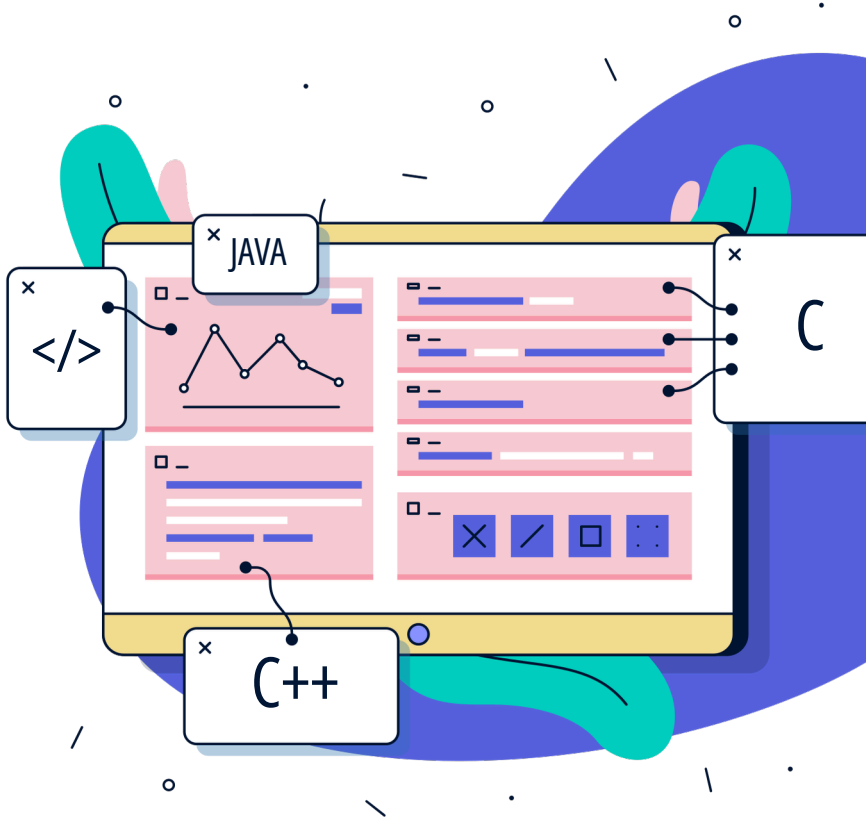
Welcome,

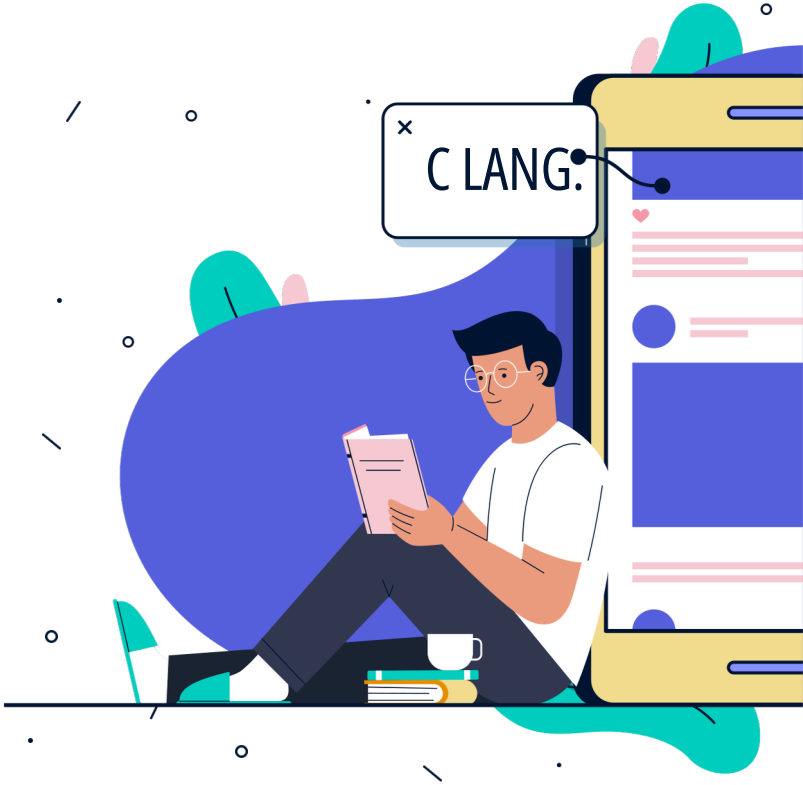
PROGRAMMERS



01.

What is NULL character?

What is NULL?



NULL Character

The **NULL** character, often denoted as **'\0'**, is a special character used to mark the **end of a string**.
The NULL character plays a crucial role in strings, which are essentially sequences of characters terminated by the NULL

character.

