

# **DEVOPS:**

## **1. Why Devops?**

-->Devops is needed to reduce delays errors and communication gaps btw development and operation team

-->Earlier, development and operations teams worked separately.

Which means:

- 1.Slow software delivery
- 2.More errors in production
- 3.Poor communication
- 4.Frequent failures

DevOps was introduced to remove these problems.

## **2. What is Devops?**

Devops = Development + Operations

-->Devops is a culture and set of practices that helps development and operations teams work together to:

- 1.Build
- 2.Test
- 3.Deploy
- 4.Monitor software efficiently

## **3. How Devops Works?**

-->Devops works by automating and connecting all stages of software delivery.

Flow:

Plan → Code → Build → Test → Deploy → Monitor

1. Developers write code
2. Automated tools build and test the code
3. Code is deployed automatically
4. Monitoring tools track performance and errors
5. Feedback is given quickly

This process repeats continuously.

#### **4. Devops Benefits**

1. Faster Software Delivery
2. Automation helps release features quickly.
3. Better Collaboration
4. Developers and operations work as a single team.
5. less Errors
6. Automated testing and deployment reduce mistakes.
7. Quick Problem Detection
8. Logs and monitoring find issues early.
9. High Reliability
10. Systems are stable and easy to rollback.
11. Cost Reduction
12. Automation saves time and resources.

#### **5. Devops Principles**

1. Automation
2. Automate build, test, and deployment processes.
3. Continuous Integration & Deployment (CI/CD)
4. Code changes are integrated and deployed frequently.

5.Collaboration

6.Teams share responsibility and communicate openly.

7.Monitoring & Logging

8.Track system performance and errors.

9.Continuous Improvement

10.Learn from feedback and improve continuously