Q1. Write a program in C++ to print the sum of two numbers.

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

int main()
{
    int num1,num2,sum=0;
    cout<<"Enter number 1:"<<endl;
    cin>>num1;
    cout<<"Enter number 2:"<<endl;
    cin>>num2;
     sum= num1+num2;
     cout<<"The sum is: " <<sum;

}
```

output:

```
Enter number 1:
2
Enter number 2:
4
The sum is: 6
```

Q2. Write a program which asks for length and width of a rectangle and calculates the area and perimeter

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

int main()
{
    int length,width;
    cout<<"Enter length of rectangle : "<<endl;
    cin>>length;
    cout<<"Enter width of rectangle : "<<endl;
    cin>>width;
    int area,perimeter;
    area=length*width;
    perimeter=2*(length+width);
    cout<<"Area of rectangle is : "<<area<<endl;
    cout<<"perimeter of rectangle is : "<<perimeter<<endl;
}
```

output:

```
Enter length of rectangle :
2
Enter width of rectangle :
3
Area of rectangle is : 6
perimeter of rectangle is : 10
```

Q3. Write a program in C++ to print welcome text on a separate line.

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

int main()
{
    cout<<"WELCOME"<<endl;
}
```

OUTPUT:

```
WELCOME
```

Q4. Write a in C++ program to find the size of fundamental data types.

```
#include <iostream>
using namespace std;
int main()
{
      cout<<"the sizeof(char): "<<sizeof(char)<<endl;
       cout<<"the sizeof(short): "<<sizeof(short)<<endl;
       cout<<"the sizeof(int): "<<sizeof(int)<<endl;
       cout<<"the sizeof(long): "<<sizeof(long)<<endl;
       cout<<"the sizeof(long long): "<<sizeof(long long)<<endl;
       cout<<"the sizeof(float): "<<sizeof(float)<<endl;
       cout<<"the sizeof(double): "<<sizeof(double)<<endl;
       cout<<"the sizeof(long double): "<<sizeof(long double)<<endl;

}
```

```
output:
the sizeof(char): 1
the sizeof(short): 2
the sizeof(int): 4
the sizeof(long): 8
the sizeof(long long): 8
the sizeof(float): 4
the sizeof(double): 8
the sizeof(long double): 16
```

Q5. Write a in C++ program to check the upper and lower limits of integers.

```
#include <iostream>
#include <climits>
using namespace std;
int main()
{
    cout<<"the maximum limit of int data types: "<<INT_MAX<<endl;
    cout<<"the minimum limit of int data types: "<<INT_MIN<<endl;
    cout<<"the maximum limit of unsigned int data types: "<<UINT_MAX<<endl;
    cout<<"the maximum limit of long long data types: "<<LLONG_MAX<<endl;
    cout<<"the minimum limit of long long data types: "<<LLONG_MIN<<endl;
     cout<<"the maximum limit of unsigned long long  data types:
"<<ULLONG_MAX<<endl;
     cout<<"the bits contain char  data types:  "<<CHAR_BIT<<endl;
     cout<<"the maximum limit char  data types:  "<<CHAR_MAX<<endl;
     cout<<"the minimum limit char  data types:  "<<CHAR_MIN<<endl;
     cout<<"the maximum limit signed char  data types:  "<<SCHAR_MAX<<endl;
     cout<<"the minimum limit signed char  data types:  "<<SCHAR_MIN<<endl;
     cout<<"the maximum limit unsigned char  data types:  "<<UCHAR_MAX<<endl;
      cout<<"the maximum limit short data types:  "<<SHRT_MAX<<endl;
     cout<<"the minimum limit short  data types:  "<<SHRT_MIN<<endl;
      cout<<"the maximum limit of unsigned short data types:
"<<USHRT_MAX<<endl;


}
```

```
output:
the maximum limit of int data types: 2147483647
the minimum limit of int data types: -2147483648
the maximum limit of unsigned int data types: 4294967295
the maximum limit of long long data types: 9223372036854775807
the minimum limit of long long data types: -9223372036854775808
the maximum limit of unsigned long long  data types:  18446744073709551615
```

```
the bits contain char  data types:  8
the maximum limit char  data types:  127
the minimum limit char  data types:  -128
the maximum limit signed char  data types:  127
the minimum limit signed char  data types:  -128
the maximum limit unsigned char  data types:  255
the maximum limit short data types:  32767
the minimum limit short  data types:  -32768
the maximum limit of unsigned short data types:  65535
```