STRING array

In C programming, a string is a sequence of characters terminated with a null character \0. For example:

```
char c[] = "c string";
```

When the compiler encounters a sequence of characters enclosed in the double quotation marks, it appends a null character \0 at the end by default.



How to declare a string?

Here's how you can declare strings:

```
char s[5];

s[0] s[1] s[2] s[3] s[4]
```

Here, we have declared a string of 5 characters.

How to initialize strings?

You can initialize strings in a number of ways.

```
char c[] = "abcd";
char c[50] = "abcd";
char c[] = {'a', 'b', 'c', 'd', '\0'};
char c[5] = {'a', 'b', 'c', 'd', '\0'};
```

c[0]	c[1]	c[2]	c[3]	c[4]
а	b	С	d	\0

Let's take another example:

```
char c[5] = "abcde";
```

Here, we are trying to assign 6 characters (the last character is '\0') to a char array having 5 characters. This is bad and you should never do this.

Example 1: scanf() to read a string

```
#include <stdio.h>
int main()
{
    char name[20];
    printf("Enter name: ");
    scanf("%s", &name);
    printf("Your name is %s.", name);
    return 0;
}
```

Output

```
Enter name: Dennis.
Your name is Dennis.
```