

.NET Syllabus

Getting Started with .NET

1. Getting Started - A C# Console Application
2. Saving your work
3. Your first line of C# code
4. How to Run your C# Programmes
5. Your First C# Windows Form
6. Adding Controls to a Form
7. Properties of a Control
8. Adding Code to a Button
9. C# Message Boxes
10. More about Message Boxes

.NET Variables

1. String Variables in C#. NET
2. Assigning Text to a String Variable
3. Concatenation in C#
4. C# Comments
5. Numbers Variables
6. Double and Float Variables
7. Double Variables
8. Addition in C# .NET
9. Adding up with float Variables
10. Subtraction
11. Mixing Subtraction and Addition
12. Operator Precedence
13. Multiplication and Division
14. Getting Numbers from Text Boxes
15. A C# .NET Calculator - Design
16. C# .NET Calculator - The Code

17. The Plus Button
18. The Equals Button

Conditional Logic

1. IF Statements
2. Else ... If
3. Switch Statements
4. C# Operators

.NET: Loops

1. C# and For Loops
2. Loop Start and End Values
3. A Times Table Programme
4. Do loops and While Loops
5. Checking for Blank TextBoxes in C#

.NET: Add Menus to your Forms

1. Add Menus to Windows Forms in C#
2. Sub Menus
3. Menu Shortcuts
4. Code for your Quit Menu
5. The Edit Menu
6. Copy and Paste in C# .NET
7. The View Menu
8. Adding Images in C# .NET
9. Open File Dialogue Box in C#
10. Open a Text File
11. The Save As Dialogue Box
12. CheckBoxes and Radio Buttons

.NET: Debugging your Applications

1. Errors at Design Time
2. Run Time Errors
3. Logic Errors
4. Breakpoints
5. The Locals Window
6. Try ..Catch Statements in C# .NET

.NET Methods

1. Understanding C# .NET Methods
2. Passing values to your C# Methods
3. Getting values back from C# Methods

Understanding Arrays

1. Arrays in C# .NET
2. Arrays and Loops
3. Arrays at RunTime
4. Multi Dimensional Arrays in C# .NET
5. Arrays and Text
6. C# Collections - Lists
7. C# Collections - HashTables
8. C# Collections - Enumerations

.NET String Manipulation

1. C# String Variables
2. Trim Unwanted Characters
3. The Contains Method
4. The IndexOf Method

5. The Insert Method
6. PadLeft and PadRight
7. Remove and Replace in C# .NET
8. C# Substring
9. Split and Join in C#
10. A C# .NET Hangman Game

.NET: Events

1. The Click Event
2. The MouseDown Event
3. KeyDown
4. The Leave Event
5. C# ListBox and ComboBox Events
6. C# Custom Web Browser
7. The TreeView Control
8. Adding Nodes to a TreeView
9. Add a WebBrowser to a C# Windows Form

Classes and Objects

1. Classes and Objects in C# .NET
2. A First Class
3. Create Objects from your C# Classes
4. Passing values to your Classes
5. Adding Properties to your C# Classes
6. Using Class Properties
7. Class Constructors in C# .NET
8. Inheritance in C# .NET
9. C# Method Overloading
10. C# Static Methods

.NET: Manipulating Files

1. How to open a Text File
2. Read a file line by line in C# .NET
1. Write to a Text File
2. How to Copy, Move and Delete a File

Databases

1. SQL Server Express and C# .NET
2. Create a SQL Server Express Database
3. Create a SQL Server Database Table
5. Create a Database Project in C#
6. Create a Database Class
7. Display Data from the Database
8. Database Navigation Buttons
9. Add, Update, Delete a Record
10. Finding Records in a DataSet

Two Tables with a SQL Server Databases

1. Create a Sql Server Database in C#
2. Create the first table
3. Create a second table
4. Adding data to the two tables
5. SQL queries, Joins, Stored Procedures
6. SQL Paramaters
7. Creating a User Form with a DataGrid
8. Coding for a simple Stored Procedure
9. Search a database using a Stored Procedure
10. Update a database with a Stored Procedure
11. Write code for the update

Multiple Forms

1. Creating Multiple Forms
2. Modal Forms in C# .NET
3. Getting at the values on other Forms

.NET Dates and Times

1. Dates and Times in C# .NET

VB .NET - Getting Started

1. Getting started with VB.NET
2. Visual Basic .NET Forms
3. Add Controls using the Toolbox
4. Adding a Textbox to the Form
5. Visual Basic .NET and Properties
6. The Text Property
7. Adding a splash of colour
8. Saving your work
9. Create a New Project

