Search Methods in the C# String Class Labs

Perform these labs on your own computer using Visual Studio 2022 or later, or VS Code 1.8x or later, to ensure you understand the lessons presented in the corresponding videos and lectures.

Lab 1: Using the String.IndexOf() Method

Open **Visual Studio** or **VS code** and create a new **console** application named **SearchSamples**.

Open the **Program.cs** file and replace the entire contents of the file with the following code.

```
string sentence = "The Quick Brown Fox";

Console.WriteLine("          1          2");
Console.WriteLine("012345678901234567890");
Console.WriteLine(sentence);
Console.WriteLine();

//************************
//* IndexOf() Samples
//************************
Console.WriteLine("*** IndexOf() Samples ***");
Console.WriteLine($"IndexOf(\"H\") =
{sentence.IndexOf("H")}");
Console.WriteLine($"IndexOf(\"h\") =
{sentence.IndexOf("h")}");
Console.WriteLine($"IndexOf(\"H\",
StringComparison.InvariantCultureIgnoreCase) =
{sentence.IndexOf("H",
StringComparison.InvariantCultureIgnoreCase)}");
Console.WriteLine();

Console.WriteLine($"IndexOf(\"Brown\") =
{sentence.IndexOf("Brown")}");
Console.WriteLine();

Console.WriteLine($"IndexOf(\"o\") =
{sentence.IndexOf("o")}");
Console.WriteLine($"IndexOf(\"o\", 16) =
{sentence.IndexOf("o", 16)}");
Console.WriteLine($"IndexOf(\"o\", 16, 3) =
{sentence.IndexOf("o", 16, 3)}");
Console.WriteLine();
```

Try It Out

Run the application and see the output.

Lab 2: Using the String.LastIndexOf() Method

Open the **Program.cs** file and replace the entire contents of the file with the following code.

```
string sentence = "The Quick Brown Fox";

Console.WriteLine("          1          2");
Console.WriteLine("012345678901234567890");
Console.WriteLine(sentence);
Console.WriteLine();

//************************
//* LastIndexOf() Samples
//************************
Console.WriteLine("*** LastIndexOf() Samples ***");
Console.WriteLine($"LastIndexOf(\"F\") =
{sentence.LastIndexOf("F")}");
Console.WriteLine($"LastIndexOf(\"f\") =
{sentence.LastIndexOf("f")}");
Console.WriteLine($"LastIndexOf(\"f\",
StringComparison.InvariantCultureIgnoreCase) =
{sentence.LastIndexOf("f",
StringComparison.InvariantCultureIgnoreCase)}");
Console.WriteLine();

Console.WriteLine($"LastIndexOf(\"Brown\") =
{sentence.LastIndexOf("Brown")}");
Console.WriteLine();

Console.WriteLine($"LastIndexOf(\"o\") =
{sentence.LastIndexOf("o")}");
Console.WriteLine($"LastIndexOf(\"o\", 14) =
{sentence.LastIndexOf("o", 14)}");
Console.WriteLine($"LastIndexOf(\"o\", 14, 5) =
{sentence.LastIndexOf("o", 14, 5)}");
Console.WriteLine();
```

Try It Out

Run the application and see the output.

Lab 3: Using the String.IndexOfAny() Method

Open the **Program.cs** file and replace the entire contents of the file with the following code.

```
string sentence = "The Quick Brown Fox";

Console.WriteLine("          1         2");
Console.WriteLine("012345678901234567890");
Console.WriteLine(sentence);
Console.WriteLine();


//************************
//* IndexOfAny() Samples
//************************
Console.WriteLine("*** IndexOfAny() Samples ***");
Console.WriteLine($"IndexOfAny(\"e\".ToCharArray()) =
{sentence.IndexOfAny("e".ToCharArray())}");
Console.WriteLine();

Console.WriteLine($"IndexOfAny(\"he\".ToCharArray()) =
{sentence.IndexOfAny("he".ToCharArray())}");
Console.WriteLine();

Console.WriteLine($"IndexOfAny(\"zQ\".ToCharArray()) =
{sentence.IndexOfAny("zQ".ToCharArray())}");
Console.WriteLine();

Console.WriteLine($"IndexOfAny(\"zd\".ToCharArray()) =
{sentence.IndexOfAny("zd".ToCharArray())}");
Console.WriteLine();
```

Try It Out

Run the application and see the output.

Lab 4: Using the String.LastIndexOfAny() Method

Open the **Program.cs** file and replace the entire contents of the file with the following code.

```
string sentence = "The Quick Brown Fox";

Console.WriteLine("          1         2");
Console.WriteLine("012345678901234567890");
Console.WriteLine(sentence);
Console.WriteLine();

//************************
//* LastIndexOfAny() Samples
//************************
Console.WriteLine("*** LastIndexOfAny() Samples ***");
Console.WriteLine($"LastIndexOfAny(\"o\".ToCharArray())
=" +
  $" {sentence.LastIndexOfAny("o".ToCharArray())}");

Console.WriteLine($"LastIndexOfAny(\"xo\".ToCharArray())
= " +
  $"{sentence.LastIndexOfAny("xo".ToCharArray())}");

Console.WriteLine($"LastIndexOfAny(\"zw\".ToCharArray())
= " +
  $"{sentence.LastIndexOfAny("zw".ToCharArray())}");

Console.WriteLine($"LastIndexOfAny(\"zd\".ToCharArray())
= " +
  $"{sentence.LastIndexOfAny("zd".ToCharArray())}");

Console.WriteLine();
```

Try It Out

Run the application and see the output.