C# Questions.

What is Common Language Runtime (CLR) ?

CLR handles program execution for various languages including C#. The architecture of CLR handles memory management, garbage collection, security handling etc.

Graphical user interface, application

Description automatically generated

What is Garbage Collection in C# ?

It is used to provide the *Automatic Memory Management* feature. If there was no garbage collector, programmers would have to write the memory management codes. Garbage collection is the process of freeing up memory that is captured by unwanted objects. When you create a class object, automatically some memory space is allocated to the object in the heap memory. Now, after you perform all the actions on the object, the memory space occupied by the object becomes waste. It is necessary to free up memory. Garbage collection happens in three cases:

* If the occupied memory by the objects exceeds the pre-set threshold value.
* If the garbage collection method is called
* If your system has low physical memory
* **Managed Code:** The MSIL code which is managed by the CLR is known as the Managed Code. For managed code CLR provides **three** .NET facilities:

* **Unmanaged Code:** Before .NET development the programming language like .COM Components & Win32 API do not generate the MSIL code. So these are not managed by CLR rather managed by Operating System.

Component Object Model (COM) is **a method to facilitate communication between different applications and languages**

**Microsoft Intermediate Language (MSIL)** **is** **the assembly language output by** . NET compilers-C#, VB.NET, etc. . NET framework is shipped with compilers of all programming languages to develop programs. There are separate compilers for the visual basic, C#, and visual programming languages