

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