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| **1. Searching Methods** | | |
| **Method** | **Description** | **Example** |
| **IndexOf()** | **Returns the index of the first occurrence of a substring.** | **int index = "Hello World".IndexOf("World");** |
| **Output: 6** |
| **LastIndexOf()** | **Returns the index of the last occurrence of a substring.** | **int index = "Hello World".LastIndexOf("o");** |
| **Output: 7** |
| **Contains()** | **Checks if the string contains a specified substring.** | **bool result = "Hello World".Contains("World");** |
| **Output: true** |
| **StartsWith()** | **Checks if the string starts with the specified substring.** | **bool result = "Hello".StartsWith("He");** |
| **Output: true** |
| **EndsWith()** | **Checks if the string ends with the specified substring.** | **bool result = "Hello".EndsWith("lo");** |
| **Output: true** |
| **2. Sorting and Manipulation Methods** | | |
| **Method** | **Description** | **Example** |
| **ToLower()** | **Converts the string to lowercase.** | **string result = "HELLO".ToLower();** |
| **Output: "hello"** |
| **ToUpper()** | **Converts the string to uppercase.** | **string result = "hello".ToUpper();** |
| **Output: "HELLO"** |
| **Trim()** | **Removes leading and trailing white spaces.** | **string result = " Hello ".Trim();** |
| **Output: "Hello"** |
| **PadLeft()** | **Pads the string on the left to reach a specified length.** | **string result = "42".PadLeft(5, '0');** |
| **Output: "00042"** |
| **PadRight()** | **Pads the string on the right to reach a specified length.** | **string result = "42".PadRight(5, '0');** |
| **Output: "42000"** |
| **Remove()** | **Removes characters from a string, starting from a specified index.** | **string result = "Hello World".Remove(5, 6);** |
| **Output: "Hello"** |
| **3. Insertion and Concatenation Methods** | | |
| **Method** | **Description** | **Example** |
| **Concat()** | **Concatenates two or more strings.** | **string result = string.Concat("Hello", " ", "World!");** |
| **Output: "Hello World!"** |
| **Insert()** | **Inserts a substring into the string at the specified position.** | **string result = "Hello".Insert(5, " World");** |
| **Output: "Hello World"** |
| **4. Deletion and Replacement Methods** | | |
| **Method** | **Description** | **Example** |
| **Replace()** | **Replaces all occurrences of a substring with another substring.** | **string result = "Hello World".Replace("World", "C#");** |
| **Output: "Hello C#"** |
| **Remove()** | **Removes a specified number of characters from the string.** | **string result = "Hello World".Remove(5, 6);** |
| **Output: "Hello"** |
| **5. String Checking Methods** | | |
| **Method** | **Description** | **Example** |
| **IsNullOrEmpty()** | **Checks if the string is null or empty.** | **bool result = string.IsNullOrEmpty("");** |
| **Output: true** |
| **IsNullOrWhiteSpace()** | **Checks if the string is null, empty, or contains only white-space characters.** | **bool result = string.IsNullOrWhiteSpace(" ");** |
| **Output: true** |
| **6. Substring and Extraction Methods** | | |
| **Method** | **Description** | **Example** |
| **Substring()** | **Retrieves a substring from the string, starting at a specified index.** | **string result = "Hello World".Substring(6, 5);** |
| **Output: "World"** |
| **ToCharArray()** | **Converts the string to a character array.** | **char[] result = "Hello".ToCharArray();** |
| **Output: {'H', 'e', 'l', 'l', 'o'}** |
| **7. Comparison Methods** | | |
| **Method** | **Description** | **Example** |
| **Compare()** | **Compares two strings lexicographically.** | **int result = string.Compare("apple", "banana");** |
| **Output: -1** |
| **CompareTo()** | **Compares the current string with another string.** | **int result = "apple".CompareTo("banana");** |
| **Output: -1** |
| **Equals()** | **Checks if two strings are equal.** | **bool result = "hello".Equals("Hello");** |
| **Output: false** |
| **8. String Joining Methods** | | |
| **Method** | **Description** | **Example** |
| **Join()** | **Joins an array of strings using a specified separator.** | **string result = string.Join(", ", new string[] { "apple", "banana", "cherry" });** |
| **Output: "apple, banana, cherry"** |
| **9. Formatting Methods** | | |
| **Method** | **Description** | **Example** |
| **ToString()** | **Converts the string to its string representation.** | **string result = 123.ToString();** |
| **Output: "123"** |
| **ToString(string format)** | **Converts the string representation of the object with a specified format.** | **string result = 123.45.ToString("0.00");** |
| **Output: "123.45"** |
| **10. Miscellaneous Methods** | | |
| **Method** | **Description** | **Example** |
| **Split()** | **Splits the string into an array based on a specified delimiter.** | **string[] result = "apple,banana,cherry".Split(',');** |
| **Output: {"apple", "banana", "cherry"}** |
| **Copy()** | **Creates a copy of the string.** | **string copy = "Hello".Copy();** |
| **Output: "Hello"** |