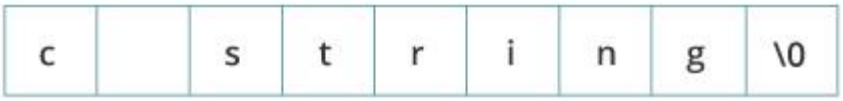
STRING array

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

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

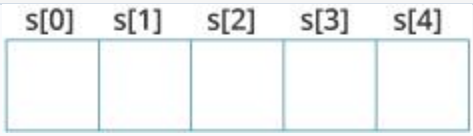
When the compiler encounters a sequence of characters enclosed in the double quotation marks, it appends a null character `\0` at the end by default.



How to declare a string?

Here's how you can declare strings:

```
char s[5];
```



Here, we have declared a string of 5 characters.

How to initialize strings?

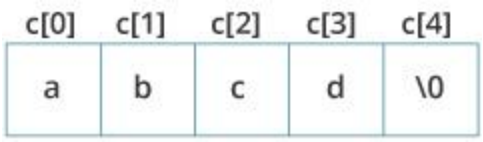
You can initialize strings in a number of ways.

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

char c[50] = "abcd";

char c[] = {'a', 'b', 'c', 'd', '\0'};

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



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.
```