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☰ HTML CSS

C Strings

❮ Previous Next ❯

Strings

Strings are used for storing text/characters.

For example, "Hello World" is a string of characters.

Unlike many other programming languages, C does not have a **String type** to easily create string variables. However, you can use the `char` type and create an array of characters to make a string in C:

```
char greetings[] = "Hello World!";
```

Note that you have to use double quotes.

To output the string, you can use the `printf()` function together with the format specifier `%s` to tell C that we are now working with strings:

Example

```
char greetings[] = "Hello World!";
printf("%s", greetings);
```

Try it Yourself »

Access Strings

Since strings are actually arrays in C, you can access a string by referring to its index number inside square brackets `[]`.

This example prints the **first character (0)** in **greetings**:

Example

```
char greetings[] = "Hello World!";
printf("%c", greetings[0]);
```

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Note that we have to use the `%c` format specifier to print a **single character**.

Modify Strings

To change the value of a specific character in a string, refer to the index number, and use **single quotes**:

Example

```
char greetings[] = "Hello World!";
greetings[0] = 'J';
printf("%s", greetings);
// Outputs Jello World! instead of Hello World!
```

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Another Way Of Creating Strings

In the examples above, we used a "string literal" to create a string variable. This is the easiest way to create a string in C.

You should also note that you can create a string with a set of characters. This example will produce the same result as the example in the beginning of this page:

Example

```
char greetings[] = {'H', 'e', 'l', 'l', 'o', ' ', 'W', 'o', 'r', 'l', 'd',
'!', '\0'};
printf("%s", greetings);
```

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Why do we include the `\0` character at the end? This is known as the "null terminating character", and must be included when creating strings using this method. It tells C that this is the end of the string.

Differences

The difference between the two ways of creating strings, is that the first method is easier to write, and you do not have to include the `\0` character, as C will do it for you.

You should note that the size of both arrays is the same: They both have **13 characters** (space also counts as a character by the way), including the `\0` character:

Example

```
char greetings[] = {'H', 'e', 'l', 'l', 'o', ' ', 'W', 'o', 'r', 'l', 'd',
'!', '\0'};
char greetings2[] = "Hello World!";

printf("%lu\n", sizeof(greetings));   // Outputs 13
printf("%lu\n", sizeof(greetings2));  // Outputs 13
```

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C Exercises

Test Yourself With Exercises

Exercise:

Fill in the missing part to create a "string" named **greetings**, and assign it the value "Hello".

```
                    =          ;
```

Submit Answer »

Start the Exercise

❮ Previous

Next ❯

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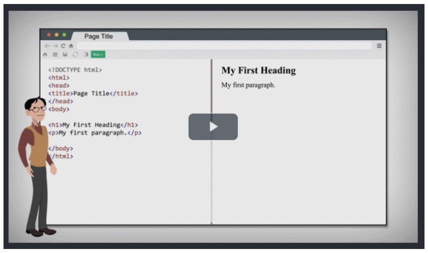

```
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<head>
<title>Page Title</title>
</head>
<body>

<h1>My First Heading</h1>
<p>My first paragraph.</p>

</body>
</html>
```

My First Heading

My first paragraph.

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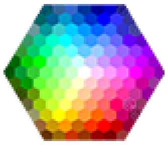

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