

"Winter Coding School 2020"

Basics of C# programming

- Course content -

Imperative programming	
Basics of C #	About the language and the environment
Branching	If then else, switch
Loops	While, do ... while, for, foreach
Methods	Input and output parameters, keywords out and ref
Data structures	Arrays, lists, dictionaries
Memory management	The difference between value and reference data types
Working with mistakes	Try catch and finally errors
Object Oriented Programming I	
Classes and objects	Writing classes, installing objects. Static elements
WPF I	
WinForms	A look at old forms
XML, XAML	Markup languages, XAML we use for WFP
Controls	Basic controls in WPF and their organization
Binding	Connecting the controller to the data
Object Oriented Programming II	
Inheritance	A way for classes to use code we've already written. Virtual, override and new
Conditions	Getters and Setters
Abstraction	A way of organizing classes
Interfaces and Structures	Classes that contain only methods or fields
Predicts, delegates and events	Pointers to methods, pattern for events
WPF II	
Converters	Value conversion
Validators	Validation
Databases	
SQL	Introduction to SQL and relational databases
EF	Entity Framework in C # over which we talk to databases
Code first approach	The way in which the database is created on the basis of classes without direct interference in SQL

Project tasks that we will develop into full applications during the course	
Address book	A telephone directory in which we can enter people and companies
POS	Retail Application. Working with items, issuing invoices, basic bookkeeping (stock list, trade book, balance sheets)
Slider Jigsaw	Puzzle A game similar to old jigsaw puzzles
Chat application	An application in which multiple users can chat over a network
Adventure	A game with which we will master the WPF
Bookstore	Application with membership fee and rent, usable for gyms and everything that has users and things for rent