Predefined String

	Elements					
char a[5] = {	‘h’,	‘e’,	‘l’,	‘l’,	‘o’	};
Index / Position	0	1	2	3	4	

Means

	Elements					
char a[5]	h	e	l	l	o	\0
Index / Position	0	1	2	3	4	

Predefined String

	Elements					
char a[5] = {	'h',	'e',	'l',	'l',	'o'	};
Index / Position	0	1	2	3	4	

Equivalent

	Elements						
char a[5] = {	'h',	'e',	'l',	'l',	'o',	'\0'	};
Index / Position	0	1	2	3	4		

NULL == ‘\0’

Insertion Operation

	Elements						
char a[5] = {	'h',	'e',	'l',	'l',	'o'	NULL	};
Index / Position	0	1	2	3	4		

	Elements						
char a[5] = {	'h',	'e',	'l',	'l',	'o',	'\0'	};
Index / Position	0	1	2	3	4		

Iteration Operation

```
for(i=0; a[i]!=NULL; i++)
{
    printf("%c ", a[i]);
}
```

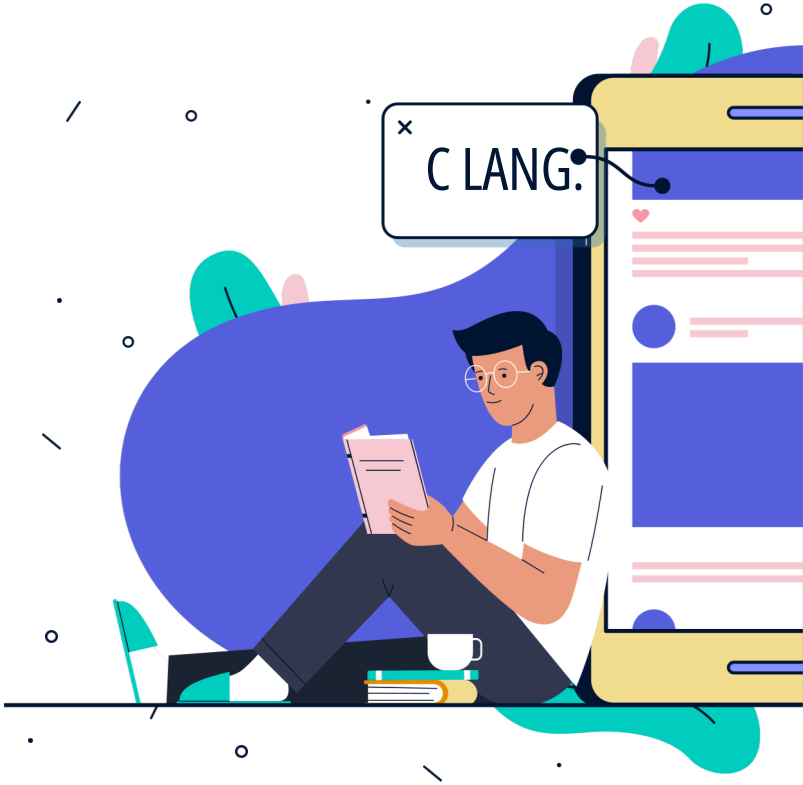
	Elements				
char a[5]	h	e	l	l	o
Index / Position	0	1	2	3	4

Equivalent

```
for(i=0; a[i]!='\0'; i++)
{
    printf("%c ", a[i]);
}
```

02.

What are Built-in String Functions?



Built-in string functions

In C language, there is **no built-in string data type**, but **strings are typically represented as arrays of characters**.
To manipulate strings, developers commonly use a set of standard library functions provided in the **<string.h>**

header file.

Built-in String Functions

Commonly used Built-in String Functions:

Functions	Description
strlen	Returns the length of a string.
strupr	Returns the uppercase version of a string.
strlwr	Returns the lowercase version of a string.
strcpy	Assign a string value to a variable.

Functions	Description
strrev	Returns the reverse string of a string.
strcat	Concatenate two strings.
strcmp	Compares to strings and return an integer value.

Let’s see each **functions** in detail with examples...

strlen()

Returns the length of a string.

```
int length = strlen(“hello”);
printf(“%d”, length);
```

Output: 5

strupr()

Returns the uppercase version of a string.

```
char str[5] = strupr(“hello”);
printf(“%s”, str);
```

Output: HELLO

strlwr()

Returns the lowercase version of a string.

```
char str[10] = strlwr("Hi C Lang");
printf("%s", str);
```

Output: hi c lang

strcpy()

Assign a string value to a variable.

```
char str[100];
str = “hello”;
```

```
char str[100];
strcpy(str, “hello”);
```

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strrev()

Returns the reverse string of a string.

```
char str[5] = strrev(“hello”);
printf(“%s”, str);
```

Output: olleh

strcat()

Concatenate two strings.

```
char str[10] = strcat(“hello”, “world”);
printf(“%s”, str);
```

Output: helloworld

strcmp()

Compares to strings and return an integer value.

Note:

- It returns **0**, if both string are exactly same.
- It returns **1**, if first compared string's letter is **greater** (in ASCII value) then second
- compared string.
  It returns **-1**, if first compared string's letter is **lesser** (in ASCII value) then second compared string.

```
int val = strcmp("apple", "apple");
printf("%d", val);
```

Output: 0

Language

Let's start now...

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