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CI/CD Pipeline

A Strategy for Successful Software Engineering

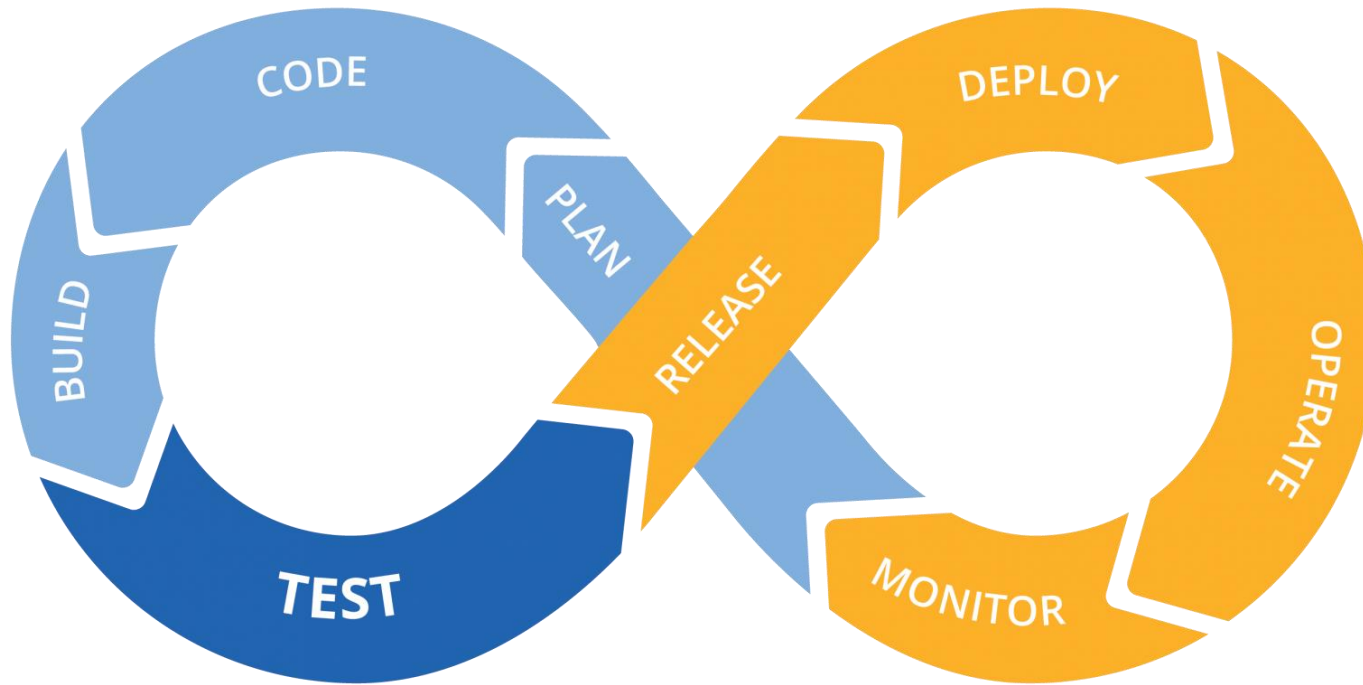
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Software Project Challenges

- ▶ Slow Development Cycle
 - ▶ Slow release cycle → Customer dissatisfaction
 - ▶ Slow deployment → Customer dissatisfaction
 - ▶ High Cost
 - ▶ Low Revenue
- ▶ High Cost of Software Tests
 - ▶ Need to recruit a special team only for tests
 - ▶ Low Revenue
- ▶ High Cost of Software Deployment
 - ▶ Need to recruit a special team only for deployment
 - ▶ Low Revenue

Overall CI/CD Concepts



Why CI/CD?

- ▶ CI: Continuous Integration
 - ▶ Detects errors as quickly as possible
 - ▶ Allows team to work faster
 - ▶ Brings more confidence to dev team
- ▶ CD: Continuous Deployment
 - ▶ Ensures every change to the product is releasable
 - ▶ Delivers values more frequently to clients
 - ▶ Gets faster feedback from clients
 - ▶ Brings more confidence to clients

What can CI/CD bring?

- ▶ Automation is everything!
- ▶ Very Quick & Smooth Development Cycle
 - ▶ **Scheduled (or even daily!) deployments and iterative development**
 - ▶ Reduce potential problems
 - ▶ Better client satisfaction
 - ▶ More revenue

Business impacts

- ▶ Allow engineers focus on solving business problems
 - ▶ Focus on innovations
 - ▶ Instead of focusing on undifferentiated heavy-lifting
 - ▶ See production quickly
 - ▶ Boost team morale
 - ▶ Drive business values
- ▶ Much Lower Cost of Software Test/Deployment
 - ▶ Reduced cost for deployment environment maintenance
 - ▶ Cloud-based solutions: AWS, GCP, Azure...
 - ▶ Reduced cost for a special team only for test/deployment