

C# .NET Training Content

- ✓ Environment Setup
- ✓ Basic Syntax
- ✓ Program Structure
- ✓ Data Types
- ✓ Variables
- ✓ Constants
- ✓ Modifiers
- ✓ Statements
- ✓ Operators
- ✓ Using Math Functions
- ✓ Decision Making
- ✓ Loops
- ✓ Strings
- ✓ Date & Time
- ✓ Arrays 1D
- ✓ Array 2D & 3D
- ✓ Functions
- ✓ Arguments
- ✓ Return types
- ✓ Parameters
- ✓ Out parameters
- ✓ Ref parameters
- ✓ Collections
- ✓ List
- ✓ ArrayList
- ✓ Dictionary
- ✓ Hashtable
- ✓ Struct
- ✓ Enum
- ✓ Classes & Object
- ✓ Constructor
- ✓ Destructor
- ✓ Access level
- ✓ Stack Memory
- ✓ Heap Memory
- ✓ Static class
- ✓ Static methods
- ✓ Abstract class
- ✓ Abstract methods
- ✓ Interfaces
- ✓ Inheritance
- ✓ Multiple Inheritance
- ✓ Multilevel inheritance
- ✓ Polymorphism
- ✓ Method overloading
- ✓ method overriding
- ✓ Exception Handling
- ✓ Files Handling
- ✓ Directory Handling
- ✓ Creating console applications
- ✓ Form Application
- ✓ Form Controls
- ✓ Dialog Boxes
- ✓ Advanced Forms
- ✓ Event Handling
- ✓ Class library & DLL creation
- ✓ Interacting with Notepad files
- ✓ Interacting with Excel file
- ✓ Visual Studio functions

SolidWorks API Training Content

1. Introduction

- ✓ Need of CAD automation
- ✓ Tools for automation
- ✓ Runtime application

2. Getting Started

- ✓ Connect to SolidWorks
- ✓ SolidWorks API object model
- ✓ SolidWorks interface elements
- ✓ ModelDoc2 Object
- ✓ PartDoc object
- ✓ Assembly Object
- ✓ Drawing Object
- ✓ Determine active document type

2.1 SolidWorks Documents:

- ✓ Create new SolidWorks files
- ✓ Open, Close, Save and Save As SolidWorks files
- ✓ Export SolidWorks documents to other formats

3. SolidWorks Part Automation

- ✓ Handle various sketch function. (Circle, Rectangle, arc slot etc.)
- ✓ Handle various feature function. (Extrude, Pattern, hole etc.)
- ✓ Traversing the features of a SolidWorks model
- ✓ Determine type of features like hole, extrusions, draft, fillet, etc.
- ✓ Feature sub-type like various hole types

4. Industry Project

- ✓ Create flange automation tool
- ✓ Identify various holes

5. SW Master Model Automation

- ✓ Create and control parametric part in SolidWorks
- ✓ Part parameters, model rebuilding and refitting
- ✓ Industry Project - Create and Update Parameter of flange.

6. SolidWorks Document Properties

- ✓ Read and write standard file properties
- ✓ Create, read and write custom properties

7. Drawing Views

- ✓ Create drawing views
- ✓ Industry Project - Creating Standard Views of a Model in SolidWorks

8. Dimensions in Drawings

- ✓ Learn to handle Dimensions in SolidWorks Drawings

9. SolidWorks Assemblies

- ✓ Traverse through all components of a SolidWorks assembly
- ✓ Industry Project – Identify all mates in assembly

10. Product Configurator

Product configurators are multifunctional systems that act as an interface between sales and product design.

- ✓ Industry Project - Create a SolidWorks Product Configurator
- ✓ Automatically generate custom assemblies
- ✓ Create bill of material,
- ✓ Create and set up a parts library
- ✓ Build a UI to choose parts from the library

The trainings explain in detail how to use C# to master CAD Automation and create fully functional industrial grade custom applications for any CAD.
