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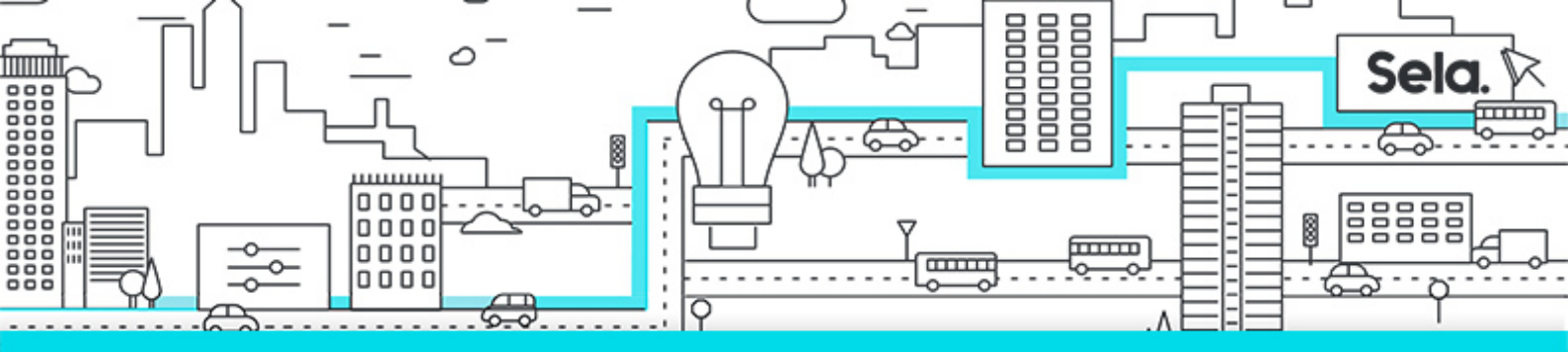
Windows Presentation Foundation (WPF)



college@sela.co.il

03-6176666





Windows Presentation Foundation (WPF)

50151 - Version: 4

5 days course

Description:

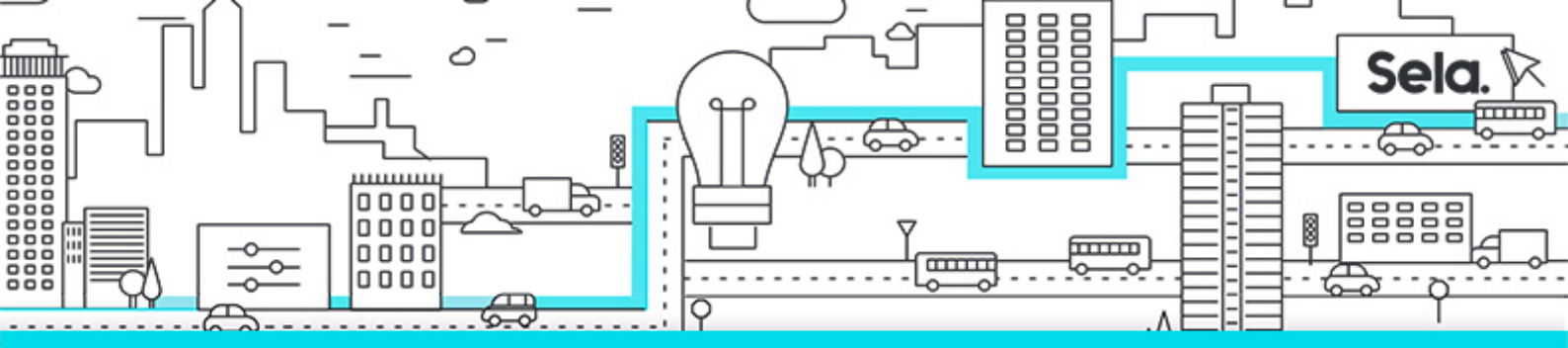
This five-day instructor-led course provides students with the knowledge and skills to develop Graphical User Interface (GUI) applications on Windows using the Windows Presentation Foundation framework. Window Presentation Foundation (WPF) is a managed framework for designing and creating user interfaces and presentation layer. It is a major part of the .NET Framework Runtime Components. WPF provides a consistent programming model for building applications for a full smart-client installation(Stand alone), or as top tier for Distributed Application. WPF enables richer control, design, and development of the visual aspects of Windows programs by unifying a host of application services: user interface,MVVM, data-binding, 2D and 3D drawing, fixed and adaptive documents, vector graphics, raster graphics, animation, audio and video. The course is packed with code samples, demos, exercises and labs, to facilitate understanding WPF-based UI applications design concepts, development and best practices as currently used in real projects.

