as one package. By doing so, thanks to the containers the developers can rest assured.

Cloud Based Devops

→ Devops automation is becoming cloud centre. Most public and private cloud computing provides support Devops Systematically on their patt platform, including continuous integration and continous development ex:- amazon web services, amazon lambda, google cloud etc.