

# AZ-2007: Accelerate app development by using GitHub

## Copilot Course

**Course Duration: 8 Hours**

**Course code: AZ-2007**

### 1. Course Overview

In **AZ-2007**, you'll dive into GitHub Copilot—the AI assistant that helps you write better code faster. This course guides you through integrating Copilot into your development workflow, exploring best practices for generating boilerplate, completing logic, writing tests, and collaborating more efficiently. You'll work on real-world scenarios using a variety of languages and frameworks, so you leave ready to supercharge your productivity.

### 2. What you'll learn?

- By the end of this course, you will be able to:
- Understand Copilot's capabilities, limitations, and practical use cases
- Efficiently integrate Copilot with IDEs like VS Code and JetBrains
- Generate high-quality code in multiple languages (JavaScript/TypeScript, Python, C#, etc.)
- Safely use Copilot's suggestions, refining and validating AI-generated code
- Leverage Copilot to create unit tests, documentation, and CI/CD scripts
- Collaborate more effectively in team environments using Copilot
- Customize your “prompt engineering” to get targeted results
- Manage Copilot settings and security in enterprise scenarios
- Apply AI-powered code generation while adhering to software engineering best practices

### 3. Target Audience

This course is ideal for:

- Developers (front-end, back-end, full-stack) seeking to streamline code generation
- Technical leads and software architects exploring AI-supported coding workflows
- DevOps engineers and QA professionals writing automation and tests
- Development managers evaluating Copilot adoption across their teams
- Anyone curious about how AI can practically enhance daily coding

## 4. Pre-Requisites

Learners should have:

- Experience with at least one programming language (e.g., JavaScript, Python, C#)
- Familiarity with Git and GitHub workflows
- A version control tool (like Git) and a supported IDE (VS Code or JetBrains IDE)
- A GitHub account with access to Copilot (individual or organization subscription)
- Basic understanding of test-driven development (recommended but not required)

## 5. Course content

### Module 1: Introduction to GitHub Copilot

- What Copilot is and how it works
- Installing and configuring Copilot in your IDE
- First coding prompts and troubleshooting issues

### Module 2: Boosting Productivity with Snippets

- Generating code stubs, class structures, and config files
- Editing and refining AI-suggested code

### **Module 3: Deep Dive by Language**

- JavaScript/TypeScript: functions, async calls, UI components
- Python: data processing, scripts, Flask/Django snippets
- C#: ASP.NET Core starters, LINQ queries, and EF Core models

### **Module 4: Tests & Documentation**

- Writing unit tests and mocks with Copilot
- Generating documentation comments and READMEs
- Integrating Copilot into CI pipelines

### **Module 5: Team & Enterprise Best Practices**

- Prompt design for sharing across teams
- Trust, review workflows, and security considerations
- Managing Copilot settings in GitHub organization

### **Module 6: Copilot in DevOps & Scripting**

- Shell scripts, YAML pipelines, Terraform scaffolding
- Automating repetitive tasks with Copilot-generated code

### **Module 7: Real-World Project**

- Build a CRUD web app using AI-assisted generation
- Incorporate best practices: testing, CI/CD, documentation
- Final review and performance optimization

### **Module 8: Next Steps & Continuous Learning**

- Best resources, community and GitHub discussions
- Staying current as Copilot evolves and new AI developer tools emerge