

Assignment - 4

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Date

ASD

Ques-1 what is DevOps? Explain the importance & benefits of DevOps.

→ DevOps is a set of Practices that combines software development (Dev) and IT operations to enable organizations to deliver software more quickly, efficiently and reliably.

- The importance of DevOps lies in its ability to address the challenges that arise when different teams with different goals and priorities work on same project.

→ Some benefits of DevOps include:

1. Faster time to market:

- DevOps Practices enable teams to release software faster and more frequently, reducing the time.

2. Increased collaboration and communication

- DevOps fosters better communication and collaboration between development and operations teams, reducing the misunderstanding.

→ 3. Improved Quality:

- By automating testing and deployment processes, S/W is delivered with better quality.

4. Greater Efficiency:

- DevOps helps streamline development and operations processes.

5. Enhanced customer satisfaction:

- By delivering S/W fast and with higher quality, DevOps helps improve customer satisfaction.

Que. 2 What are the 7 c's of DevOps lifecycle for business agility?

- 7 c's in DevOps are set of principles designed to help organisations improve their efficiency.

→ The 7 c's:-

- Continuous business Planning
- Continuous development
- Continuous Integration
- Continuous deployment
- Continuous Testing
- Continuous delivery & monitoring
- Continuous Feedback

→ 1) Continuous business planning:

- Ongoing process of Planning and Prioritizing work based on business goals

2) Continuous development:

- Refers to ongoing process of developing the S/Ws.

- 3) Continuous Integration:

- Refers to integrating code changes into shared repository multiple times.

- 4) Continuous deployment

- Refers to deploying the changes into the production as soon as they are ready.

5) Continuous Testing

- This refers to the continuous testing of the software.

6) Continuous delivery & monitoring:

- This refers to process of delivering software & continuously monitoring it.

7) Continuous Feedback

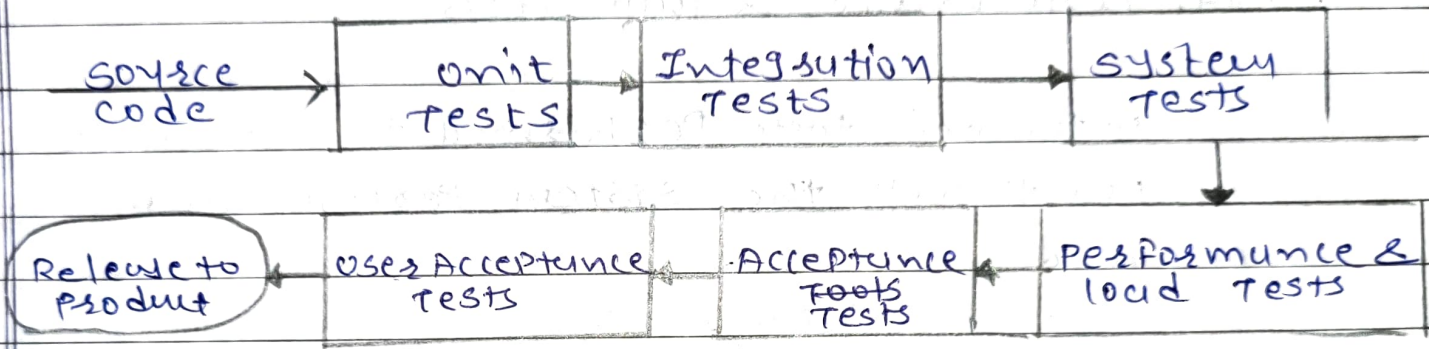
- This refers to ongoing process of gathering feedback from users.

Que-3

Explain Devops Testing in details

→ continuous testing is the process of constantly testing software applications throughout the entire software lifecycle.

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→ 1. Unit Tests:-

- Automated tests that are performed on individual code modules or the functions.

→ 2. Integration Tests:-

- Automated Tests that are performed on the integrated system, purpose is to integrate those system & get the desired output.

→ 3. System Test:-

- These are automated test that are performed on the entire system.

→ 4. Performance & load tests:-

- Automated tests performed to determine how well the system performs under load.

→ 5. Acceptance Test:-

- Automated tests performed to verify that the system meets the business requirements.

6. User Acceptance Tests:-

- Automated tests performed by end-users to verify that the system meets their needs and is user friendly.

Que-4

Difference +

DevOps

Agile Development

- | DevOps | Agile Development |
|---|---|
| → The goal is to integrate development and operations teams for faster and reliable delivery. | - The goal is to deliver functional software to the customer. |
| → Emphasizes collaboration, shared responsibility, and learning. | - Emphasizes transparency, communication & responsiveness. |
| → A range of automation & monitoring tools available. | - Range of tools to support agile practices. |
| → Cross-Functional teams that include many. | - Self-organizing teams that include many. |
| → Focus on entire software lifecycle. | - Primarily focuses on dev. that includes planning & testing. |