

3.11-String Manipulation

Program

```
int employeeId = 20;
```

```
string companyName = "UTCLI";
```

```
Console.WriteLine("String Concatenation");
```

```
Console.WriteLine("Hello, my employee ID is " + employeeId + " and my company name is " +  
companyName);
```

```
Console.WriteLine("String Composite");
```

```
Console.WriteLine("Hello, my employee ID is {0} and my company name is {1}", employeeId,  
companyName);
```

```
Console.WriteLine("String Interpolation");
```

```
Console.WriteLine($"Hello, my employee ID is {employeeId} and my company name is  
{companyName}");
```

```
Console.WriteLine("Verbatim Strings");
```

```
Console.WriteLine(@"The sunset painted the sky in hues of orange and pink,  
casting a warm glow over the city.
```

```
People bustled through the streets,
```

```
engaged in their daily routines.
```

```
In the distance, skyscrapers towered,
```

```
symbols of progress and innovation.");
```

Exercise

Write a C# program in which Two variables are initialized: `employeeId`, an integer set to 20, and `companyName`, a string set to "UTCLI".

The program demonstrates string concatenation by combining the text "Hello, my employee ID is " with the value of `employeeId`, followed by " and my company name is ", and finally adding the value of `companyName`.

Also show composite formatting using `{0}` and `{1}` as placeholders for `employeeId` and `companyName`, respectively, in the string "Hello, my employee ID is `{0}` and my company name is `{1}`".

String interpolation is employed by prefixing the string with `$`, allowing direct insertion of variables within curly braces `{}`. It substitutes `{employeeId}` and `{companyName}` with their respective values.

Hint

Declare and initialize an integer variable `employeeId` with a value of 20.

Declare and initialize a string variable `companyName` with the value " UTCLI".

Utilize different methods to output strings:

Use string concatenation (+ operator) to combine strings and variables.

Use string composite formatting with `{0}` and `{1}` placeholders to insert variables into a formatted string.

Use string interpolation with `$` prefix to directly insert variables within curly braces `{}` in a string.

Use verbatim strings (prefixed with `@`) to maintain the formatting of multi-line text without interpreting escape characters.

Explanation

It begins by declaring an integer variable `employeeId` with a value of 20 and a string variable `companyName` with the value " UTCLI". The code then showcases string concatenation, string composite formatting, string interpolation, and the use of verbatim strings to output different messages containing the `employeeId` and `companyName`. These techniques offer flexibility in

constructing and formatting strings, allowing for dynamic insertion of variables and preserving the structure of multi-line text.