Program 1 : Sum of Two Numbers:

1_sum_of_two_numbers.cpp

```cpp
#include<iostream>
using namespace std;

int main(){
 // Variables
 double a, b;

 // Input Numbers
 cout << "Enter Two Numbers: ";
 cin >> a >> b;

 // Add and Display Sum
 cout << "Sum: " << a + b << '\n';

 return 0;
}
```

Output Screenshot:

```
Enter Two Numbers: 12.6 96.5
Sum: 109.1
```

Program 2 : Vowel or Consonant:

2_vowel_or_consonant.cpp

```cpp
#include<iostream>
using namespace std;

int main(){
 // Variable
 char ch;

 // Input
 cout << "Enter Enter a Character: ";
 cin >> ch;

 // Condition and Output
 cout << "Character is a ";
 if(
   ch == 'a' ||
   ch == 'e' ||
   ch == 'i' ||
   ch == 'o' ||
   ch == 'u'
 ) cout << "Vowel";
 else cout << "Consonant";
 cout << '\n';


 return 0;
}
```

Ouptut Screenshots

```
Enter Enter a Character: a
Character is a Vowel
```

```
Enter Enter a Character: b
Character is a Consonant
```

Program 3 : Triangle is Valid or Not:

3_triangle_is_valid_or_not.cpp

```cpp
#include<iostream>
using namespace std;

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

 // Header
 cout << "Program to find triangle\n";
 for(int i=0; i<22; i++) cout << '*'; cout << '\n';

 // Input Angles
 for(int i=1; i<4; i++){
   cout << "Enter the ";
   switch(i){
     case 1: cout << "first"; break;
     case 2: cout << "second"; break;
     case 3: cout << "third"; break;
   }
   cout << " angle: ";
   switch(i){
     case 1: cin >> a; break;
     case 2: cin >> b; break;
     case 3: cin >> c; break;
   }
 }

 // Condition and Display
 cout << "\n\nThis is ";
 if(a+b+c != 180) cout << "In";
 cout << "Valid Triangle\n\n";

 return 0;
}
```

Ouptut Screenshots

```
Program to find triangle
**********************
Enter the first angle: 88
Enter the second angle: 34
Enter the third angle: 55


This is InValid Triangle
```

```
Program to find triangle
**********************
Enter the first angle: 60
Enter the second angle: 60
Enter the third angle: 60


This is Valid Triangle
```

Program 4 : Sum of Square of first 10 Natural Numbers:

4_sum_of_square_of_10_first_natural_numbers.cpp

```cpp
#include<iostream>
using namespace std;

int main(){
 // Sum Variable
 int sum;

 // Calculating Sum
 for(int i=1; i<11; i++)
   sum += i*i;

 // Output
 cout << "Sum of square of first 10 Natural Numbers: "
      << sum
      << '\n';

 return 0;
}
```

Output Screenshot:

```
 Sum of square of first 10 Natural Numbers: 385
```

Program 5 : Shape:

5_shape.cpp

```cpp
#include<iostream>
using namespace std;

int main(){
 // Variables
 int i, j;

 // Shape
 for(i=0; i<6; i++){
   for(j=0; j<i; j++)
     cout << '*';
   cout << '\n';
 }

 // And
 cout << "\nAnd\n\n";

 // Inverted Shape
 for(i=0; i<6; i++){
   for(j=0; j<6-i; j++)
     cout << '*';
   cout << '\n';
 }
  return 0;
}
```

Output Screenshot:

```
*
**
***
****
*****
```

And

```
******
*****
****
***
**
*
```