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Assignment - 2

Q1:- why is DevOps a major requirement in today's scenario?

Ans:- In a nutshell the DevOps model allows companies to create viable application and programmes within a much shorter time frame, thus accelerating the speed of innovation.

It is a major requirement because it's a software development and operational approach that enables faster development of new products & easy maintainance of existing deployments.

* Some important benefits of DevOps as a major requirement are:

1) Faster Solution
2) Increased efficiency
3) Improved customer experience
4) Faster ROI
5) Improved performance
6) Continuous improvements
7) Reduce failures & Rollback.

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-1 Gradle Scalability of IT software applications as it brings various departments such as IT, product, Engineering, Cybersecurity, operations & many units them in common objectives of achieving business target

In this approach the software is seen as a tool to improve organizational efficiency and security by automating several key process.

Q2 Explain all DevOps tools in detail?

Ans2 Since no single tool covers across all areas of development & delivery. The need is to first understand the process and accordingly map the tool to be successfully establish DevOps culture in organization.

1) Jenkins: an excellent DevOps automation tool being adopted by increased no. of software development teams, it's essentially an open source CI/CD server that helps in automating the different stages of delivery pipeline

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→ Allows us to set up & customer CI Pipeline as per individual needs
→ Runs on Linux, windows & Mac OS
→ Jenkins allows you to iterate & deploy new code with greater speed.

2) Git:

widely used across software industries. Git is an distributed SCM (Source code Management) DevOps tool. It allows you to easily track the progress of your development work, where you can save different version of source code & return to previous one as when required

3) Nagios: one of the most popular free & Open-source DevOps monitoring tool; for infrastructure real time so that identifying security threats / detection of outages & errors be comes easier

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4) Docker: It is one of the widely used development tool of DevOps. It is known to provide platform independent integrated containe security & agile operations for Cloud native legacy applicatio

5) Kubernetes: Ideal for large teams, this DevOps tool is built on which Docker started in the field of containerization. it is a powerful tool that can grou containers by logical categori -sation.

6) Ansible: It is primarily a deplo management & organization DevOps tool. It is written in simple programming language YAML. It makes easier for DevOps team to scale the process of automatio & speed up productivity.