Intended Audience:

This course is intended for C# developers with at least 6 months of experience with the .NET framework and familiarity with UI development.

Prerequisites:

- Working knowledge of C# 3.0 or above
- Basic knowledge of UI development
- Familiarity with XML

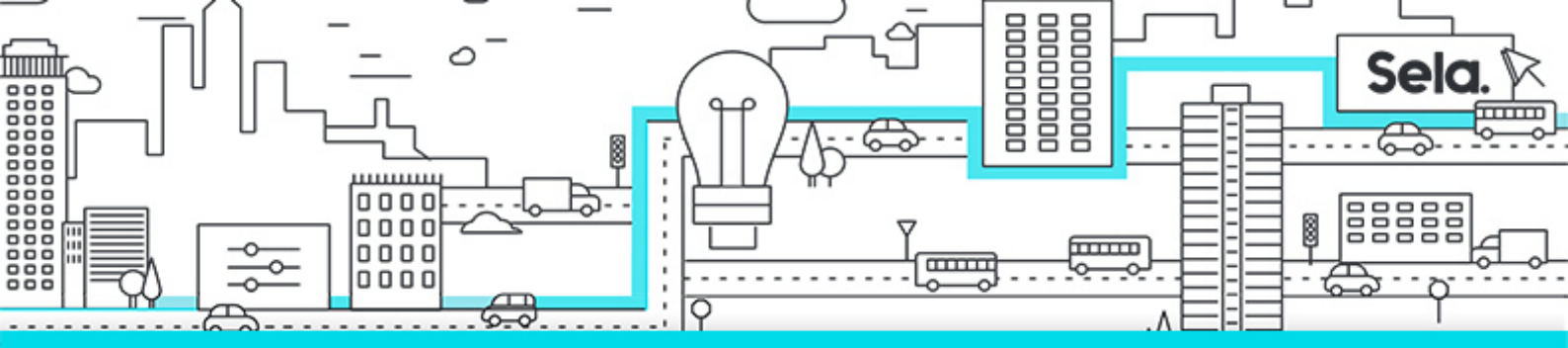


Objectives:

- Understand the Windows Presentation Foundation framework architecture and design concepts.
- Use WPF built-in controls from Visual Studio and introduction to Expression Blend.
- Reading and Writing with Xaml language.
- .Net Applications & modern WPF.
- Using WPF layout system.
- Styling applications & WPF Template mechanism.
- MVVM as a standard, architecture, best practices and frameworks.
- Introduction to 3D and animation with WPF
- WPF Dispatcher model and Multithreaded application

Topics:

- **Module 1 – Introduction**
 - History of Windows GUI applications
 - Graphics and DirectX
 - WPF main abilities
 - WPF and Windows versions
 - The hierarchical class tree of WPF
- **Module 2 - Application Layer and IDE**
 - .NET application
 - App.xaml
 - Custom application
 - Window Type and Dialogs
 - Introduction to Expression Blend
 - Visual Studio IDE
 - Xaml and Xaml.Cs interactions (code behind)



- **Module 3 – XAML**

- XAML the concept
- Xaml name space
- Markup extension
- Writing syntax
- Element Binding

- **Module 4 – Controls**

- Commonly built in controls.
- Behind WPF controls.
- Content Model.
- Introduction to custom controls

