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

```c
/*********************************************
Statement - Constant
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*********************************************/
#include<stdio.h>
#define val 10
#define floatVal 4.5
#define charVal 'G'

int main()
{
    printf("Integer Constant: %d\n",val);
    printf("Floating point Constant: %.1f\n",floatVal);
    printf("Character Constant: %c\n",charVal);

    return 0;
}
```

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.

main.c

Ctrl+S

```c
/*****************************************
Statement - Constant
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*****************************************/
#include <stdio.h>
int main()
{
    // int constant
    const int intVal = 10;
    // Real constant
    const float floatVal = 4.14;
    // char constant
    const char charVal = 'A';
    // string constant
    const char stringVal[10] = "ABC";

    printf("Integer constant:%d \n", intVal );
    printf("Floating point constant: %.2f\n", floatVal );
    printf("Character constant: %c\n", charVal );
    printf("String constant: %s\n", stringVal);

    return 0;
}
```

input

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