

- **Why does defining a custom constructor suppress the default constructor in C#?**

Because when you define a custom constructor, the compiler no longer provides the implicit default constructor automatically.

- **How does method overloading improve code readability and reusability?**

It allows multiple methods with the same name but different parameters, making code easier to read and reducing duplication.

- **What is the purpose of constructor chaining in inheritance?**

To ensure the base class is properly initialized before the derived class adds its own initialization.

- **How does new differ from override in method overriding?**

new hides the base method (no polymorphism), while override replaces the base method and supports polymorphism.

- **Why is ToString() often overridden in custom classes?**

To provide meaningful, human-readable information about the object instead of the default class name output.

- **Why can't you create an instance of an interface directly?**

Because an interface only defines a contract (methods/properties) without implementation, so it cannot be instantiated.

- **What are the benefits of default implementations in interfaces introduced in C# 8.0?**

They allow adding new methods to interfaces without breaking existing implementations and provide shared logic across classes.

- **Why is it useful to use an interface reference to access implementing class methods?**

It promotes abstraction, loose coupling, and allows working with different implementations interchangeably.

- **How does C# overcome the limitation of single inheritance with interfaces?**

A class can implement multiple interfaces, achieving multiple inheritance of behavior without inheriting multiple base classes.

- **What is the difference between a virtual method and an abstract method in C#?**

A virtual method has a default implementation but can be overridden, while an abstract method has no implementation and must be overridden.