**MODULE 2 TOPICS (Client and Server Standards,.NET Framework Architectures,Framework Components,Designing Patterns (MVC))**

Assignment Basic Level :->

B1. What is .net?

Ans : NET is a software development framework and ecosystem designed and supported by Microsoft to allow for easy desktop and web application engineering.

B2. What is CLR?

Ans :The core runtime engine in the Microsoft .NET framework for executing applications .code running in CLR is referred to as “managed code”.

B3. What is role of client?

Ans : The Client Profile is designed **to run client applications and to enable the fastest possible deployment for Windows Presentation Foundation (WPF) and Windows Forms technology.**

B4. What is role of server?

Ans : A server role is **a set of software programs that, when they are installed and properly configured, lets a computer perform a specific function for multiple users or other computers within a network**.

Assignment Intermediate Level :->

I1. What is difference between CLS and CTS?

Ans :

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| CLS | CTS |
| CLS stands for Common Language Specification. | CTS stands for Common Type System. |
| It is meant for language interoperability i.e program written in one language can communicate with any other language, having full advantages of all object oriented concepts such as Polymorphism, Inheritance etc. | It is meant for declaring different data types, how they are managed in runtime with cross language integration, type safety with great performance execution. |

I2. What is role of compiler?

Ans: In computing, a compiler is a computer program that translates computer code written in one programming language into another language . The name "compiler" is primarily used for programs that translate source code from a high-level programming language to a lower level language ( machine code) to create an executable program.

I3. What is difference between Compiler and Interpreter?

Ans:

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| compiler | interpreter |
| Scans the entire program and translates it as a whole into machine code. | Translates program one statement at a time. |
| Compilers usually take a large amount of time to analyze the source code. However, the overall execution time is comparatively faster than interpreters. | Interpreters usually take less amount of time to analyze the source code. However, the overall execution time is comparatively slower than compilers. |
| Generates Object Code which further requires linking, hence requires more memory. | No Object Code is generated, hence are memory efficient. |
| Programming languages like C, C++, Java use compilers. | Programming languages like JavaScript, Python, Ruby use interpreters. |

Assignment Advanced Level :->

A1. What is communication protocol and what is difference between HTTP and HTTPS?

Ans : HTTPS is HTTP with encryption. The difference between the two protocols is that **HTTPS uses TLS (SSL) to encrypt normal HTTP requests and responses**. As a result, HTTPS is far more secure than HTTP. A website that uses HTTP has HTTP:// in its URL, while a website that uses HTTPS has HTTPS://.

A2.What do you mean by design pattern?

Ans : In software development, a pattern (or design pattern) is **a written document that describes a general solution to a design problem that recurs repeatedly in many projects**. Software designers adapt the pattern solution to their specific project.

A3. What is MVC?

Ans : The **Model-View-Controller (MVC)** is an architectural pattern that separates an application into three main logical components: the **model**, the view, and the controller. Each of these components are built to handle specific development aspects of an application. MVC is one of the most frequently used industry-standard web development framework to create scalable and extensible projects.

A4. What is client server architecture?

Ans: client-server architecture, **architecture of a computer network in which many clients request and receive service from a centralized server** . Client computers provide an interface to allow a computer user to request services of the server and to display the results the server returns.

A5. What is difference between Asp.Net and MVC.Net?

Ans: The primary difference between ASP.NET MVC and ASP.NET Core is their **cross-platform approach**. ASP.NET Core can be used on Windows, Mac, or Linux, whereas ASP.NET MVC can only be used for applications on Windows.