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1. Write a short note on evolution of .NetFrame work on C#(100 words)

.NET Framework, introduced by Microsoft in 2002, has undergone significant evolution, with C# as its flagship language. Initially focused on Windows desktop applications, .NET Framework expanded to web development with [ASP.NET](http://asp.net/). The introduction of LINQ (Language-Integrated Query) in C# 3.0 enhanced data querying capabilities. .NET Core emerged in 2016, bringing cross-platform compatibility and open-source development. Subsequently, in 2020, .NET 5 unified .NET Core and .NET Framework, offering a single platform for diverse application types. With performance improvements, modern language features, and continued community support, the evolution of .NET Framework in C# reflects a commitment to adaptability and developer empowerment.

1. Explain the following terms
2. Mono
3. Xamarin
4. [COM](http://3.com/)
5. .net core
6. unity c#
7. REST
8. Mono: Mono is an open-source implementation of Microsoft's .NET Framework. It allows developers to build and run cross-platform applications using the C# programming language.
9. Xamarin: Xamarin is a cross-platform app development framework that uses C# and .NET to create native mobile applications for iOS, Android, and Windows. It allows code sharing across different platforms, reducing development time.
10. COM (Component Object Model): COM is a binary-interface standard for software components introduced by Microsoft. It enables communication between software objects, allowing them to interact with each other regardless of the language they were written in.
11. .NET Core: .NET Core is an open-source, cross-platform framework for building modern, cloud-based, and internet-connected applications. It's the successor to the traditional .NET Framework and is designed to be modular, lightweight, and scalable.
12. Unity C#: Unity C# refers to the C# programming language used in the Unity game development engine. Unity supports scripting in C#, providing developers with a powerful and flexible language to create interactive and engaging games.
13. REST (Representational State Transfer): REST is an architectural style for designing networked applications. It uses a stateless communication model, typically over HTTP, where resources are identified by URIs, and interactions are based on standard operations like GET, POST, PUT, and DELETE. RESTful services are widely used in web development for building scalable and maintainable APIs.
14. The Common Language Runtime (CLR) plays a pivotal role in .NET applications.

Firstly, it manages memory, ensuring efficient allocation and deallocation, enhancing application performance.

Secondly, CLR provides a robust type system, promoting code safety by enforcing strict type checking during compilation.

Lastly, CLR facilitates language interoperability, allowing diverse languages to seamlessly integrate within the .NET framework, fostering code reuse and flexibility.