

# Input /Output

Implement C programs for the following problem statements:

a. Input two numbers and compute all arithmetic operations.

```
#include <stdio.h>

int main()
{
    int a = 9,b = 4, c;

    c = a+b;
    printf("a+b = %d \n",c);
    c = a-b;
    printf("a-b = %d \n",c);
    c = a*b;
    printf("a*b = %d \n",c);
    c = a/b;
    printf("a/b = %d \n",c);
    c = a%b;
    printf("Remainder when a divided by b = %d \n",c);

    return 0;
}
```

Inference- Value of arithmetic operators get printed

# Input /Output

b. Input radius, compute area, diameter, & circumference of the circle and display them

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

```
main()
{
    float area, diameter, circumference;
    int radius;

    printf ("please enter radius=");
    scanf ("%d", &radius);

    area = 3.14*radius*radius;
    printf ("area=%f\n", area);

    diameter= 2*radius;
    printf ("diameter=%f\n", diameter);

    circumference= 2*radius*3.14;
    printf ("circumference=%f\n", circumference);

    return 0;
}
```

Inference- Value of area, diameter, and circumference gets printed after we enter value of radius in output and press enter key.

# Input /Output

## c. Swapping the values of two variables using third variable.

```
#include<stdio.h>
int main() {
    double var1, var2, temp;
    printf("Enter first number: ");
    scanf("%lf", &var1);
    printf("Enter second number: ");
    scanf("%lf", &var2);

    temp = var1;
    var1 = var2;
    var2 = temp;

    printf("\nAfter swapping, first number = %.2lf\n", var1);
    printf("After swapping, second number = %.2lf", var2);
    return 0;
}
```

Inference- Numbers get swapped after typing value of variables in output and pressing enter key.

# Input /Output

d.Program for swapping the values of two variables without using a third variable.

```
#include <stdio.h>

int main()
{
double var1, var2;

printf("Enter first number: ");
scanf("%lf", &var1);
printf("Enter second number: ");
scanf("%lf", &var2);


var1 = var1 + var2;
var2 = var1 - var2;
var1 = var1 - var2;
printf("\nAfter swapping, first number = %.2lf\n", var1);
printf("After swapping, second number = %.2lf", var2);


return 0;
}
```

Inference- Numbers get swapped after typing value of variables in output and pressing enter key.

# Input /Output

e. To evaluate algebraic expression  $(ax+b)/(ax-b)$ .

```
#include <stdio.h>

int main()
{
    int a,b,x;
    float k;
    printf ("enter value of a,b,x=");
    scanf ("%d%d%d",&a,&b,&x);

    k= (a*x+b)/(a*x-b);
    printf ("k=%f", k);

    return 0;
}
```

Inference- We get value of given algebraic expression after typing value of variables in output and pressing enter key.