

Simple C++ Programs

1. To find sum of two numbers

```
#include<iostream>

using namespace std;

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

    cout<<"Enter value of a"<<endl;
    cin>>a;

    cout<<"Enter value of b";
    cin>>b;
    c = a+b;

    cout<<"Sum of given two numbers is: "<<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<iostream>

using namespace std;

int main()
{
    int a, b, area;
    cout<<"Enter side length a:"<<endl;
    cin>>a;

    cout<<"Enter side length b:"<<endl;
    cin>>b;
    area = a*b;

    cout<<"Area of rectangle is: "<<area;

    return 0;
}
```

4. Area of a triangle where three sides are given

```
#include<iostream>
#include<cmath>

using namespace std;

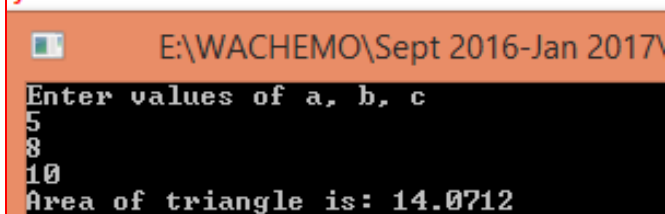
int main()
{
    int a, b, c;
    double s, A;

    cout<<"Enter values of a, b, c"<<endl;
    cin>>a>>b>>c;

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

    cout<<"Area of triangle is: "<<A;

    return 0;
}
```



```
E:\WACHEMO\Sept 2016-Jan 2017\
Enter values of a, b, c
5
8
10
Area of triangle is: 14.0712
```

5. Find the area & perimeter of a square

```
#include<iostream>

using namespace std;

int main()
{
    int L, A, P;

    cout<<"Enter length of a square L: "<<endl;
    cin>>L;

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

    cout<<"Area = "<<A<<endl;
    cout<<"Perimeter = "<<P;
    return 0;
}
```

6. Calculating the average for 3 numbers

```
#include<iostream>

using namespace std;

int main()
{
    int A, B, C;
    float Average;
    cout<<"Enter values of A, B, C:"<<endl;
    cin>>A>>B>>C;

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

    cout<<"Average of given 3 numbers is: "<<endl;
    cout<<Average;

    return 0;
}
```

7. Greatest of two numbers

```
#include<iostream>

using namespace std;

int main()
{
    int A, B;

    cout<<"Enter values of A, B:"<<endl;
    cin>>A>>B;

    if (A>B)
    cout<<"A is Larger";
    else
    cout<<"B is Larger";

    return 0;
}
```

8. Interchange the value of two numbers

```
#include<iostream>

using namespace std;

int main()
{
    int a, b, c;
    cout<<"Enter value of a:"<<endl;
    cin>>a;

    cout<<"Enter value of b:"<<endl;
    cin>>b;

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

    cout<<"Values of a & b after swapping: "<<endl;
    cout<<"a = "<<a<<endl;
    cout<<"b = "<<b;

    return 0;
}
```

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

```
#include<iostream>

using namespace std;

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

    cout<<"Enter values of P, N, R: "<<endl;
    cin>>P>>N>>R;

    SI = (P*N*R/100);
    cout<<"Simple Interest is: "<<SI;

    return 0;
}
```

10. Convert temperature from Fahrenheit to Celsius

```
#include<iostream>

using namespace std;

int main()
{
    float F, C;

    cout<<"Enter Fahrenheit: "<<endl;
    cin>>F;

    C = (F-32)*5/9;
    cout<<"Temperature in Celsius is: "<<C;

    return 0;
}
```

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

```
#include<iostream>

using namespace std;

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

    cout<<"Enter value of N: "<<endl;
    cin>>N;

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

    cout<<"Factorial of N is: "<<F;

    return 0;
}
```

12. Find the Sum of First Five Natural Numbers

```
#include<iostream>

using namespace std;

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

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

    cout<<"Sum of 1st 5 numbers is: "<<sum;
    return 0;
}
```

13. Calculating sum of integers 1 to 100

```
#include<iostream>

using namespace std;

int main()
{
    int i =1, sum =0;

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

    cout<<"Sum of integers from 1 to 100 is: "<<sum;

    return 0;
}
```

14. To find the sum of n natural Numbers

```
#include<iostream>

using namespace std;

int main()
{
    int n, i, sum =0;

    cout<<"Enter value of n: "<<endl;
    cin>>n;

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

    cout<<"Sum of integers from 1 to 100 is: "<<sum;

    return 0;
}
```

15. Sum of squares of n natural numbers

```
#include<iostream>

using namespace std;

int main()
{
    int n, i, sum =0;

    cout<<"Enter value of n: "<<endl;
    cin>>n;

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

    cout<<"Sum of square of integers ";
    cout<<"up to n is: "<<sum;

    return 0;
}
```

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

```
#include<iostream>

using namespace std;

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

    cout<<"Enter value of n: "<<endl;
    cin>>n;

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

    cout<<"Sum of even numbers upto n is: "<<sum;

    return 0;
}
```


17. To find Product of numbers up to N

```
#include<iostream>

using namespace std;

int main()
{
    int n, i, prod = 1;

    cout<<"Enter value of n: "<<endl;
    cin>>n;

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

    cout<<"Product of numbers upto n is: "<<prod;

    return 0;
}
```

18. Sum of first 50 odd numbers

```
#include<iostream>

using namespace std;

int main()
{
    int n = 1, sum =0;

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

    cout<<"Sum of 1st 50 odd umbers is: "<<sum;

    return 0;
}
```