

Functions in C : \rightarrow A block of code which can be used to perform a specific task is called a function. It is only invoked whenever it is called. Two types:

① User-defined functions

② Built-in functions.

Parameters (a,b)
Arguments (1,2)

```
void sum(int a, int b) {
    printf("%d", a+b);
}

main {
    sum(1,2);
}
```

* The variables defined during function definition are parameters (a,b)
* The actual values passed during function call are arguments (1,2)

```
function definition {
    int add(int a, int b) {
        // function body
    }
}
```

(3rd Sem) (Idea + Road Map) (why?) DSA
(Cloud) (ACP) 6th Sem
Azure + AWS Python
numpy pandas
PySpark (Excel) { DE / DA
matplotlib { SQL + AI / ML
Seaborn { DBMS } R (6x8 = 48)
Scipy

Hamming Weight

5 \rightarrow 0101 191

```
int hammingWeight(int n) {
}
```

11 \rightarrow 1011
= 3

5, 11, 0, 9
2 3 0 2

* (Bin / Conversion) (Bitwise) Count = 0
11 \rightarrow (1011)
x 2 0001
1
10 >> 1 1011 >> 1
101
001
001
1 >> 1 1 >> 1
1 10
01
TC 8s

Logic : PrepInsta \rightarrow Top 100 Codes

Before starting DSA, practice logic building via these 100 questions

C++ * Take U Forward \rightarrow Striver (English)
* Code Help \rightarrow Love Babbar (Hindi)
Python: (Tech With Tim) (W3Schools)
Java: Kunal Kushwaha (Boas)
(Abdul Bari) (pseudo code)

Given an integer n, write a C program to reverse the given integer:

i/p: n = 123 o/p 321
n = 456 o/p 654
n = 120 o/p 21

Capgemini / Cognizant (2025)
Reva / BMSIT

$n = 123$ $\downarrow \downarrow$ $digit = n \% 10 = 3$
 $1 \times 100 + 2 \times 10 + 3 \times 1$ $n = n / 10$
ans = 0
 $ans = ans \times 10 + digit$
 $= 0 \times 10 + 3$
 $= 3$
 $3 \times 10 + 2 = 32$
 $32 \times 10 + 1 = 321$
 $123 / 10 = 12$
 $12 / 10 = 2$
 $12 / 10 = 1$
 $1 / 10 = 0 \rightarrow$ stop

DRY RUN

3 & 4 = 7
3, 4, X, X
(3, 4)

0000
0011
0011
0001
0010

3, 1, 2, 1, 2, 3, 4

0010
0010
0000
0001
0001
0010
0011

0011
0011
0000
0100
0100
(4)