String Builder Class

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String Builder is a class that can be used to apply changes and methods to a string without making any new objects or new strings , It also allow you to modify the string without using any more memory

It can be declared by using **System.Text** namespace and it has many methods that can be used to interact with the string , It is also dynamic that can be sized as how long is the string

Differences between String and StringBuilder

It uses less memory than string , and it’s more faster than string because this memory feature , it’s mutable unlike strings that are immutable

Use Cases

It can be used when we need to make change on a long string or to make a dynamic one or even add concatenation to it , we also use it when we are limited in memory matter

Advantages :

- Faster than String

- Has multiple methods

- Reduces memory usage

Disadvantages :

- More complex than Strings

Methods :

**Append**: Add texts to the end

Example :

StringBuilder sb = new StringBuilder("Hello");

sb.Append("World");

Console.WriteLine(sb); // Output: Hello World

**Insert**: Inserts a string at a specified index

Example :

sb.Insert(6, "C# ");

Console.WriteLine(sb); // Output: Hello C# World

**Replace**: Replaces all occurrences of a specified string

Example :

sb.Replace("World", "Programmer");

Console.WriteLine(sb); // Output: Hello C# Programmer

**Remove**: Removes a range of characters

Example :

sb.Remove(6, 3); // Removes "C# "

Console.WriteLine(sb); // Output: Hello Programmer

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