**Static**

In C#, static is a keyword or modifier that belongs to the type not instance.

So **instance is not required** to access the static members.

In C#, static can be **field**, **method**, **constructor**, **class**, **properties**, **operator** and **event**.

**Indexers** and **destructors cannot** be static.

**Static Field**

A field which is declared as static, is called static field.

Unlike instance field which gets memory each time whenever you create object, **there is only one copy of static field created in the memory,** which is shared to all the objects.

**Static Class**

It can have **only static members**.

It is **not allowed** to create objects of the static class

Points to remember for C# static class

* C# static class contains only static members.
* C# static class cannot be instantiated.
* C# static class is **sealed**.
* C# static class cannot contain instance constructors.

**Static Constructor**

A static constructor is used to **initialize** any **static data**, or to perform a particular action that needs to be **performed only once**.

It is called automatically **before** the first instance is created or any static members are referenced.

Static constructors have the following properties:

1. A static constructor **doesn't** take access modifiers or have parameters.
2. A class or struct can **only have one** static constructor.
3. Static constructors **cannot be inherited or overloaded**.
4. A static constructor **cannot be called directly** and is **only meant to be called by the common language runtime (CLR).** It is invoked automatically.
5. The **user has no control** on when the static constructor is executed in the program.
6. If a static constructor throws an exception, the runtime doesn't invoke it a second time, and the type will remain uninitialized for the lifetime of the application domain.
7. If you don't provide a static constructor to initialize static fields, all static fields are initialized to their default value as listed in Default values of C# types.

