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PHOENIX TS

## Unit Testing with Visual Studio 2017

**Due to Covid-19 safety restrictions** PhoenixTS will temporarily be unable to provide food to our students who attend class at our Training Center; however, our Break Areas are **currently open** where students will find a constant supply of Coffee, Tea and Water. Students may bring their own lunch and snacks to eat in our breakrooms or at their seat in the classroom or eat out at one of the many nearby restaurants.

### Course Overview

Learning how to effectively use Visual Studio 2017 can enhance your productivity while simplifying your most common tasks, allowing you more time to focus on your project. This course teaches students what it takes to put it to work for your projects. Participants will learn to use XAML tools to build classic WPF apps, and UWP tools to build apps targeting Windows 10. They will learn about .NET Core and then explore NuGet, the package manager for the Microsoft development platform. In addition, participants will learn the debugging and live unit testing techniques that comes with the IDE. Finally, they will adapt Microsoft's implementation of cloud computing with Azure, and the Visual Studio integration with Source Control repositories.

At the conclusion of this course, participants will be able to do the following:

- Improve productivity with Visual Studio 2017
- Use the workloads and components of the new installation wizard and use the online and offline installer
- Build stunning Windows apps using Windows Presentation Foundation (WPF) and Universal Windows Platform (UWP) tools
- Use .NET Core and build apps targeting this new framework
- Explore everything about NuGet packages
- Debug and test applications using Visual Studio 2017
- Accelerate cloud development with Microsoft Azure
- Integrate Visual Studio with most popular source control repositories, such as TFS and GitHub



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## Schedule

### Course Outline

#### Module 1: What is New in Visual Studio 2017 IDE?

- The new installation experiences
- The new features and enhancements to the Visual Studio IDE

#### Module 2: What is New in C# 7.0?

- Local functions or nested functions
- Literal improvements in C# 7.0
- The new digit separators
- Getting to know about pattern matching
- The ref returns and locals
- New changes to tuples
- Changes to the throw expression
- Changes to the expression-bodied members
- New changes with the out variables
- Getting to know about deconstruction syntax
- Uses of the generalized async return types

#### Module 3: Building Applications for Windows Using XAML Tools

- The WPF architecture
- The XAML overview
- Building your first WPF application
- Layouts in WPF
- WPF property system
- Data binding in WPF
- Using Converters while data binding
- Using triggers in WPF

#### Module 4: Building Applications for Windows 10 Using UWP Tools

- Getting started with Universal Windows Platform
- Building your first UWP application
- Designing UWP applications
- Application designing with the XAML style
- Building your own XAML control
- Generating visual assets using the new Manifest Designer
- Preparing UWP apps to publish to Windows Store

#### Module 5: Building Applications with .NET Core



- Overview of .NET Core
- Installation of .NET Core with Visual Studio 2017
- A quick lap around the .NET Core commands
- Creating .NET Core applications using Visual Studio
- Publishing a .NET Core application using Visual Studio 2017
- Creating, building, and publishing a .NET Core web app to Microsoft Azure

## **Module 6: Managing NuGet Packages**

- Overview to NuGet package manager
- Creating a NuGet package library for .NET Framework
- Creating a NuGet package library for .NET Standard
- Testing the NuGet package locally
- Publishing NuGet package to NuGet store
- Managing your NuGet packages

## **Module 7: Debugging Applications with Visual Studio 2017**

- Overview of Visual Studio debugger tools
- Debugging C# source code using breakpoints
- Using the Data Tips while debugging
- Using the Immediate Window while debugging your code
- Using the Visual Studio Diagnostics Tools
- Using the new Run to Click feature in Visual Studio 2017
- Debugging an already running process
- Debugging XAML application UI

## **Module 8: Live Unit Testing with Visual Studio 2017**

- Overview of Live Unit Testing in Visual Studio 2017
- Configuring Visual Studio 2017 for Live Unit Testing
- Unit testing with Visual Studio 2017
- Navigating to failed tests

## **Module 9: Accelerate Cloud Development with Microsoft Azure**

- Understanding the cloud computing basics
- Creating your free Azure account
- Configuring Visual Studio 2017 for Azure development
- Creating an Azure website from portal
- Managing Azure websites (Web Apps) from the portal
- Creating an Azure website from Visual Studio
- Updating an existing Azure website from Visual Studio
- Building a Mobile App Service
- Integrating Mobile App Service in a Windows application
- Scaling App Service plan



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## Module 10: Working with Source Controls

- Working with Git repositories
- Working with Team Projects

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Starting at **\$2,200**

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# GSA



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