GitHub Copilot For .NET Developers

Duration: 16 hrs (2 days)

Pre-requisites:

- Basic Coding Experience: At least one year of coding experience is recommended.
- Familiarity with .NET and C#: Some experience with developing C# applications, especially in Visual Studio Code with the C# Dev Kit extension, would be beneficial.
- Basic Understanding of GitHub: Familiarity with GitHub basics, such as repositories, commits, and pull requests.

Audience Profile:

1. .NET Developers: Developers who work with .NET technologies and are looking to enhance their productivity with AI-powered coding assistance.

2. Software Engineers: Engineers who want to learn how to integrate AI tools into their development workflow.

3. Project Managers: Managers who oversee .NET projects and want to understand how GitHub Copilot can improve team efficiency.

Module 01: Understanding GitHub Copilot

- GitHub Copilot, Your AI Pair Programmer
- How Copilot works
- Prompt Crafting Best Practices
- GitHub Copilot Features and Plans
- GitHub Copilot IDE Integrations
- Installation and Set Up of GitHub Copilot with VS and VS Code
- Risks/Vulnerabilities and how to avoid them

Module 02: Writing Code with GitHub Copilot

- Autocompletion features and capabilities
- Working with different languages and frameworks
- Use GitHub Copilot to Document Your Code
- Use GitHub Copilot to Explain Existing Code
- Customizing suggestions and feedback loops
- Time-saving Development Tips, Tricks, and Shortcuts
- Using copilot in command line
- Best practices to follow when coding with an AI assistant

Module 03: Real-world project using Html and JavaScript

- Learn about the project requirements
- Basic project setup
- Thinking about the components
- Writing the app

Module 04: Real-world project using C#

- Use GitHub Copilot with C#
- Building a .NET Core application
- Writing unit tests using Copilot
- Refactoring C# code with Copilot
- Debugging with Copilot

Module 05: End to End .NET Core MVC Project with Entity Framework

- Designing the database schema with Entity Framework Core
- Creating models, views, and controllers using Copilot
- Writing business logic with Copilot
- Implementing services and repositories
- Writing unit tests for controllers, services, repositories
- Dependency injection and service registration
- Generating views with Copilot
- Using Razor syntax and partial views
- Styling the application with Bootstrap and custom CSS