Q1. Write a program to check whether a number is prime or not.

```
#include <iostream>
using namespace std;
int main()
{
    int num1,count ;
    cout<<"Enter the number:"<<endl;
    cin>>num1;

    for(int i=1;i<=num1;i++)
    {
        if(num1%i==0)
        {
            count++;
        }
    }
     if(count==2)
     {
         cout<<"Its a prime number";

     }
      else {
          cout<<"Not a prime number";
      }

    return 0;
}
```

```
output:
Enter the number:
23
Its a prime number
```

Q2.Write a program to generate first N prime numbers. Accept N from user.

```
#include <iostream>
using namespace std;
int main()
{
    int i,j,num1,count;
    cout<<"Enter the number:"<<endl;
    cin>>num1;
    cout<<"The first "<< num1 <<" prime numbers are : "<<endl;

    for(i=2;i<=num1;i++)
    {
        count=0;

        for(j=1;j<=i;j++)
        {
            if(i%j==0)
            {
                count++;
            }

        }
         if(count==2)
            {
                cout<<i<<"\t";
            }
    }

    return 0;
```

```
}

output:
Enter the number:
23
The first 23 prime numbers are :
2       3       5       7       11      13      17      19      23


Q3.Write a program to generate following pyramid
A
AB
ABC

#include <iostream>
using namespace std;
int main()
{
    int i,j,num1;
    cout<<"Enter the value:";
    cin>>num1;
    char ch='A';

    for(i=0;i<num1;i++)
    {

        for(j=0;j<=i;j++)
        {
          cout<<char(ch+j);
        }
        cout<<endl;
    }

    return 0;
}

output:
Enter the value:5
A
AB
ABC
ABCD
ABCDE

Q4. Write a menu driven program to perform mathematical operations on two
numbers.

#include <iostream>
using namespace std;
int main()
{
    int num1,num2,n,sum,sub,mul;
    float Division;
    do{
    cout<<"welcome"<<endl;
    cout<<"1. Addition"<<endl;
    cout<<"2. Substraction"<<endl;
    cout<<"3. Multiplication"<<endl;
    cout<<"4. Division"<<endl;

    cout<<"Enter your choice : ";
    cin>>n;
     switch(n)
     {
```

```
         case 1 : cout<<"addition"<<endl;
                    cout<<"Enter two numbers : ";
                    cin>>num1>>num2;
                    sum=num1+num2;
                    cout<<sum<<endl;
                    break;

        case 2 : cout<<"Substraction"<<endl;
                    cout<<"Enter two numbers : ";
                    cin>>num1>>num2;
                    sub=num1-num2;
                    cout<<sub<<endl;
                    break;

         case 3 : cout<<"Multiplication"<<endl;
                    cout<<"Enter two numbers : ";
                    cin>>num1>>num2;
                    mul=num1*num2;
                    cout<<mul<<endl;
                    break;

         case 4 : cout<<"Division"<<endl;
                    cout<<"Enter two numbers : ";
                    cin>>num1>>num2;
                    Division=num1/num2;
                    cout<<Division<<endl;
                    break;

        default : cout<<"Exit";


     }
    }while(1);
}
```

```
output :
welcome
1. Addition
2. Substraction
3. Multiplication
4. Division
Enter your choice : 3
Multiplication
Enter two numbers : 3 4
12
```

Q5. Generate following pyramid , accept the level from the user as input

```
1
1 2
1 2 3
```

```
#include <iostream>
using namespace std;
int main()
{
    int i,j,num1;
    cout<<"Enter the value:";
    cin>>num1;

    for(i=1;i<num1;i++)
    {

        for(j=1;j<=i;j++)
```

```
        {
          cout<<j;
        }
        cout<<endl;
    }

    return 0;
}

output:
Enter the value:5
1
12
123
1234
```