.NET Framework

1. CLR (Common Language Runtime)
   1. CLR acts as an interface between the os and the .NET system
   2. CLS (Common Language specification)
   3. CTS (Common type system)
2. BCL/FCL (Base class library or framework class library)
   1. Z

Managed vs Native:

1. Managed code is code that is executed by .NET runtime, which provides addition features like memory management, type safety, and security.
   1. Easier to write and debug
   2. More portable, assuming the other system has .NET runtime installed
2. Native code is directly executed by the computer’s processor and does not have features like type safety or memory management.
   1. Faster and more efficient
   2. Less portable since its specific to the processor and OS on which it was compiled.

What is a runtime?

1. A runtime is a program that is responsible for executing code at the execution phase of a program. Runtimes provide the environment in which code is executed, and include additional features to support execution of the code.
2. Examples: OS runtimes (windows os), Language runtimes (.NET), browser runtimes (JS)

How C# code is compiled: