

Simple C programs

1. To find sum of two numbers

```
#include<stdio.h>

int main()
{
    int a, b, c;

    printf("Enter value of a: ");
    scanf("%d", &a);

    printf("Enter value of b: ");
    scanf("%d", &b);
    c = a+b;

    printf("Sum of given two numbers is: %d", c);

return 0;
}
```

2. Finding Area of the square

```
#include<stdio.h>

int main()
{

    int L, area;

    printf("Enter length of square L: ");
    scanf("%d", &L);

    area = L*L;

    printf("Area of square is: %d", area);

    return 0;
}
```

3. Finding Area of the rectangle

```
#include<stdio.h>

int main()
{
    int a, b, area;
    printf("Enter side length a: \n");
    scanf("%d", &a);

    printf("Enter side length b: \n");
    scanf("%d", &b);

    area = a*b;

    printf("Area of rectangle is: %d ", area);

    return 0;
}
```

4. Area of a triangle where three sides are given

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

int main()
{
    int a, b, c;
    float s, A;

    printf("Enter values of a, b, c: \n");
    scanf("%d %d %d", &a, &b, &c);

    s = (a+b+c)/2;
    A = sqrt (s*(s-a)*(s-b)*(s-c));

    printf("Area of triangle is: %f", A);

    return 0;
}
```

```
E:\WACHEMO\Sept 2016-Jan 2017\p
Enter values of a, b, c:
5
8
10
Area of triangle is: 14.071247
```

5. Find the area & perimeter of a square

```
#include<stdio.h>

int main()
{

    int L, A, P;

    printf("Enter length of a sqaure L: ");
    scanf("%d", &L);

    A = L*L;
    P = 4*L;

    printf("Area = %d\n", A);
    printf("Perimeter = %d", P);
    return 0;
}
```

6. Calculating the average for 3 numbers

```
#include<stdio.h>

int main()
{

    int A, B, C;
    float Average;

    printf("Enter values of A, B, C: \n");
    scanf("%d %d %d", &A, &B, &C);

    Average = (A+B+C)/3;

    printf("Average of given 3 numbers is: %f", Average);

    return 0;
}
```

7. Greatest of two numbers

```
#include<stdio.h>

int main()
{
    int A, B;

    printf("Enter values of A, B: ");
    scanf("%d %d", &A, &B);

    if (A>B)
    printf("A is Larger");
    else
    printf("B is Larger");

    return 0;
}
```

8. Interchange the value of two numbers

```
#include<stdio.h>

int main()
{
    int a, b, c;
    printf("Enter value of a:");
    scanf("%d", &a);

    printf("Enter value of b:");
    scanf("%d", &b);

    c = a;
    a = b;
    b = c;

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

    return 0;
}
```

9. Calculate simple interest using the expression ($SI=PNR/100$)

```
#include<stdio.h>

int main()
{
    int P, N, R;
    float SI;

    printf("Enter values of P, N, R: ");
    scanf("%d %d %d", &P, &N, &R);

    SI = (P*N*R/100);
    printf("Simple Interest is: %f", SI);

    return 0;
}
```

10. Convert temperature from Fahrenheit to Celsius

```
#include<stdio.h>

int main()
{
    float F, C;

    printf("Enter Fahrenheit: ");
    scanf("%f", &F);

    C = (F-32)*5/9;
    printf("Temperature in Celsius is: %f", C);

    return 0;
}
```

11. Draw a flowchart for computing factorial N, where $N! = 1 * 2 * 3 * \dots * N$

```
#include<stdio.h>

int main()
{
    int N, F = 1, i;

    printf("Enter value of N: ");
    scanf("%d", &N);

    for(i=1; i<=N;i++)
    {
        F = F * i;
    }

    printf("Factorial of N is: %d", F);

    return 0;
}
```

12. Find the Sum of First Five Natural Numbers

```
#include<stdio.h>

int main()
{
    int count, sum;
    sum = 0;

    for (count = 1; count<=5; count++)
    {
        sum = sum +count;
    }

    printf("Sum of 1st 5 numbers is: %d", sum);
    return 0;
}
```

13. Calculating sum of integers 1 to 100

```
#include<stdio.h>

int main()
{
    int i, sum;

    sum =0;
    for(i=1; i<101;i++)
    {
        sum = sum + i;
    }

    printf("Sum of integers from 1 to 100 is: %d", sum);

    return 0;
}
```

14. To find the sum of n natural Numbers

```
#include<stdio.h>

int main()
{
    int n, i, sum;

    sum = 0;

    printf("Enter value of n: ");
    scanf("%d", &n);

    for(i=1; i<=n;i++)
    {
        sum = sum + i;
    }

    printf("Sum of n natural numbers is: %d", sum);

    return 0;
}
```

15. Sum of squares of n natural numbers

```
#include<stdio.h>

int main()
{
    int n, i, sum;

    printf("Enter value of n: ");
    scanf("%d", &n);

    sum = 0;
    for(i=1; i<=n;i++)
    {
        sum = sum + i*i;
    }

    printf("Sum of square of integers ");
    printf("up to n is: %d", sum);

    return 0;
}
```

16. To find the sum of all even numbers up to 'n'

```
#include<stdio.h>

int main()
{
    int n, count, sum;

    printf("Enter value of n: ");
    scanf("%d", &n);

    count = 0;
    sum = 0;
    while (count<=n)
    {
        sum = sum + count;
        count = count + 2;
    }

    printf("Sum of even numbers upto n is: %d", sum);

    return 0;
}
```


17. To find Product of numbers up to N

```
#include<stdio.h>

int main()
{
    int n, i, prod;

    printf("Enter value of n: ");
    scanf("%d", &n);

    prod = 1;
    for(i=1; i<=n;i++)
    {
        prod = prod * i;
    }

    printf("Product of numbers upto n is: %d", prod);

    return 0;
}
```

18. Sum of first 50 odd numbers

```
#include<stdio.h>

int main()
{
    int n, sum;

    n = 1;
    sum = 0;
    while (n <= 99)
    {
        sum = sum + n;
        n = n + 2;
    }

    printf("Sum of 1st 50 odd umbers is: %d", sum);

    return 0;
}
```

Current sum Previous sum

Initial count = 0, sum = 0	
count	sum = sum + count
1	sum = 0 + 1 = 1
2	sum = 1 + 2 = 3
3	sum = 3 + 2 = 5
4	sum = 5 + 2 = 7
5	sum = 7 + 2 = 9
Up to n<=99	