- **Module 5 – Layout**

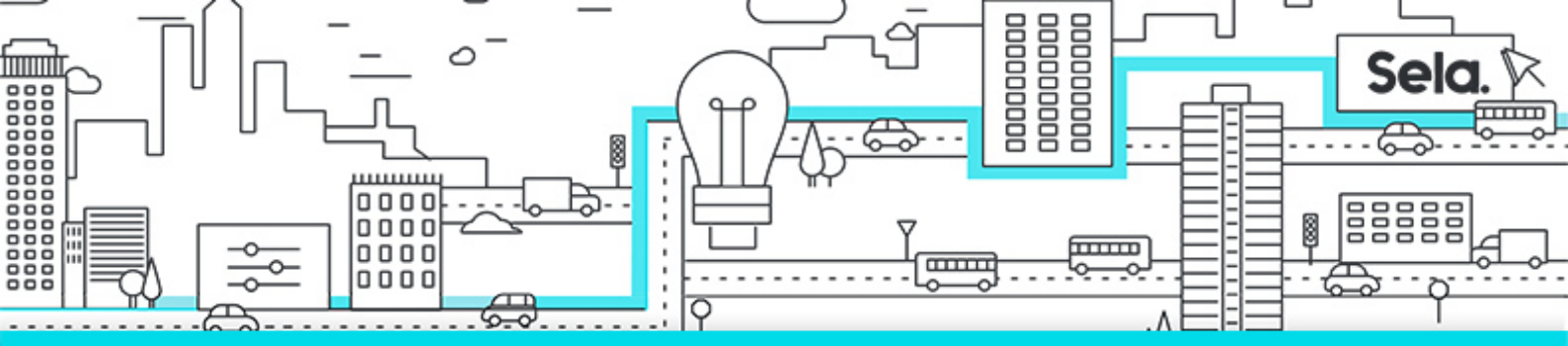
- All WPF Panels
- Layout Properties
- Layout system
- Introduction to custom Panels
- Design Principles

- **Module 6 - Style Templates & Resources**

- Using style
- Style levels
- Resources
- Dynamic & Static
- Style Triggers
- Visual State Manager.
- Control template

- **Module 7 - WPF fundamentals**

- Dependency Object & Dependency Property



- Attached Property
- Visual & Logical trees
- Dispatcher and STA
- Routed Events

• **Module 8 - Data & Data Binding**

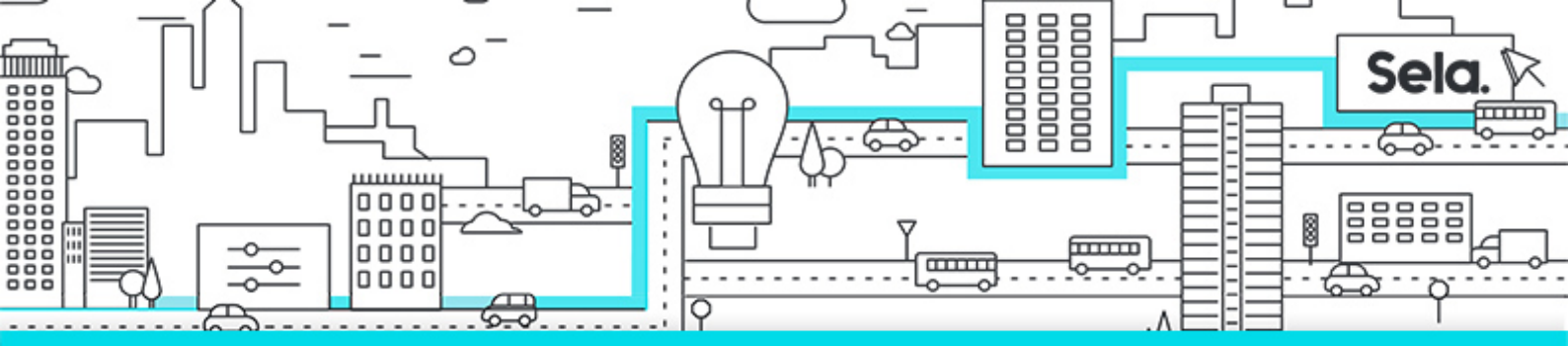
- Data Binding overall
- INotifyPropertyChnged
- Relative binding concept
- Data context
- DataTemplates
- Converters

• **Module 9 – MVVM**

- The Pattern
- Model , View, ViewModel
- WPF Commands
- Event To command (Blend SDK)
- ObservableCollection
- View first & ViewModel First
- Navigation basics
- MVVM Light
- Popular MVVM Frameworks

• **Module 10 – Validation**

- User input
- Validation Rules
- IDataErrorInfo
- Visual Feedback
- Custom validation methods



- **Module 11 - Animation Media and 3D**

- Basic WPF 3D
- Animation in XAML
- Animation in C#
- Windows Media Classes

- **Module 12 - Debug**

- Visual Studio output
- Converter as Debugger
- WPF Snoop
- Visual Studio 2015 Profiling tools