

String-Tagged Templates

This lesson will teach you how to use a tagged template as a reusable way to format code.

The last detail you are going to learn about TypeScript and string is what you may call a *tagged template*. This concept is rarely used, but offers a different way of specifying a function before opening a backquote. Each group of strings and placeholders is defined by a dollar sign `$` and curly braces `{}`.

In this case, you still provide an expression, but you can have the whole string manipulated by the method (placeholders and strings before and after placeholders).

In the following snippet, the **third line** uses string interpolation but, at the start, it has `analyzeString` which is the **string template**.

The code below does not compile because we have not yet defined the template. ✕

```
const number = 84;  
const number2 = 100;  
const endResult = analyzeString`The number is ${number} which is not like the second number $
```



The function provided in the tagged template takes two parameters.

The first one will be all string literals in an array, and the second is a list of all placeholders.

The string literal is all the text that is not a placeholder. For example, you can have a sentence that contains a few characters and a placeholder followed by some other characters and another placeholder. At the start of the string, you transform it into a tagged template using a tag. The tag is a function, in the

below case, it is `analyzeString`, that you place in front of the backquote.

This function as mentioned above, has two parameters: the first parameter an array comprising two items, and the second parameter will be an array of placeholders. The return of the **function** must be a string.

```
function analyzeString(literals: TemplateStringsArray, ...placeholders: any[]) {  
  let result = "";  
  for (let i = 0; i < placeholders.length; i++) {  
    result += literals[i];  
    result += "*" + placeholders[i] + "*";  
  }  
  result += literals[literals.length - 1];  
  return result;  
}  
  
const number = 84;  
const number2 = 100;  
const endResult = analyzeString`The number is ${number} which is not like the second number $`  
  
console.log(endResult);
```

The code above demonstrates the two parameters discussed previously. The `literals` is a list that contains the strings:

- `"The number is"`
- `"which is not like the second number"`

`placeholders` is also a list. In the example, it contains the two following values:

- 84
- 100

The string template could be replaced by a function. The advantage is that the string is already divided in portion with the `literals` (`TemplateStringsArray`) and the list of `placeholders` (`any`). The **tagged template** can also return something other than a string.