Static variables and methods

STATIC VARIABLES

`Static variables` are variables that are shared across all instances of a class. Instead of each instance having its own copy, there is a single shared copy in memory, accessible through the class.

STATIC METHODS

`Static methods` are methods that can be called without creating an object of the class. They belong to the class itself rather than any instance. Static methods can only directly access other static members and cannot acces instance-specific data.

Why do we use static variables and methods?

Because its usefull for sharing variables and metheds consistent across all instances of a class. and is it efficient since only one copy of a static variable exists, it reduces memory usage compared to storing the same data in multiple instances.

How do we use static variables and methods in our code?

Define them with the `static` keyword within a class, and access them using the class name.

```
public class Example
{
        public static int Counter = 0;
}

Example.Counter++; // Counter plus 1
Console.WriteLine(Example.Counter); // Output 1
```