Task 1

Describe the strings in C#.

A string is an object of type String whose value is text. Internally, the text is stored as a sequential read-only collection of Char objects. There is no null-terminating character at the end of a C# string; therefore a C# string can contain any number of embedded null characters ('\0'). The Length property of a string represents the number of Char objects it contains, not the number of Unicode characters. To access the individual Unicode code points in a string, use the StringInfo object.

What is typical for the string data type?

The **string** class has an important feature – the character sequences stored in a variable of the class are never changing (**immutable**). After being assigned once, the content of the variable does not change directly – if we to change the value, it will be saved to a new location in the dynamic memory and the variable will point to it.

Describe the most important methods of the String class.

String.ToLower(…)

- Returns a copy of this string converted to lowercase.

ToUpper(…)

- Returns a copy of this string converted to uppercase.

IndexOf(…)

- Reports the zero-based index of the first occurrence of the specified element in this string.

Substring (…)

- Retrieves a substring from this instance. The substring starts at a specified character position and continues to the end of the string.

Replace(…)

- Returns a new string in which all occurrences of a specified char/string in the current instance are replaced with another specified char/string.

Split(…)

- Returns a string array that contains the substrings in this instance that are delimited by elements of a specified Unicode character array.

Join(…)

- Concatenates all the elements of a array, using the specified separator between each element.

Trim(…)

- Removes all leading and trailing white-space characters from the current String object.

Fromat(…)

- Replaces each format item in a specified string with the text equivalent of a corresponding object's value.

ToString(…)

- Returns this instance of String; no actual conversion is performed.