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# Windows Presentation Foundation training

4 days (28 hours)

## Presentation

Windows Presentation Foundation (WPF) in Visual Studio 2022 provides developers with a unified programming model for creating modern desktop business applications on Windows.

Thanks to WPF, your applications will run on the latest .NET technology to achieve better performance. You can also run your applications side by side using different versions of .NET Core.

You'll have access to the latest Visual Studio features, tools and SDKs that have been created for applications using the .NET Core platform.

In this WPF training course, you'll learn how to master and use its advanced concepts (Binding, XAML, MVVM) to make your applications richer, more modular and maintainable.

In this course, you'll learn about the latest version of WPF: [WPF 6](#).

## Objectives

- Designing a graphical user interface with WPF
- Using Two Way Data Binding
- Manage component positioning
- Understanding the MVVM pattern
- Master the use and creation of graphical components
- Exploiting the possibilities of XAML - Using Microsoft Blend

## Target audience

- Developers
- Architects

## Prerequisites

Knowledge of an object-oriented language, particularly the .NET environment with C#.

## WPF training program

### Introduction to WPF

- Discover WPF
- WPF and Windows Forms
- WPF and Windows 10

### XAML concepts

- XAML language basics
- XAML with Blend
- Code Behind
- Dependency Properties

### Resource management

- Roles of logical and physical resources
- Designing control styles and templates
- Role and use of different types of triggers

### DataBinding

- DataBinding principles
- Two Way Binding
- Binding between graphics components
- Binding with business objects
- DataTemplates
- INotifyPropertyChanged
- Configuration of link mode with tagging extensions or by code
- Managing different types of sources
- Data presentation model
- Conversion and validation operations with error handling. DataGrid and CollectionViewSource control

### Style and positioning

- Layout
- Positioning components
- Styles
- Themes and resources
- Behavior
- Animation

## Graphics components

- WPF controls
- Control styling
- ControlTemplate
- ItemsControl
- Personalization

## Using patterns

- Validation
- Conversion
- MVVM
- Command, RelayCommand and EventToCommand
- RoutedEvent
- Error messages
- Internationalization

## MS Blend

- Discovering and using MS Blend
- Interface organization and integration with VS
- Resource and asset management
- Animations and templates

## Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

## Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

## Organization

The course alternates theoretical inputs from the trainer supported by examples and

brainstorming sessions and group work.

## Validation

At the end of the session, a multiple-choice questionnaire is used to check that skills have been correctly acquired.

## Sanction

A certificate will be issued to each trainee who completes the course.