**C# ASSIGNMENT ONE**

1. Write a short note on the evolution of .Net Framework and C# (100 words)
2. Explain the following terms;
3. Mono,
4. Xamarin,
5. COM,
6. .Net Core,
7. Unity C#,
8. REST
9. Critically, explain ANY three key functions of CLR (50 words)

**Answers:**

1. The .NET Framework was first released in 2002, and C# was developed as a programming language to support the framework.

Over the years, .NET has evolved to become a comprehensive platform for developing and running software applications. And C# has evolved to become a modern, cross-platform language that supports a wide range of programming paradigms. Together, .NET and C# have become a powerful combination for developers.

1. **Mono:**

Mono is an open-source implementation of the .NET Framework that runs on a variety of operating systems, including Linux, macOS, and Android. It provides a complete cross-platform development stack, including a runtime, compiler, and class libraries.

1. **Xamarin**

Xamarin is a cross-platform development tool that uses the C# programming language. It allows developers to create native apps for iOS, Android, Windows, macOS, and tvOS, using a single codebase.

1. **COM**

COM, or Component Object Model. COM is a technology that allows for the creation of reusable software components. It's a Windows-only technology, and it enables developers to create components that can be used by other applications.

1. .**NET Core**

.NET Core is a cross-platform version of the .NET Framework, which means it can run on a variety of operating systems, including Windows, Linux, and macOS.

1. **Unity C#**

Unity is a game engine that can be used to create 2D and 3D games, as well as other types of interactive content. It uses C# as its primary programming language.

1. **REST**

REST stands for Representational State Transfer, and it's an architectural style for web services. It's based on the idea of resources that can be accessed via Uniform Resource Identifiers (URIs), and it uses HTTP methods like GET, POST, and PUT to perform operations on those resources.

REST is a popular architecture for web services because it's simple, lightweight, and scalable. It's also widely used by developers who want to create APIs that are easy to use and understand.

1. **Three Functions of CLR**

* The CLR manages the execution of .NET applications, including memory management, exception handling, and thread management.
* The CLR provides a runtime environment that allows developers to write code in multiple languages and run it side-by-side in the same process.
* The CLR provides a set of standard class libraries that provide commonly used functionality, such as string manipulation, data access, and networking.

All these functions make the CLR a vital part of the .NET Framework.