Before dot net (1990-1998) the software platform are ------

1. **VB:** Visual basic also known as Visual Basic Classic is introduced in 1991; it is considered the third generation of event-driven programming languages and integrated development environment (IDE). VB is derived from the BASIC programming language and is considered to be event-driven and object-oriented.

Visual Basic use for ----

1. Rapid application development (RAD) of graphical user interface (GUI) applications.
2. Access to databases using Data Access Objects, Remote Data Objects, or ActiveX Data Objects.
3. Creation of ActiveX controls and objects.
4. **VC++:** Visual C++ was Microsoft's implementation of a professional Windows hosted IDE for developing Windows software. Visual C++ 1.0 was the first release of Visual C++, released in 1993 for 16-bit development.
5. **ASP:** ASP stands for Active Server Pages which is known as classic ASP. Classic ASP is a server-side scripting environment that you can use to create and run dynamic web applications. With ASP, you can combine HTML pages, script commands, and COM components to create interactive web pages that are easy to develop and modify. Classic ASP is the predecessor to ASP.NET, but it is still in wide use today.

# .NET

1. After coming java as platform independent Microsoft coming with .Net framework.
2. .Net will support for multiple programming language.
3. .net framework can be written as VB , C#, jscript various language.

## **Components of .NET Framework**

1. CLR (Common Language Runtime)
2. CTS (Common Type System)
3. BCL (Base Class Library)
4. CLS (Common Language Specification)
5. FCL (Framework Class Library)
6. .NET Assemblies
7. XML Web Services
8. Window Services

## Version of .NET:

1. Version- 1.0 (2002):

* Initial release.
* Introduced CLR 1.0
* Use of DLLs as class libraries.
* OOP support for Web development.

1. Version- 1.1 (2003):

* Added ASP.NET Control support for Mobile device development.
* Added support for ADO.NET classes for Oracle database and ODBC database connectivity.
* IP6 and fixed issue to Code Access Security for ASP.NET.

1. Version- 2.0 (2005):

* New CLR 2.0
* Enhancement of ASP.NET & ADO.NET,
* Generics Types, Partial Types, Anonymous methods, Nullable Types, Iterators,
* Covariance and Contravariance
* 64bit support we added.

1. Version- 3.0 (2006) :

* Windows Presentation Foundation (WPF),
* Windows Communication Foundation (WCF),
* Windows Workflow Foundation (WWF).

1. Version- 3.5 (2007) :

* Build-in-Support for AJAX,
* Language Integrated Query (LINQ),
* Expression trees, HashSet collections, WCF and WF integration
* Peer-to-Peer networking

1. Version- 4.0 (2010) :

* New CLR 4.0,
* Task Parallel Library (TPL),
* Managed Extensibility Framework (MEF),
* Dynamic Language Runtime (DLR) were a major addition of this release.

1. Version- 4.5 (2012) :

* Async support,
* Support for Windows Store app,
* Enhancements of WPF, WCF, WF, MEF, and ASP.NET, and base framework classes, such as support for arrays larger than 2GB on 64-bit platform.

1. Version- 4.5.1 (2013) :

* Performance and debugging improvements,
* support for automatic binding redirection, and
* expanded support for Windows Store application.

1. Version- 4.5.2 (2014) :

* ASP.NET APIs enhancements,
* System DPI support for Windows Forms controls,
* Event Tracing for Windows (ETW) and New Workflow features and
* Debugging improvements were added in this release.

1. Version- 4.6 (2015) :

* ASP.NET enhancements,
* ADO.NET always an encrypted feature for SQL Server 2016,
* new 64-bit JIT compiler,
* Assembly Loader improvements,
* enhancements to Garbage Collector

1. Version- 4.7 (2017) :

* High DPI support for Windows Forms controls,
* Touch support for WPF in Windows 10,

1. Version- 4.8 (2019) :

* JIT improvements, Updated ZLib,
* FIPS improvements,
* Malware scanning for Assemblies and Accessibility Enhancements

# ASP

ASP supports many different development models:

1. Classic ASP
2. ASP.NET Web Forms
3. ASP.NET MVC
4. ASP.NET Web Pages
5. ASP.NET API
6. ASP.NET Core

### Classic ASP:

1. ASP stands for Active Server Pages which is known as classic ASP.
2. Classic ASP is old but make a server-side scripting environment which create dynamic web applications.
3. With ASP, you can combine HTML pages, script commands, and COM components to create interactive web pages that are easy to develop and modify.
4. Classic ASP is the predecessor to ASP.NET, but it is still in wide use today.
5. An ASP file has the file extension ".asp"
6. An ASP file is just the same as an HTML file
7. An ASP file can contain server scripts in addition to HTML
8. Server scripts in an ASP file are executed on the server
9. Edit, change, add content, or customize any web page
10. Respond to user queries or data submitted from HTML forms
11. Provide web security since ASP code cannot be viewed in a browser

**Language:** classis asp scripting language is VBScript.

**Output**: The Response.Write() method is used by ASP to write output to HTML.

<% Response.Write("Hello World!") %>

**Variables**: <% Dim x(2,2) %>

### ASP.net Web Forms:

Web application are built using web Forms. Asp.net comes with built-in Web forms control, which are responsible for generating the user interface. They mirror typical HTML widget like boxes, buttons. If these controls do not fit your need you are free to create your own user controls/

Web forms are design to make building web-based applications as easy as building Visual Basic Applications or win form apps.

In Web form we can use VB or C# as programming language.

### ASP.NET:

1. Asp.net is a web development platform, which provides a programming model, a comprehensive software infrastructure for web application. It is a server-side Scripting language. It browser independent.
2. Asp.net was released in 2002 as successor to classic ASP.

### ASP.NET MVC:

It gives us a MVC patterns based way to build dynamic websites. It enables a clean separation of concerns and that gives you full control over markup for enjoyable, agile, development. It also provides many features that enable fast development for creating outstanding application.

### ASP.NET WEB PAGE:

It is used to create dynamic web pages. It provides fast and lightweight way to combine server code with HTML. It helps to add video, links to the social sites. It also provides other features like you can create beautiful sites that conform to the latest web standards.

It uses razor syntax to insert dynamic content in the page. Razor systax uses C# or VB as programming language.