C# ASSIGNMENT

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

* The .Net Framework and C# have evolved significantly over the years. The .Net Framework was introduce by Microsoft in 2002, providing a platform for building and running Windows application. C# is a programming language developed by Microsoft specifically for the .NET

Framework, known for its simplicity and versatility.

* It evolved to include C#, which was developed as part of Microsoft .NET initiative. C# became a key language in the .NET Framework and has since evolved with features like async/awaiy, LINQ, and pattern matching, contributing to its popularity as a modern, versatile language.

2. Explain the following terms ;

Mono, Xamarin, Com, .Net core,Unity C#, REST

* Mono: An open-source implementation of the .NET Framework that allows developers to run .NET

application on various platform. Including linux and macOS

* Xamarin: A cross-platform development framework that uses C# allows developers to create native mobile application for IOS, Android, and Windows using a single codebase.
* Com; Component Object Model (COM) is a Microsoft technology that enable software components to communicate and interact with each other.
* .NET Core: it is an open – source, cross-platform framework that is a modern and lightweight version of the .NET framework. It allows developer to build application that can run on windows, Linux, and macOS.
* Unity C#: Unity is a popular game development engine that uses C# as the scripting language, providing a powerful and flexible environment for creating games and interactive experiences.
* Rest: Representational state Transfer (REST) is an architectural style for designing networked applications. It uses standard HTTP methods like GET, POST,PUT, and DELETE to perform operations on resources.

3. Critically, explain any three key function of CLR (50 words)

* Memory Management: CLR manages memory allocation and deallocation, automatically handling tasks like garbage collection to free up memory resources.
* Exception Handling: CLR provides a robust exception handling mechanism, allowing developer to catch and handle runtime exceptions, ensuring the stability and reliability of the application.
* Code Verification and Excution:CLR verifies the safety and integrity of the code before executing it, ensuring that it adheres to security and typesafety measures, protecting against potential vulnerabilities.