Write a C program to find the sum of digits of a number.

```c
#include <stdio.h>
void main()
{
    int        n, m, sum=0;
    printf("Enter a number:");
    scanf("%d",&n);
    while (n >0)
    {
        m = n%10;
        sum = sum+m;
        n = n/10;
    }
    printf("Sum is = %d", sum);
    return 0;
}
```

Algorithm:

step1 :- Start
step 2: INPUT n, m, sum=0
step3 : INPUT "Enter a Number:", n
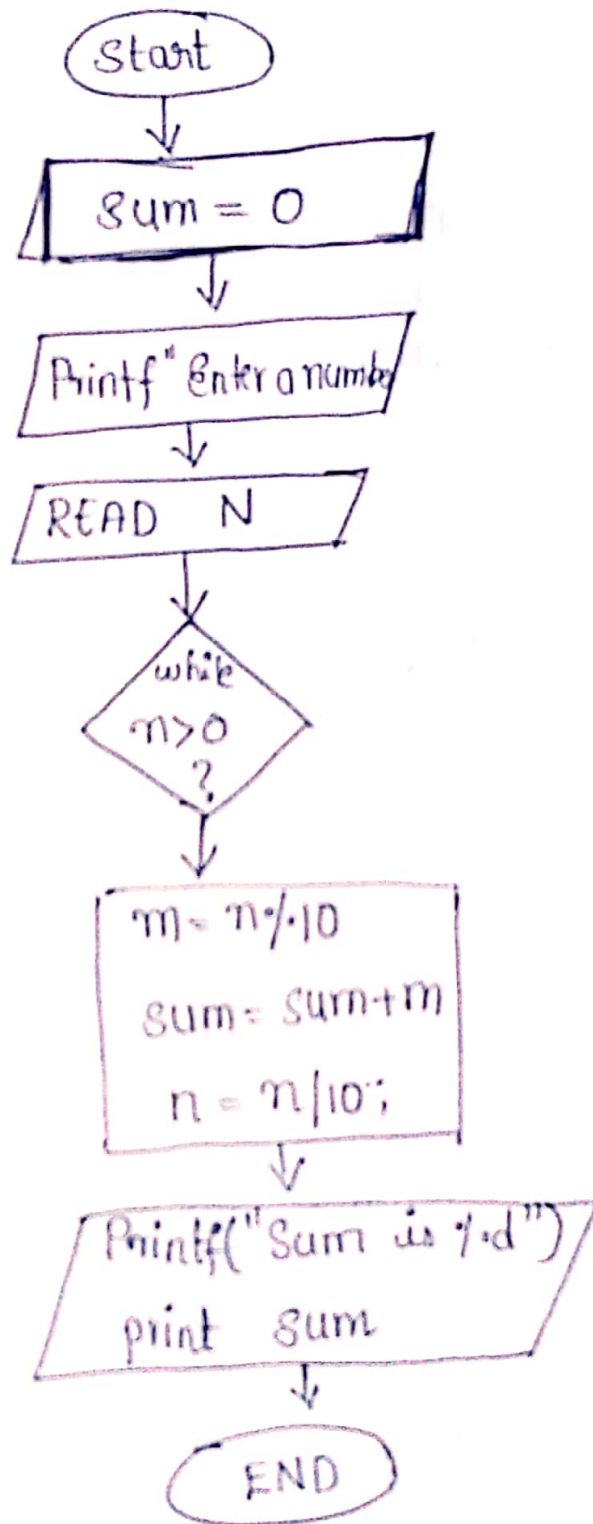step4: while (n >0)
step5:   m = n%10
           sum= sum+m
           n = n/10.

step6: OUTPUT "Sum is %d", Sum.
       Return 0.

step7:   Exit.

FLOW Chart

```
        ┌─────────┐
        │  Start  │
        └─────────┘
             │
             ▼
    ╱─────────────────╲
    │   Sum = 0        │
    ╲─────────────────╱
             │
             ▼
    ╱──────────────────────╲
    │ Printf "Enter a number│
    ╲──────────────────────╱
             │
             ▼
    ╱──────────────╲
    │  READ   N     │
    ╲──────────────╱
             │
             ▼
        ╱───────╲
       ╱  while  ╲
       ╲  n>0    ╱
        ╲   ?   ╱
             │
             ▼
    ┌──────────────────┐
    │   m = n%10        │
    │                   │
    │  Sum = Sum+m      │
    │                   │
    │  n = n/10;        │
    └──────────────────┘
             │
             ▼
    ╱─────────────────────────╲
    │ Printf("Sum is %d")      │
    │                          │
    │   print  Sum             │
    ╲─────────────────────────╱
             │
             ▼
        ┌─────────┐
        │   END   │
        └─────────┘
```

Code, Compile & Run

C (Gcc 6.3)   ▼

```c
1  #include <stdio.h>
2  void main()
3  {
4      int m,n,sum=0;
5      printf("Enter a number:");
6      scanf("%d\n",&n);
7      printf("%d",n);|
8      while(n>0)
9      {
10         m=n%10;
11         sum=sum+m;
12         n=n/10;
13     }
14     printf("\nThe Sum of digits is=%d",sum);
15     return(0);
16 }
17
```

6:19

Custom Input   Run

Input

```
458
```

Output

```
Enter a number:458
The Sum of digits is=17
```

Runtime Error

NZEC