

✓ Day : Basic Input/Output and Operators (2-8-2025)

1. Write a C program to add two integers.

IPO

Input : to get a value as input say a,b,c

Process: to add two integers using the condition

$$C=a+b$$

Output : output the addition of two integers

```
#include<stdio.h>
```

```
void main()
```

```
{
```

```
    float a=2,b=2,c;
```

```
    c=a+b;
```

```
    printf("%f",c);
```

```
}
```

Output

Clear

4.000000

=== Code Exited With Errors ===

2. Write a program to swap two numbers using a temporary variable.

IPO

Input: to get a value as input to swap a number

Process: to swap a two number using temporary third variable is introduced to hold the value of one variable while swapping

Output: to output the exchanged variable values

```
#include <stdio.h>
```

```
void main()
```

```
{
```

```
int a=3,b=4,temp;
```

```
printf("before swapping:a=%d,b=%d\n",a,b);
```

```
{
```

```
temp=a;
```

```
a=b;
```

```
b=temp;
```

```
}
```

```
printf("after swapping:a=%d,b=%d\n",a,b);
```

```
}
```

Output

Clear

before swapping:a=3,b=4

after swapping:a=4,b=3

=== Code Exited With Errors ===

3. Write a program to swap two numbers without using a temporary variable

IPO

Input: to swap the two numbers as input without using a temporary variable

Process: to swap the two numbers without using temporary variable ,to exchange the two variables as a =10 ,b=5 and after swaping it becomes a=5 , b=10

Output : out put the variable a , b after swaping

```
#include<stdio.h>

void main()
{
    int a=5,b=10;
    printf("before swaping :a=%d,b=%d\n",a,b);
    {
        a=a+b;
        b=a-b;
        a=a-b;
    }
    printf("after swaping : a=%d,b=%d\n",a,b);
}
```

Output

[Clear](#)

```
before swaping :a=5,b=10
after swaping : a=10,b=5
```

```
=== Code Exited With Errors ===
```

4. Write a program to find the ASCII value of a character.

IPO

Input: to get the ASCII program by using char ,printf and stores in char variable

Process: to print char variable using %d ,c converts char into ASCII value

Output : output the value using printf()

```
#include<stdio.h>
```

```
void main()
```

```
{
```

```
    int n,a;
```

```
    char c='a';
```

```
    n=c;
```

```
    printf("%d",n);
```

```
}
```

Output

Clear

97

=== Code Exited With Errors ===

5. Write a program to calculate the area and perimeter of a rectangle.

IPO

Input : to input the value of length of rectangle and width

Process: to calculate the area and perimeter of a rectangle using $a=l*w$; and $perimeter=2*length+ width$ formulas

Output: output the area and perimeter of rectangle

```
#include<stdio.h>

void main()
{
    float l,w,area,perimeter;
    scanf("%f%f",&l,&w);
    {
        area=l*w;
        perimeter=2*(l+w);
    }
    printf("area of rectangle:%.2f\n",area);
    printf("perimeter of rectangle:%2f\n",perimeter);
}
```

Output

Clear

```
area of rectangle:25.00
perimeter of rectangle:20.000000
```

```
=== Code Exited With Errors ===
```

6. Write a program to compute the simple interest.

IPO

Input : to get a value as input for principle,rate ,number of years

Process: to calculate simple interest by,

$S.I = (p * r * t) / 100$ that stores answer in d

Output : output the variable D

```
#include<stdio.h>
```

```
void main()
```

```
{
```

```
    int a=60,b=2,c=40;
```

```
    float d;
```

```
    d=(a*b*c)/100;
```

```
    printf("%f",d);
```

```
}
```

Output

Clear

48.000000

=== Code Exited With Errors ===

7. Write a program to convert temperature from Celsius to Fahrenheit.

IPO

Input: to get value of c as input say a

Process: to convert temperature from Celsius to Fahrenheit by the formula

$$F = (c * (9/5)) + 32 \text{ stores answer in } d$$

Output : output the variable as d

```
include<stdio.h>
```

```
void main()
```

```
{
```

```
    float a=2,h;
```

```
    h=(a*9/5)+32;
```

```
    printf("%f",h);
```

```
}
```

Output

Clear

35.599998

=== Code Exited With Errors ===

8. Write a program to find the quotient and remainder of two integers.

IPO

Input: to get the quotient and remainder of two integers

process: to find the quotient and remainder by

Quotient=dividend/divisor;

Remainder=dividend % divisor;

Output: to output the quotient and remainder

```
#include<stdio.h>
```

```
void main()
```

```
{
```

```
int divide=12,divisor=2,remain,q;
```

```
{
```

```
q=divide/divisor;
```

```
remain=divide%divisor;
```

```
}
```

```
printf("q=%d\n",q) printf("remain=%d\n",remain);
```

```
}
```

Output

Clear

```
q=6
remain=0
```

```
=== Code Exited With Errors ===
```


9. Write a program to check whether a number is even or odd.

IPO

Input : to get a value odd or even as input

Process: to check whether a number is even or odd using if ,else condition

$a \% 2 == 0$ even else odd

Output: output the value odd or even

```
#include<stdio.h>
```

```
void main()
```

```
{
```

```
    int a=5,i;
```

```
    {
```

```
        if(a%2!=0)
```

```
    {
```

```
        printf("odd");
```

```
    }
```

```
    else
```

```
    {
```

```
        printf("even");
```

```
    }
```

```
}
```

```
{
```

Output

Clear

```
odd
```

```
=== Code Exited With Errors ===
```

10. Write a program to calculate the square and cube of a number.

IPO

Input : to get a value as input as a,b

Process : to get a program to calculate the square and cube of a number where for square $n=5$; $1^2+2^2+....+n^2$ and for cube 1^3+

```
#include<stdio.h>
```

```
void main()
```

```
{
```

```
float a=2,square,cube;
```

```
square=a*a;
```

```
cube=a*a*a;
```

```
printf("square=%f\n",square);
```

```
printf("cube=%f\n",cube);
```

```
}
```

Output

Clear

```
square=4.000000
```

```
cube=8.000000
```

```
=== Code Exited With Errors ===
```