

UNIT 1

Walkthrough Visual Studio Part 1

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What is Visual Studio

- Advanced integrated Development Enterprise Exclusively developed by **Microsoft Corporation** in Year 2000.
- It is actively used to develop Computer Programs, websites, Desktop Applications, Mobile Applications, Games and more.
- It is a application package to **create, debug and run** the .NET Applications.
- It is an intelligent software which simplifies application development targeting to .NET technologies.
- Visual Studio is an IDE(Integrated Development Environment) –
 - **It utilizes drag drop features,**
 - **Generate related code by itself by drag drop components**
 - **Develop, Run, Debug application**
- It comes in built-in framework
- Contains developer framework

IDE(Integrated Development Environment)

- Simplify Application development with the support of its framework.
- We can implement .NET application instead of writing code from scratch.
- It helps to write the initial code required to develop .NET application.
- IDE is famous because of its components.

Features of IDE

- ✓ **Code snippets**- This completes the syntax by itself(Tab+Tab Feature) it makes programmer life simple more powerful than other environment.
- ✓ **Reference highlighting**- by mouse over on keywords or variables. The respective messages like info, errors, warnings etc. will be displayed.
- ✓ **Intellisense (Auto Complete Features)**
 - Intellisense something starts with **a** all things related to **a**
 - Intellitype
- ✓ **Auto Generation of code**

Solution and Project

Project -> it is an application

Extension .proj based on language

C# ->>>>> .csproj

VB ->>>>> .vbproj

VC++ ->>> .vcxproj

Solution -> it is a collection of projects

In .NET project exists inside solution without solution project cannot exist

Extension .sln

Why need solution ->

- ✓ it is used to group the projects
- ✓ Solution can have any number and any type of projects

- Visual Studio Helps to simplify application development with its components

Note : Components exists in **view menu**

- ✓ Screens/forms or UI => shift+F7
- ✓ Code window => F7
- ✓ Tool box => alt+ctrl+x
- ✓ Properties => F4
- ✓ Solution Explorer => alt+ctrl+l
- ✓ Server Explorer => alt+ctrl+s

When you create an application respective windows will be displayed

Note: When a tool is added respective objects gets created, when a tool is modified the properties will be automatically modified

How to Build an Application

- Build Refers to generate IL when program gets compiled IL gets generated
- Any program needs to be converted into IL in .NET
- When you build assembly gets created in is nothing but IL
- It creates .exe or .dll.
- Select project in solution explorer and right click on it and build **ctrl+shift+b**

Clean Application

- Clean Application is used to delete the assembly
- .dll and .exe files is deleted

Rebuild (Clean+Build)

- Build Builds only the recent added programs
- The Builded programs will not build again.

Different Types of Applications

- **Console Application**=> Application doesn't have any UI

Instruction based application (which will be operated by admin) are created

- **Windows Application**=> Native to windows operating system

UI based applications , Windows OS dependent

✓ **Windows Forms** - windows os application like xp, nt, etc

✓ **WPF(windows presentation foundation)** -Rich User Interface application like win 7, 8, 10 etc, it works using xaml(Extensible Application Markup Language) code

- **Windows Services**- Program without UI, runs in background

start>run>services.msc (os background services) like Antivirus , windows Update etc.

- **Class Libraries**- Program without main methods used to create libraries, which can be consumed

- Web Application and Websites-

- It is an application hosted in web server
- Accessible in web

- Web Services-

It is a service library, can be consumed in any application in any technology