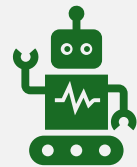


# Continuous integration and continuous delivery

# Introduction to CI/CD



Combines Continuous  
Integration (CI) + Continuous  
Delivery (CD)



Enables faster, safer, and  
automated software  
development and delivery

# Continuous Integration (CI)




Developers merge code frequently—at least once a day



Automated builds and tests validate each integration.



Early bug detection and quick feedback



## Continuous Delivery (CD)

Automates the delivery of applications to staging/testing environments

Ensures deployable builds at any time

Optional: Can extend to Continuous Deployment (automatic production release)

## Advantages of Implementing CI/CD

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Accelerated  
development cycles.

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Improved code quality  
and reliability.

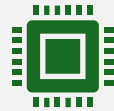
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Enhanced collaboration  
among teams.

# Key Components of a CI/CD Pipeline



Source Control: Version management of code.



Build Automation: Compiling and packaging code.

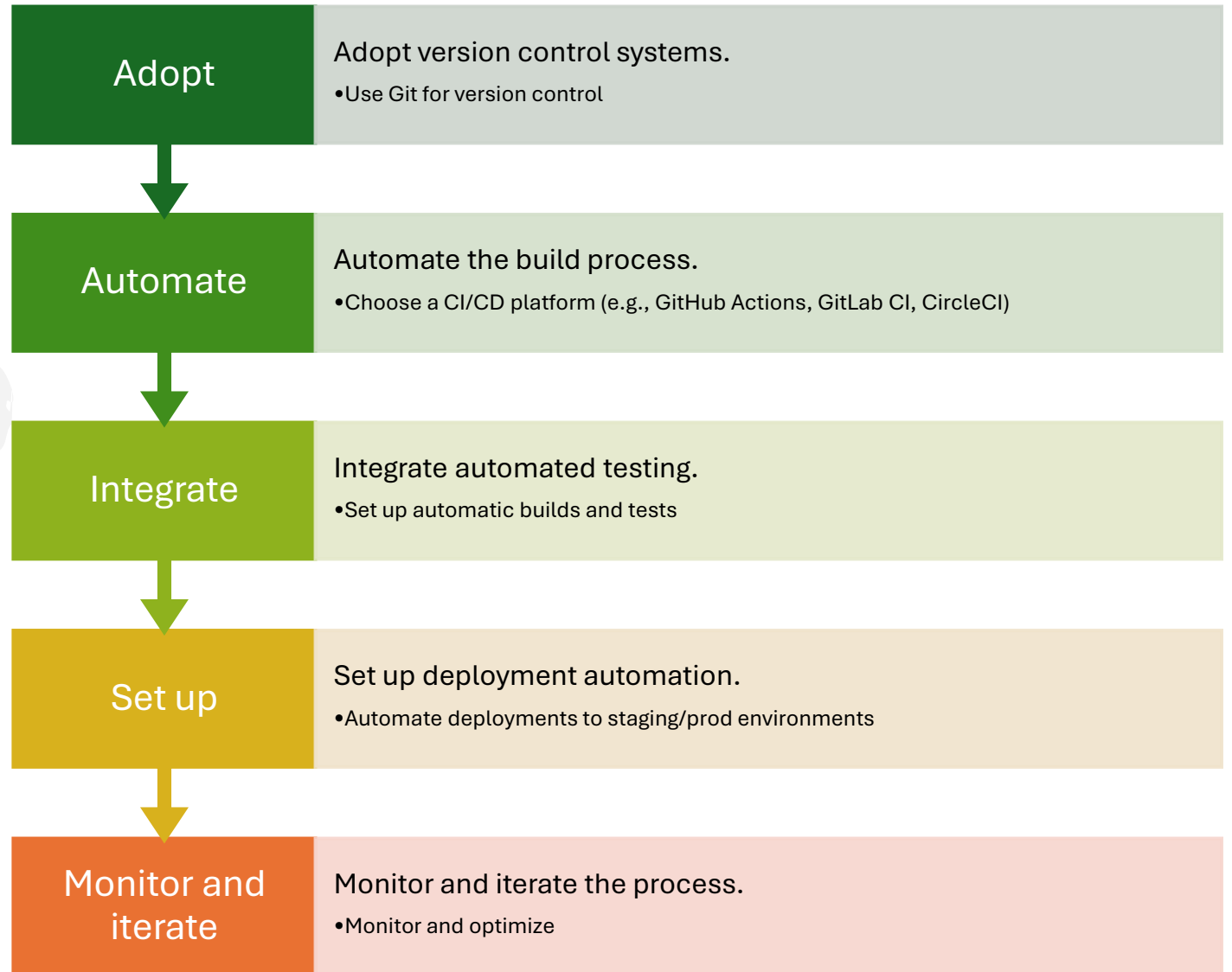


Automated Testing: Validating code functionality.



Deployment Automation: Releasing code to environments.

