**Static Variable**

* Declared with the static keyword.
* Belongs to the **class**, not to any specific object.
* Shared by **all objects** of the class (only one copy exists in memory).
* Useful for data that should be common for all instances (like a counter).

**Example:**

class Student

{

public string Name;

public static int Count = 0; // Static variable

public Student(string name)

{

Name = name;

Count++; // Increment whenever a new student is created

}

}

class Program

{

static void Main()

{

Student s1 = new Student("John");

Student s2 = new Student("Emma");

Console.WriteLine(Student.Count); // Output: 2 (shared value)

}

}

**Static Method**

* Declared with the static keyword.
* Belongs to the **class**, not to an object.
* Can be called **without creating an object**.
* Can **only access static members** of the class (cannot access instance variables directly).

**Example:**

class Calculator

{

public static int Add(int a, int b) // Static method

{

return a + b;

}

}

class Program

{

static void Main()

{

int result = Calculator.Add(10, 20); // Call without object

Console.WriteLine(result); // Output: 30

}

}

**Key Points (Difference between Normal & Static)**

| **Feature** |  | **Normal Variable/Method** |  | **Static Variable/Method** |
| --- | --- | --- | --- | --- |
| **Belongs To** |  | Object |  | Class |
| **Memory** |  | Each object has its own copy |  | Only one copy shared by all objects |
| **Access** |  | Need object instance |  | Access using ClassName.MemberName |
| **Use case** |  | Object-specific data/behavior |  | Common/shared data or utility functions |