ASSIGNMENT

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).

**SOLUTION**

1. .NET Framework is a software development framework developed by Microsoft that supports many languages like c#, visual basic e.t.c. Microsoft started the development of the .NET Framework in the late 1990s, originally under the next generation windows services, and at late 2000, the first beta version of the .NET Framework was release. Then after so many changes have come to .NET Framework in different versions.

C# is a programming language that was first released in 2000 by Microsoft as part of .NET Framework. Since the initial release, c# has gone through several versions, each adding new features and improving performance.

1. a. **Mono: -** is a software platform designed to allow developers to easily create cross platform application.

b. **Xamarin**: - is a free and open source mobile app platform for building native and high-performance IOS, Android, tvOS, and watchOS, macOS, and windows apps in c #.

c. **COM**: - component object model (COM) lets an object expose its functionality to other components and to host application on windows platforms.

d.**.Net core**: - is an open-source, general-purpose, software development platform developed by Microsoft.

e. **Unity c#:-** is a real-time 3D development platform for building 2D and 3D application, like games and simulations.

f. **REST: -** is a software architecture that imposes condition on how an API should work.

1. i. **Garbage collection: -** this ensures that your application uses resources effectively, preventing memory leaks, and reducing the chances of crashes or slowdowns.

ii. **Type safety :-** CLR ensures type safety by verifying types at both compile and runtime, reducing runtime errors.

iii. **Security:-** the CLR implements its own secure execution model that is independent of the host platform.