

Experiment I

Aim:- To understand Devops, Principle, and devops rules & responsibility.

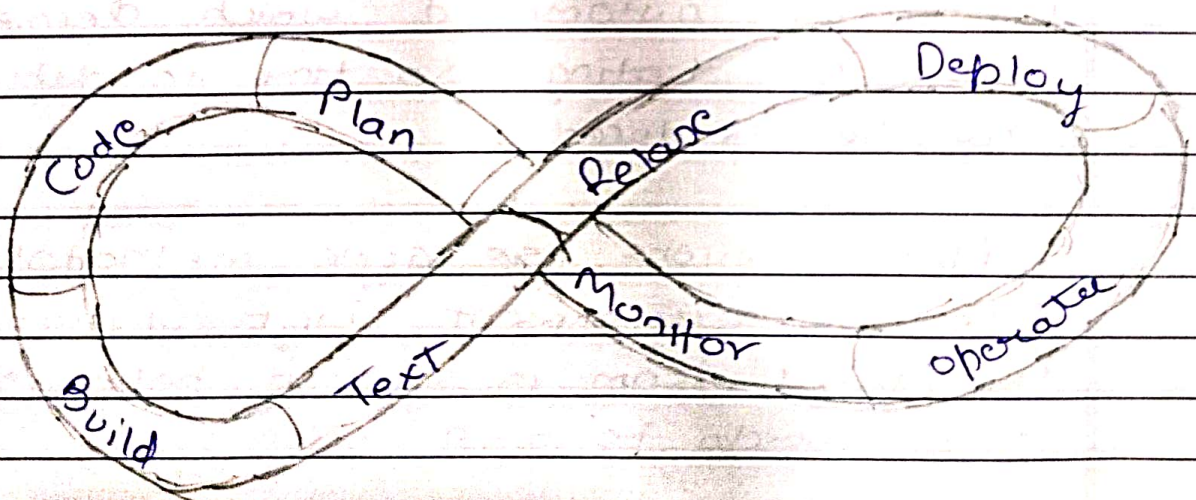
Theory:

Definition:

It is a combination of 2 words one is development and other is operation. It is the culture to promote development & operation

- Devops helps to increase Organisation Speed to deliver application and service. It also allows organisation to serve their customer better and compete more strongly in market.
- Devops can be defined as sequence of development.
- Devop has become one of most valuable business discipline for enterprise or organisation.
- With help of devop quality & speed of ^{extern.} application delivery has improved to great.

Architecture:-



Devops Architecture

1. Build - without devops, the cost of consumption of resources was evaluated based on predefined individual usage with fixed hardware allocation, and with devops, the usage with fixed of cloud, sharing of resource comes into the picture, the build is dependent ~~on~~ upon user's need which is a mechanism to control usage.
2. Code - Many good practices such as git enabled code to be used, which ensures writing code for business, helps to track changes, get notified about reason behind differences in actual to the expected output & if necessary reverting to original code developed. The code can be approximately arranged in file, folders etc.
3. Test - The app will be ready for production after testing. In case of manual testing it consumes more time in testing. The testing can be automated which decreases the time for testing. so time to deploy code can be reduced.
4. Plan - Devops use agile methodology to plan the development with operation & development team in sync. it helps in organising words to plan accordingly.
5. Monitor - Continuous Monitoring is used to identify any risks of failure. Also it helps in tracking system accurately so health of app can be checked.

6. Deploy - Many system can support the schedule for automated deployment. The cloud management platform enable uses to capture accurate insights and view optimization scenario, analytic of trend by deployment or dashboards.

7. Operate - Devops changes traditional approach of developing & testing separately. The teams operate in collaborative way where both teams actively participate through service lifecycle. The operation team interacts with developers & they come with monitoring plan.

8. Release - Deployment by an environment can be done by automation. But when deployment is made to production environment, it is done by manual triggering. Commonly used to the deployment is production environment manually to lessen the impact of customers.

Principles:-

- Collaboration
- Data based decision making
- Customer centric decision making
- Constant improvement
- Responsibility throughout lifecycle.

Advantages:-

- Devops is an excellent approach for quick development and deployment of application
- It response faster to market changes to improve business growth.
- Devops escalate business profit by decreasing software delivery time.
- Devops clears descriptive process, which gives clarity on product development

Disadvantages:-

- Devops professional experts are less available
- Devolving with it is expensive.
- Adopting new devops technology into industries is hard to manage
- Lots of devops knowledge can be a problem in continuous integration of automation project.

Conclusion:-

Hence, we have known what devops is & its advantage & disadvantages.