VB .NET - Write your first .NET code

1. What is a Variable?
2. Add a button to your VB Net Form
3. Writing your first VB code
4. String Variables in VB
5. How to get at Text in a textbox
6. More about VB .NET variables
7. Using variables in your VB code
8. A VB NET Calculator Project

9. The code for the calculator
10. The Message Box in VB .NET

VB .NET - Conditional Logic

1. VB Net If Statements
2. Select Case Statements
3. Add a Combo Box to a VB .NET form
4. The Conditional Operators in VB
5. Section Three Exercises

VB .NET - Loops

1. An Introduction to Loops in VB .NET
2. VB For Loops
3. VB Do Loops
4. A Times Table Programme
5. The Code for the Time Table Programme
6. The Basic Math Symbols in VB .NET

VB .NET - Adding menus to Forms

1. Add a menu to a VB .NET Form
2. How to add VB code to a Menu
3. How to add a Sub Menu to your Form
4. How to add Shortcuts to your Menu Items
5. Menu Item Images
6. Right-Click Menus
7. A VB .NET menu Project
8. The Open File Dialogue Box
9. Filter files with the Open File Dialogue Box
10. Selecting Files
11. The Save File Dialogue Box
12. Cut, Copy, Paste and Undo menus
13. How to Show and Hide Controls

14. Insert Images into a Picture Box
15. Add a Checkbox to a VB .NET form
16. Writing code for Checkboxes
17. Add Option Buttons to a VB .NET form

VB .NET - Debugging your code

1. Error Handling and Debugging in VB .NET
2. VB Design Time Errors
3. VB RunTime Errors
4. Try ... Catch in VB .NET
5. Logic Errors
6. Breakpoints and Debugging tools

VB .NET - Mastering Arrays

1. What is an Array?
2. VB Arrays and the Index Number
3. Assigning Values to a VB Array
4. Arrays where boundaries are not known

VB .NET - String Manipulation

1. The VB String Variable Type
2. How to use the Trim Method in VB
3. The difference between Char and Chars()
4. How to use the VB InStr Method
5. How to use the Substring Method in VB
6. Equals, Replace and Insert Methods
7. How to use Split and Join in VB .NET

VB .NET - Working with Text Files

1. What is a Text File?
2. How to Open a Text File in VB .NET
3. How to Read a Text File Line by Line
4. How to Write to a Text File in VB .NET
5. Appending Text to a File in VB .NET
6. How to Copy a File in VB
7. How to Move a File
8. How to Delete a File

VB .NET - Functions and Subs

1. An Introduction to VB Functions and Subs
2. How to Create your own Subs in VB .NET
3. Using Parameters in your Subs
4. ByVal and ByRef in VB .NET
5. How to Create a Function in VB.NET
6. How to use Parameters with Functions
7. Standard Modules - Part One
8. Standard Modules - Part Two
9. File and Folder Functions

VB .NET - Events

1. The VB Click Event
2. The VB MouseDown Event
3. The KeyDown Event in VB Net
4. The VB Form Load Event

VB .NET - Classes and Objects

1. An Introduction to VB Classes and Objects
2. Create your own Classes in VB .NET
3. Create Objects from your Class

4. Creating Properties in your Classes
5. Inheritance and VB Classes

VB .NET - VB .NET and Databases

1. VB NET and Databases
2. The Database Wizard in VB NET
3. Write your own VB .NET database code
4. Learn about DataSets and Data Adaptors
5. Display the Data in the DataSet
6. Navigate a Database with VB .NET
7. How to Move through the Database
8. Add, Update and Delete Records
9. Add a New Record using VB .NET
10. Delete a Record using VB .NET

VB .NET - VB NET and Forms

1. Anchor and Dock Controls on a VB Form
2. Add a Toolbar to a VB Form
3. Creating Multiple Forms in VB .NET
4. Modal and Non Modal VB Forms
5. Getting at Values on Other Forms

Introduction to ASP.NET

ASP.NET Core Fundamentals

ASP.NET MVC (Model-View-Controller)

ASP.NET Web API

Authentication and Authorization

Database Access in ASP.NET

Client-Side Integration in ASP.NET