

Constants

Constants in C refer to a specific quantity that doesn't change during the execution of a program.

Types of Constants

- Integer Constants
- Real Constants
- Single Character Constants
- String Constants

Defining Constants:

In C/C++ program we can define constants in two ways as shown below:

1. Using *#define* pre-processor directive
2. Using a *const* keyword

Using #define preprocessor directive:

This directive is used to declare an alias name for existing variable or any value. We can use this to declare a constant as shown below:

```
#define identifierName value
```

- **identifierName:** It is the name given to constant.
- **value:** This refers to any value assigned to identifierName.

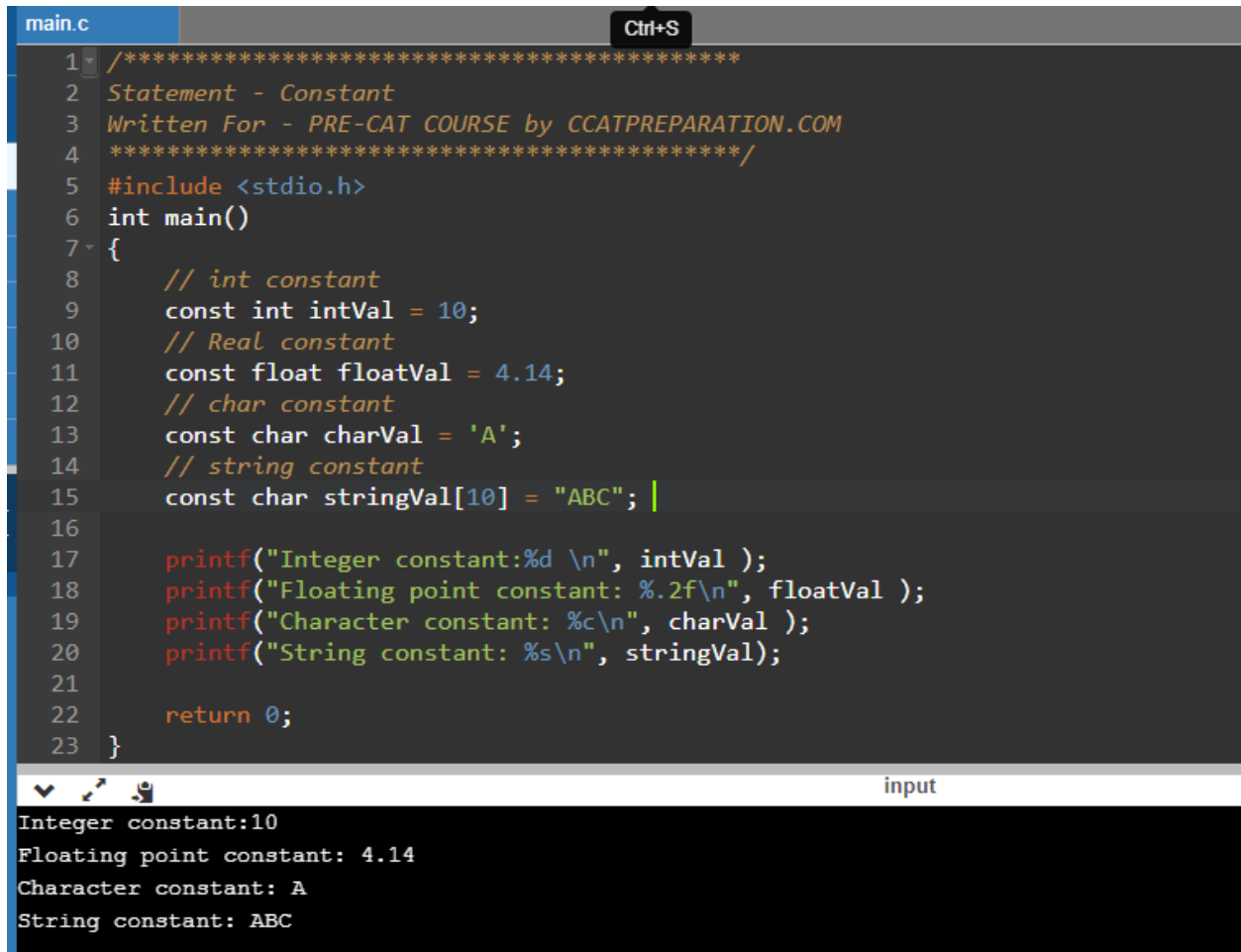
```
main.c
1  /*****
2  Statement - Constant
3  Written For - PRE-CAT COURSE by CCATPREPARATION.COM
4  *****/
5  #include<stdio.h>
6  #define val 10
7  #define floatVal 4.5
8  #define charVal 'G'
9
10 int main()
11 {
12     printf("Integer Constant: %d\n",val);
13     printf("Floating point Constant: %.1f\n",floatVal);
14     printf("Character Constant: %c\n",charVal);
15
16     return 0;
17 }
```

input

```
Integer Constant: 10
Floating point Constant: 4.5
Character Constant: G
```

using a *const* keyword:

Using *const* keyword to define constants is as simple as defining variables, the difference is you will have to precede the definition with a *const* keyword.

A screenshot of a code editor showing a C program that demonstrates the use of the 'const' keyword. The code defines constants for an integer, a float, a character, and a string, and then prints their values. The output of the program is shown in a terminal window at the bottom.

```
main.c Ctrl+S
1  /*****
2  Statement - Constant
3  Written For - PRE-CAT COURSE by CCATPREPARATION.COM
4  *****/
5  #include <stdio.h>
6  int main()
7  {
8      // int constant
9      const int intVal = 10;
10     // Real constant
11     const float floatVal = 4.14;
12     // char constant
13     const char charVal = 'A';
14     // string constant
15     const char stringVal[10] = "ABC";
16
17     printf("Integer constant:%d \n", intVal );
18     printf("Floating point constant: %.2f\n", floatVal );
19     printf("Character constant: %c\n", charVal );
20     printf("String constant: %s\n", stringVal);
21
22     return 0;
23 }
```

input

Integer constant:10
Floating point constant: 4.14
Character constant: A
String constant: ABC