Constants in C

A constant is a value or variable that can't be changed in the program, for example: 10, 20, 'a', 3.4, "c programming" etc.

There are different types of constants in C programming.

List of Constants in C

|  |  |
| --- | --- |
| **Constant** | **Example** |
| Decimal Constant | 10, 20, 450 etc. |
| Real or Floating-point Constant | 10.3, 20.2, 450.6 etc. |
| Octal Constant | 021, 033, 046 etc. |
| Hexadecimal Constant | 0x2a, 0x7b, 0xaa etc. |
| Character Constant | 'a', 'b', 'x' etc. |
| String Constant | "c", "c program", "c in javatpoint" etc. |

2 ways to define constant in C

There are two ways to define constant in [C programming](https://www.javatpoint.com/c-programming-language-tutorial).

1. const keyword
2. #define preprocessor

1) C const keyword

The const keyword is used to define constant in C programming.

1. **const** **float** PI=3.14;

Now, the value of PI variable can't be changed.

1. #include<stdio.h>
2. **int** main(){
3. **const** **float** PI=3.14;
4. printf("The value of PI is: %f",PI);
5. **return** 0;
6. }

**Output:**

The value of PI is: 3.140000

If you try to change the the value of PI, it will render compile time error.

1. #include<stdio.h>
2. **int** main(){
3. **const** **float** PI=3.14;
4. PI=4.5;
5. printf("The value of PI is: %f",PI);
6. **return** 0;
7. }

**Output:**

Compile Time Error: Cannot modify a const object

2) C #define preprocessor

The #define preprocessor is also used to define constant. We will learn about #define preprocessor directive later.

Visit here for: [#define preprocessor directive](https://www.javatpoint.com/c-preprocessor-define).