# Steps to Implement CI/CD



# Real-World Example

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Code pushed to GitHub triggers  
CI pipeline

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Jenkins builds and tests the app

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If successful, CD pushes to  
staging

---

Manual approval sends it to  
production



# Embracing CI/CD for Modern Development

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CI/CD enhances  
development efficiency.

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Promotes high-quality,  
reliable software delivery.

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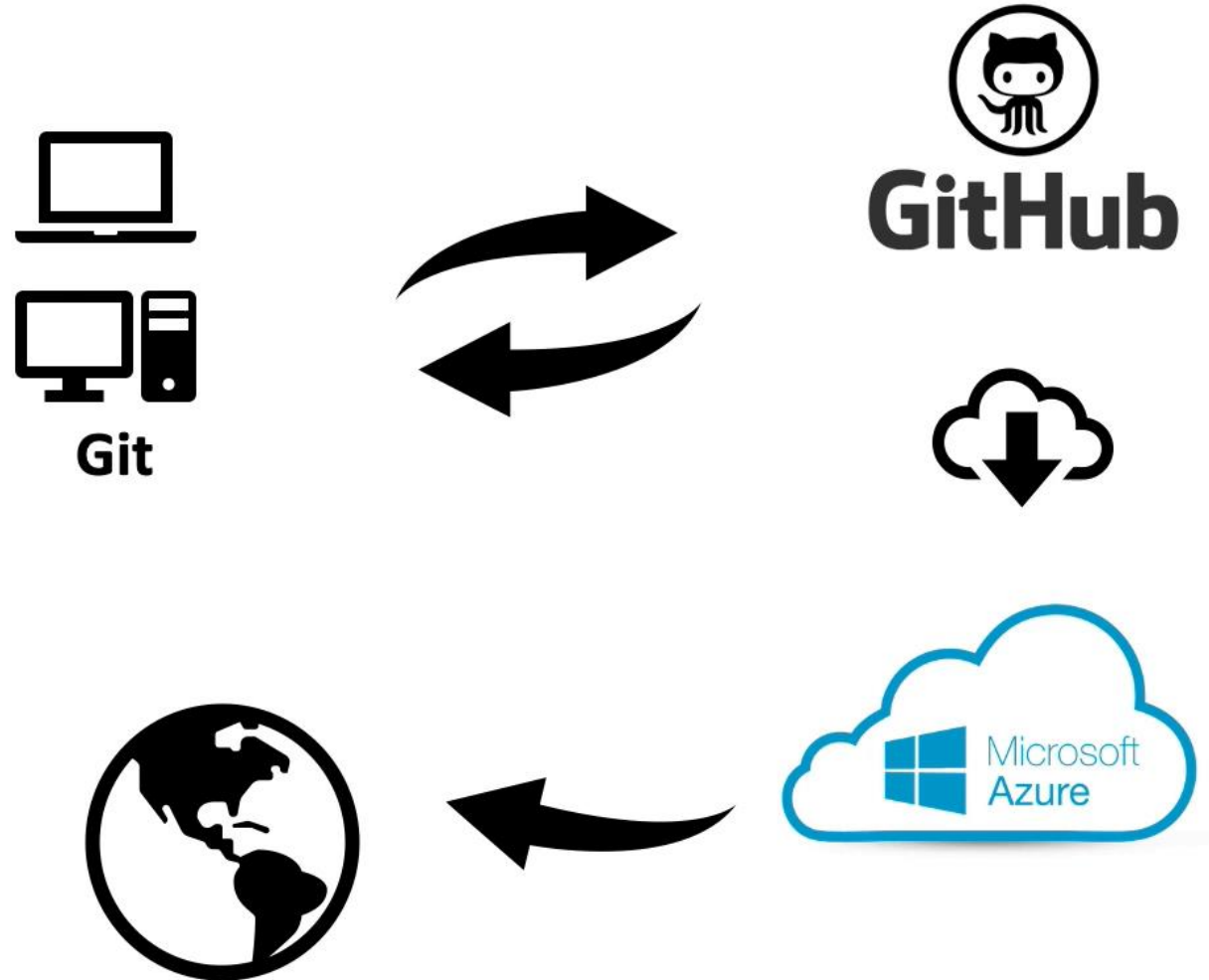
Essential for agile and  
DevOps practices.



# Windows Azure

practical workflow

# Website Creation with GitHub and Microsoft Azure



# Create static website

Panopto

Create New Recording Manage Recordings Settings unified\kalfou Sign out

Stop

Starting Devices

Folder SU25-CPSC-24700-LT1 - Web and Distributed Prog

Name Static webApp Join Session

Webcast

Primary Sources

Video None

Audio Microphone Array (Realtek(R) Audio)

Quality High

Capture Computer Audio

Secondary Sources

Capture PowerPoint

Capture Main Screen

Add Another Video Source

Main Screen

Panopto

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Add Another Video Source

Resolution 1920 x 1080 fps 8 kbps 600

Enable screen capture preview

Resolution 1920 x 1080 fps 8 kbps 600

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