***Q5:* What is Managed or Unmanaged Code?**

* **Managed Code** - The code, which is developed in .NET framework is known as managed code. This code is directly executed by CLR with the help of managed code execution. Any language that is written in .NET Framework is managed code.
* **Unmanaged Code** - The code, which is developed outside .NET framework is known as unmanaged code. Applications that do not run under the control of the CLR are said to be unmanaged, and certain languages such as C++ can be used to write such applications, which, for example, access low - level functions of the operating system. Background compatibility with the code of VB, ASP and COM are examples of unmanaged code.

**What is Boxing and Unboxing?**

Boxing and Unboxing both are used for type conversion but have some difference:

* **Boxing** - Boxing is the process of converting a value type data type to the object or to any interface data type which is implemented by this value type. When the CLR boxes a value means when CLR is converting a value type to Object Type, it wraps the value inside a System.Object and stores it on the heap area in application domain.
* **Unboxing** - Unboxing is also a process which is used to extract the value type from the object or any implemented interface type. Boxing may be done implicitly, but unboxing have to be explicit by code.

The concept of boxing and unboxing underlines the C# unified view of the type system in which a value of any type can be treated as an object.

**What is the difference between string and StringBuilder in c#**

**String**

* It's an immutable object that hold string value.
* Performance wise string is slow because its' create a new instance to override or change the previous value.
* String belongs to System namespace.

**StringBuilder**

* StringBuilder is a mutable object.
* Performance wise StringBuilder is very fast because it will use same instance of StringBuilder object to perform any operation like insert value in existing string.
* StringBuilder belongs to System.Text.Stringbuilder namespace.

**What are partial classes?**

A **partial** class is only use to splits the definition of a class in two or more classes in a same source code file or more than one source files. You can create a class definition in multiple files but it will be compiled as one class at run time and also when you'll create an instance of this class so you can access all the methods from all source file with a same object. Partial classes can be create in the same namespace it's doesn't allowed to create a partial class in different namespace.

***Q13:* What are generics in C#?**

**Generics** allow you to delay the specification of the data type of programming elements in a class or a method, until it is actually used in the program. In other words, generics allow you to write a class or method that can work with any data type.

**What is Serialization?**

**Serialization** means saving the state of your object to secondary memory, such as a file.

1. Binary serialization (Save your object data into binary format).
2. Soap Serialization (Save your object data into binary format; mainly used in network related communication).
3. XmlSerialization (Save your object data into an XML file).

**Why can't you specify the accessibility modifier for methods inside the interface?**

In an interface, we have virtual methods that do not have method definition. All the methods are there to be overridden in the derived class. That's why they all are public.

**What are dynamic type variables in C#?**

You can store any type of value in the dynamic data type variable. Type checking for these types of variables takes place at run-time.

**What is the difference between Interface and Abstract Class?**

**What is delegates in C# and uses of delegates?**

**What is extension method in C# and how to use them?**

**What is the difference between Equality Operator (==) and Equals() Method in C#?**

**What is Reflection in C#.Net?**

**How encapsulation is implemented in C#?**

**Why to use lock statement in C#?**

**Can Multiple Inheritance implemented in C# ?**

**What is the "yield" keyword used for in C#?**

**IEnumerable vs List - What to Use? How do they work?**