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**MATRIC NUMBER: FPI/HND/2023/00001641**

**COURSE CODE: COM316**

**1.Write a short note on the evolution of .Net Framework and C#(100 words)**

The .NET Framework and C# have gone through significant changes over the years. The .NET Framework was introduced by Microsoft in the early 2000s as a platform for creating Windows applications. It provided developers with a common runtime environment and a set of libraries to work with. C# was developed as a modern, object-oriented programming language specifically designed for the .NET Framework. Over time, both the .NET Framework and C# have undergone updates and improvements, introducing new features and enhancements to simplify and streamline development. These updates have made the process of building applications easier and more efficient.

**2.Explain the following terms ;**

**Mono:** Mono is an open-source implementation of the .NET Framework, allowing developers to run .NET applications on various platforms. It provides a cross-platform development environment and supports multiple programming languages.

**Xamarin:** Xamarin is a cross-platform development toolset that uses Mono to build native mobile applications for iOS and Android. It allows developers to write code once and deploy it on multiple platforms, saving time and effort.

**COM (Component Object Model):** COM is a Microsoft technology for building software components that can be used across different programming languages. It enables interoperability between different applications and allows them to communicate and share functionality.

**.NET Core:** .NET Core is a cross-platform, open-source framework that enables developers to build applications for Windows, Linux, and macOS. It provides a lightweight and modular platform for developing modern applications.

**Unity C#:** Unity C# is a scripting language used in the Unity game development engine. It allows developers to write code to create interactive and immersive games and applications.

**REST (Representational State Transfer):** REST is an architectural style for designing networked applications using HTTP. It emphasizes a stateless, client-server communication model, where resources are represented and manipulated through standardized HTTP methods like GET, POST, PUT, and DELETE.

**3.Critically,explain ANY three key functions of CLR(50 words)**

**- Memory Management:** The CLR manages memory allocation and deallocation, ensuring that objects are properly allocated and released, and handling tasks like garbage collection.

**- Exception Handling:** The CLR provides a robust exception handling mechanism that allows developers to catch and handle exceptions, ensuring that programs can gracefully handle errors and recover from them.

**- Security Management:** The CLR enforces security policies to protect against unauthorized access and ensure the safety and integrity of the code and data running within the runtime environment.