

# Development of Windows applications using WPF using the MVVM pattern

Course code: DOTNET\_WPF2

The course is taught for .NET developers who are interested in taking advantage of the MVVM architecture in creating WPF applications. You will learn to understand the advantages and disadvantages of this approach not only in theory, but also how to apply it in real situations, including design variants and related decisions, on real examples.

## Required input knowledge

- Experience with c # programming at GOC2125 and DOTNET\_WPF levels is assumed
- Development experience with Visual Studio
- Experience with object-oriented programming in C #
- Experience with LINQ technology

## Teaching methods

- Expert explanation with practical examples, exercises on computers

## Course syllabus

Architecture and MV \* patterns

MVVM - what, why, how

Model

- Link with three-tier architecture
- Model requirements
- Useful Designs - Facade and Adapter

ViewModel

- Purpose and responsibilities
- INotifyPropertyChanged and ObservableCollection
- Model and viewmodel status - differences
- Hybrid architecture - MVP vs MVVM
- Navigation and Pattern Mediator

View

- XAML, resources, binding
- Sequence of events and how to avoid event loops

Dependency and constraint management

- Manual access
- IoC / DI

Alternatives

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