AFZAL PASHA

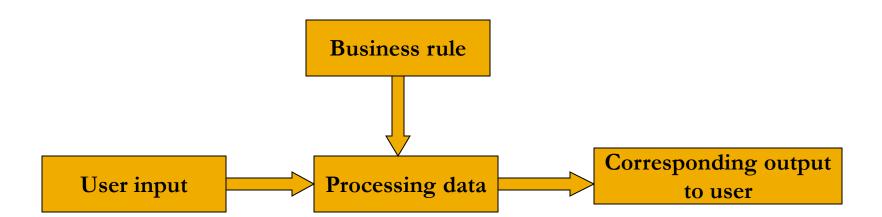
### APPLICATION

#### Separate Database Server



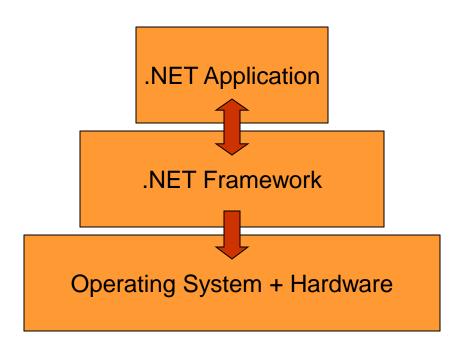
## APPLICATION

#### Execution of application





 NET is a Framework to develop the .NET Applications and deploy the .NET Applications



VB VC++ VC# JScript ...

**Common Language Specification** 

ASP.NET: Web Services and Web Forms

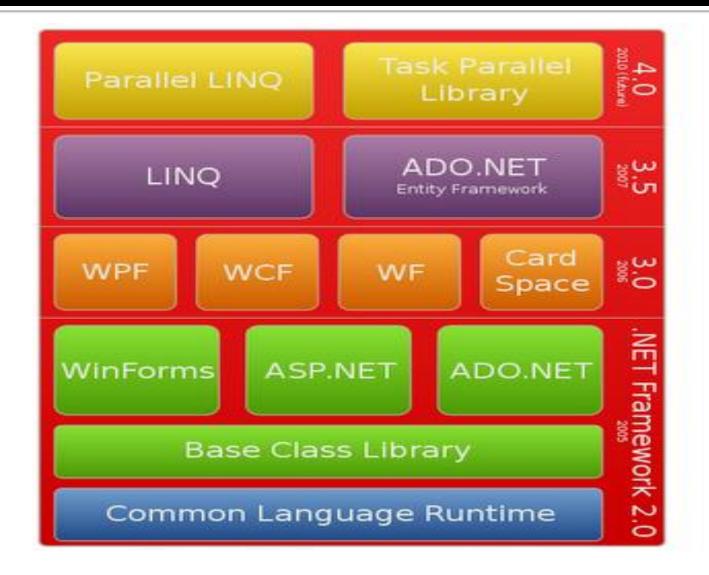
Windows Forms

ADO.NET: Data and XML

**Base Class Library** 

**Common Language Runtime** 

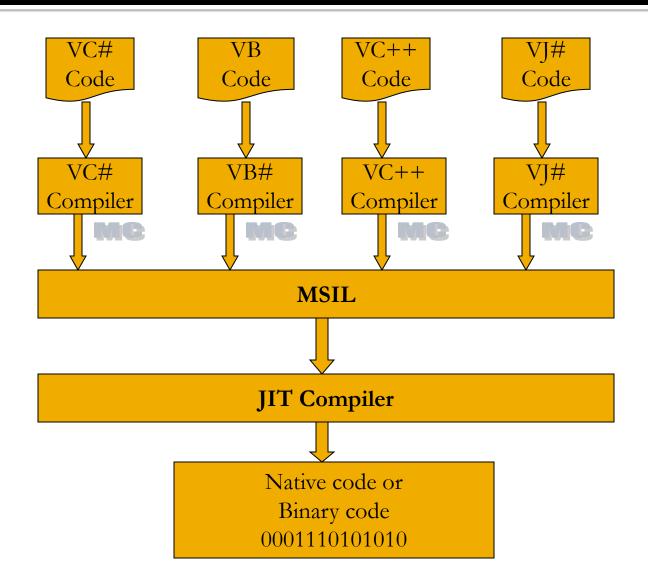
Visual Studio.NET



## COMPONENTS OF .NET FW

- > CLR
- > .NET Framework Class Library (FCL)

#### **ARCHITECTURE OF CLR**



#### CLR FUNCTIONALITIES

- CLR provides functionality such as
- Exception handling
- Security
- Debugging
- □ Versioning Support to any language that targets its.

#### CLR FUNCTIONALITIES

#### Managed code

The code which will execute inside the CLR with debugging and garbage collection process

Ex: .NET Components

#### Unmanaged code

The code which will execute inside the CLR without debugging and garbage collection process

**Ex: COM Components** 

#### FEATURES OF CLR

- Automatic Memory Management
- Common type system (CTS)
- Language Interoperability
- Type safety

#### FRAMEWORK CLASS LIBRARY

- Namespace
- System Base class

C#: Using System;

**VB**: Imports System

C#: Using System.Data;

VB: Imports System.Data

#### ADVANTAGE OF .NET FW

- Consistent programming model
- Common Language Specification (CLS)
- Code access Security
- Multi platform Applications
- Ease of Deployment
- Garbage Collection

## **ASSEMBLIES**

#### What is an Assembly?

- Abstract unit of compiled code
- Fundamental app building block in .NET
  (Single deployable unit of .NET Framework )
- Can consist of one or more compiled files
- Can be an "EXE" or a "DLL"

# .NET CORE

.NET Framework .NET Core Xamarin WPF iOS App Models Console **Windows Forms** Mac OS Console **ASP.NET Core** Android ASP.NET **Base Libraries** .NET Framework BCL .NET Core BCL Mono BCL

