

KOENIG SOLUTIONS • COURSE OUTLINE

AZ-2007: Get started with AI-assisted development

Learn to use GitHub Copilot and Copilot Chat in Visual Studio Code to document, develop, test, and improve code.

1 Day

8 HOURS

6

MODULES

21

TOPICS

22

HANDS-ON EXERCISES

COURSE OVERVIEW

Learn how to accelerate app development by using GitHub Copilot and GitHub Copilot Chat in a Visual Studio Code environment.

WHO THIS COURSE IS FOR

Software Developers

App Developers

Test Engineers

Code Reviewers

PREREQUISITES

- An active subscription for GitHub Copilot is required for either a personal GitHub account or a GitHub account managed by an organization or enterprise.
- One or more years of code develop experience is recommended.
- Some experience developing C# applications in Visual Studio Code with the C# Dev Kit extension is recommended.

LEARNING OBJECTIVES

- Explain GitHub Copilot tools, benefits, and limitations
- Configure GitHub Copilot extensions for Visual Studio Code
- Generate code explanations and project documentation with Copilot Chat
- Develop new code features using GitHub Copilot suggestions
- Apply GitHub Copilot best practices during code development
- Create unit tests using GitHub Copilot and Copilot Chat
- Implement code improvements for quality, performance, and security
- Plan an end-to-end project accelerated by GitHub Copilot

6 Modules, 21 Topics

01

2 Exercises

Get Started with GitHub Copilot

This module introduces developers to the GitHub Copilot products, the benefits that GitHub Copilot provides to developers, the GitHub Copilot and GitHub Copilot Chat product features, and the GitHub Copilot extensions for Visual Studio Code.

TOPICS

- Introduction
- Examine AI tools from GitHub, OpenAI, and Microsoft
- Examine GitHub Copilot tools, benefits, and limitations
- Examine the autocomplete features of the GitHub Copilot extension
- Examine the AI assistance features of the GitHub Copilot Chat extension

02

4 Exercises

Generate Documentation Using GitHub Copilot Tools

This module explores the generation of code explanations, project documentation, and inline code comment documentation using the GitHub Copilot Chat extension for Visual Studio Code.

TOPICS

- Introduction
- Examine the “document” and “explain” features of GitHub Copilot Chat
- Review the “code documentation” solution

03

5 Exercises

Develop Code Features Using GitHub Copilot Tools

This module explores using GitHub Copilot and GitHub Copilot Chat suggestions to create new code. Autocompletion and code update suggestions are generated, managed, and implemented using the GitHub Copilot extensions for Visual Studio Code.

TOPICS

- Introduction
- Examine the code development features of GitHub Copilot
- Examine GitHub Copilot best practices
- Review the create new code solution
- Review the code logic solution

04**3 Exercises**

Develop Unit Tests Using GitHub Copilot Tools

This module explores using GitHub Copilot and GitHub Copilot Chat to create unit tests. Exercises provide practical experience creating unit test projects and running unit tests in Visual Studio Code.

TOPICS

- Introduction
- Examine the unit testing tools and environment
- Review the “create unit tests” solution

05**4 Exercises**

Implement Code Improvements Using GitHub Copilot Tools

This module explores using GitHub Copilot Chat to develop improvements for an existing codebase. Exercises provide practical experience implementing GitHub Copilot suggestions that improve code quality, reliability, performance, and security.

TOPICS

- Introduction
- Examine GitHub Copilot support for code improvements
- Review the “app improvement” solution

06**4 Exercises**

Guided Project - Accelerate App Development Using GitHub Copilot Tools

This Module explores using GitHub Copilot to accelerate development of an end-to-end project. GitHub Copilot is used to explain unfamiliar code, generate project documentation, develop a new app feature, develop unit tests, and implement improvements.

TOPICS

Introduction · Prepare the development environment

Practise What You Learn

#	MODULE	ACTIVITY
01	Get Started with GitHub Copilot	■ Install GitHub Copilot extensions for Visual Studio Code ■ Configure GitHub Copilot extensions for Visual Studio Code
02	Generate Documentation Using GitHub Copilot Tools	■ Generate code explanations using GitHub Copilot Chat ■ Generate project documentation by using GitHub Copilot Chat ■ Generate inline code documentation by using GitHub Copilot Chat ■ Complete the “code documentation” challenge
03	Develop Code Features Using GitHub Copilot Tools	■ Create code by using code line completions ■ Create code by using GitHub Copilot Inline Chat ■ Complete the create new code challenge ■ Complete the code logic challenge ■ Convert code from one programming language to another
04	Develop Unit Tests Using GitHub Copilot Tools	■ Create unit tests by using GitHub Copilot Chat ■ Create unit tests for specific conditions by using GitHub Copilot ■ Complete the “create unit tests” challenge
05	Implement Code Improvements Using GitHub Copilot Tools	■ Improve code quality by using GitHub Copilot Chat ■ Improve code reliability and performance by using GitHub Copilot Chat ■ Improve code security by using GitHub Copilot Chat ■ Complete the “app improvement” challenge
06	Guided Project - Accelerate App Development Using GitHub Copilot Tools	■ Analyze and document code using GitHub Copilot tools ■ Develop code features using GitHub Copilot tools ■ Develop unit tests using GitHub Copilot tools ■ Refactor and improve code sections using GitHub Copilot tools

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

Classroom Training

Live Online Classes (ILO)

Fly-Me-A-Trainer (FMAT)

Flexi (Self-Paced)

1-on-1 Training

Ready to Get Started?

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✉ info@koenig-solutions.com