# Fast track C#



Classroom or online training course 3 day course outline

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This course combines topics from the following courses (any items marked with a \* will be covered if time allows).

# Topics taken from our INTRODUCTION TO VISUAL C# course

# **Creating forms**

- · Drawing controls
- · Formatting forms

#### **Coding form events**

- Forms and their events
- The two event arguments

# Laying out your code

- · Commenting out code
- Using regions

#### C# variables

- · Creating and using variables
- · The types of variable

# Enumerations and constants (\*)

- Enumerations
- Constants

## **Conditions**

- Using IF and ELSE
- The SWITCH statement

### Modular code

- · Passing arguments
- · Writing functions

### **Arrays**

- · Using arrays
- · Splitting text

### Looping

- · Looping n times
- WHILE loops
- · Looping over collections

### Files and folders

- · Stream readers and writers
- The USING statement
- · FileInfo and DirectoryInfo

# **Debugging and trapping errors**

- · The TRY clause
- Stepping through code
- · Setting breakpoints

### **Using lists**

- · Populating lists
- · Finding items

# Properties in C#

- · RO, WO and RW properties
- Coding properties

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# Topics taken from our INTERMEDIATE C# course

### **Designing classes**

- · The domestic cat object
- · Properties and methods
- · Encapsulation and exposure

# **Creating classes**

- Using namespaces
- · Creating constructors
- Fields, properties and methods
- Static members

#### The form as a class

- · Partial classes
- InitalizeComponent method
- · Instantiating forms

## **Data structures**

- Generics
- Arrays
- · Lists, stacks and queues
- Dictionaries

# Overloading (\*)

- · Overloaded methods
- · Overloading constructors

## LINQ theory

- · Extension methods
- lenumerability
- · Query vs. method syntax

### **Writing LINQ**

- Arrays, lists and data tables
- · Criteria and ordering
- Using LET expressions

### Advanced LINQ (\*)

- · Projecting data
- Anonymous types
- Forcing query execution
- · Taking and skipping

# Types of model

- Code first
- Model first
- Database first

### **Entity Frameworks**

- · Creating entity data models
- · Data contexts
- · Updating models

### **LINQ** with Entity Frameworks

- Creating a data context
- · Selecting data using LINQ
- Using relationships (associations)
- · Adding, editing and deleting

# Advanced LINQ with EF (\*)

- · Returning anonymous types
- Using stored procedures
- Extending (partial classes)

# **Grouping using LINQ (\*)**

- · IGrouping and IEnumerable
- Grouping keys
- · Group into and ordering
- Using multiple keys

Maximum 6 people per course. Scheduled classroom courses include lunch at a local restaurant; you can see how our online training works here. For more information, see <a href="https://www.wiseowl.co.uk/">https://www.wiseowl.co.uk/</a>.