THADOMAL SHAHANI TSEC

THADOMAL SHAHANI TSEC ENGINEERING COLLEGE

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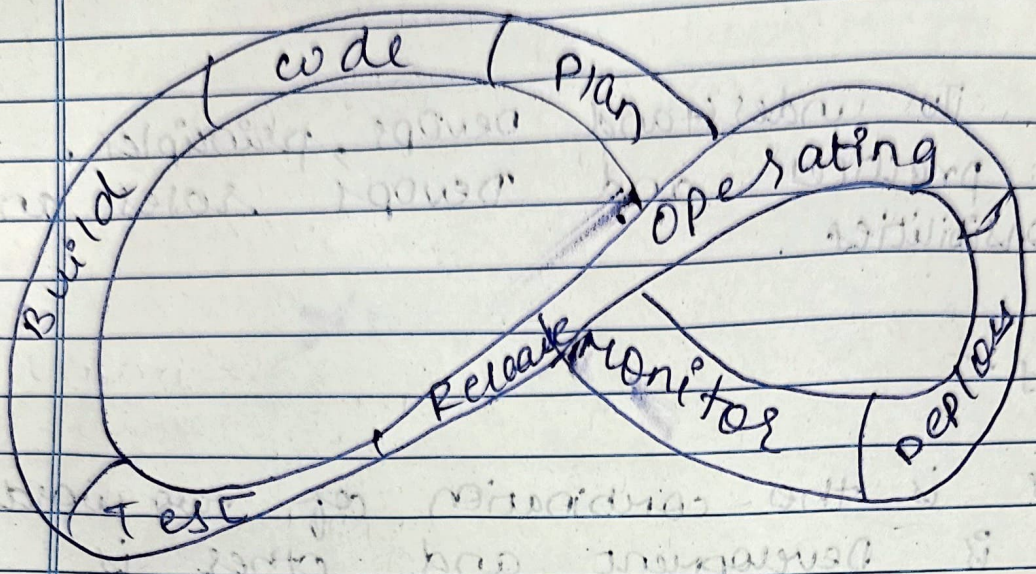
Experiment No. 1

Aim: To understand DevOps, principles, practices and DevOps roles and responsibilities.

Theory:-

- DevOps is the combination of two words, one is Development and other is Operations. It is culture to promote the development and operation process collectively.
- DevOps helps to increase organization speed to deliver applications and services. It also organizations to serve their customers better and complete more strongly in the market.
- DevOps can also be defined as a sequence of development.
- DevOps has become one of the most valuable business disciplines for enterprises or organizations. With the help of DevOps, quality and speed of the application delivery has improved to great extent.

Architecture



1. Build :- Without DevOps, the cost of the consumption of the resources was evaluated based on the pre-defined usage with fixed hardware allocation.
2. Code :- Many good practices such as Git enables the code to be used, which ensures writing the code for business, helps to track changes, getting notified about the reason.
3. Test :- The application will be ready for production after testing. In the case of manual testing, it consumes more time in testing and moving the code to the output. The testing can be automated, which decreases the time for testing so that the time to deploy the code to production can be reduced.

4. Plan :- DevOps use Agile Methadology to plan the development. With the operations and development team in sync, it helps in organizing the work to plan accordingly to increase productivity.
5. Monitor :- Continuous monitoring is used to identify any risk of failure. Also, it helps in tracking the system accurately so that the health of the application can be checked.
6. Deploy :- Many systems can support the scheduler for automated deployment. The cloud management perform enables users to capture accurate insights and view the optimization scenario.
7. Operate :- DevOps changes the traditional approach of developing and testing separately. The teams operate in collaborative way where both the teams actively participate.
8. Release :- Deployment to an environment can be done by automation. But when the deployment is made to the production environment, it is done by manual triggering.

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- Principles
1. Collaboration
2. Data-Based Decision Making
3. Customer-Centric Decision Making
4. Constant Improvement
5. Responsibility Throughout the lifecycle
6. Automation
7. Failure as a learning Opportunity

- Advantages

1. Devops is an excellent approach for quick development and deployment of applications.
2. Devops escalate buisness profit by decreasing software delivery time & transportation costs.
3. Devops clears the descriptive process which gives clarity on product development & delivery.
4. It improves customer experience & satisfication.
5. Devops means collective responsibility which leads to better than engagement & productivity.

- Disadvantages.

1. Devops professional or experts

develops are less available.

2. Developing with Devops is so expensive.
3. Adopting new Devops technology is so expensive into the industries is hard to manage in a short time.
4. Lack of Devops knowledge can be problem in the continuous integration of automatic projects.

Conclusion: Hence, we have known what Devops is and its advantages and disadvantages.