



Center for Application of  
New and Innovative Technologies NIT

# "Autumn Coding School 2019"

## GETTING TO KNOW C#

- BASIC SYNTAX
- DEBUGGING
- FLOW CONTROL
- LOOPS
- ARRAYS
- FUNCTIONS
- NAMESPACES
- FORMS

With basic syntax, we will work to properly apply the debugger from the beginning to get into the habit of using it. Special focus on things specific to recent C # versions such as tuples, else if operator, etc.

## OOPINC#

- THE BASICS OF OOP  
(INHERITANCE, ENCAPSULATION, POLYMORPHISM, ABSTRACTION)
- INTERFACES
- STRUCTURES
- GENERIC TYPES AND METHODS
- ANONYMOUS TYPES
- ENUMERATION AND ITERATION
- NULLABLE TYPES

We get to know the OOP paradigm at work in C # on a number of examples. We are working to understand the techniques that we can apply within this paradigm.

## .NET AND DAY TO DAY PROGRAMMING

- ERROR HANDLING
- USEFUL TOOLS WITHIN .NET
- WORK WITH FILES
- NETWORK PROGRAMMING
- THREADS, TASKS, ASYNCHRONY
- COLLECTION CLASSES
- NUGET

We are expanding our language skills with many useful tools. The focus is that after this chapter, trainees can start designing almost any type of application they imagine.

## UNIT TESTING

- WRITING UNIT TESTS
- DEVELOPMENT FROM THE TEST
- DATA DRIVEN TESTING

We are learning how to properly test code as well as doing reverse development where we write functional code

since we wrote the tests he has to pass.

## GUI

- **STANDARD WINDOWS UI**
- **WPF**
- **GRAPHIC APPLICATION DESIGN PHILOSOPHY**
- **CODEDUI**

We add a GUI to our applications. We are also learning how to automate graphic testing application.

## LINQ

- **LINQ QUERIES**
- **LINQ AND XML**
- **LINQ OPERATORS**
- **XML**
- **REGULAR EXPRESSIONS**

Language Integrated Query is a set of tools by which we can query all collections as well to external data sources such as SQL Server. We get to know him and study in detail XML, for itself as with LINQ. When it comes to searches, we are also introduced to regular expressions.

## ASP.NET, XAMARIN AND UNITY

- **MVC**
- **RAZOR**
- **BLAZER**
- **IOS AND ANDROID DEVELOPMENT**

Serverside web development, clientside web development with Blazor, microservices. On the other hand, with xamarin we're moving C # apps to iOS and Android devices. In addition, we are introduced to one of the most popular game engine of today that works with C #.