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

code-

```
#include<iostream>
using namespace std;
 main()
{
    int n , count=0;
    cout<<"enter the number";
    cin>>n;

    for(int i=1;i<=n;i++)
    {
       if(n%i==0)
       {
        count ++;
       }
    }
    if (count==2){
        cout<<"Prime";

    }
    else{
        cout<<"not prime";
    }
}
```

output-

```
enter the number4
not prime
```

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

code-

```
#include<iostream>
using namespace std;
 main()
{
    int a,b , count=0;
    cout<<"Enter 1stnumber";
    cin>>a;
    cout<<"Enter 2nd number";
    cin>>b;

    for(int i=a;i<=b;i++)
    {
       if(b%i==0)
       {
        count ++;
       }
    }
    if (count==2){
        cout<<"Prime";

    }
    else{
        cout<<"not prime";
    }
}
```

output-

```
Enter 1stnumber3
Enter 2nd number7
not prime
```

3) Write a program to generate following pyramid
A
AB
ABC
..... A.............Z

code-

```
#include <iostream>
using namespace std;
int main()
{
    char ch='A';
    int n;
    cout<<"Enter the row";
    cin>>n;

    for(int i=1;i<=n;i++)
  {
     for(int j=0;j<i;j++)
     {
        cout<<char('A'+ j);
     }
      cout<<endl;
  }

}
```

output-
Enter the row4
A
AB
ABC
ABCD

4) Write a menu driven program to perform mathematical operations on two numbers.
1. Add
2. Sub
3. Mul
4. Div
5. Exit
accept the menu option and numbers form user.

code-

```
#include <iostream>
using namespace std;
int main(){
      int num1, num2;
      cout << "Enter the value of num1 : ";
      cin >> num1;
      cout << "Enter the value of num2 : " ;
      cin >> num2;

      int sum = num1 + num2;
      cout << " SUM : " << sum << "\n";

      int sub = num1 - num2;
      cout <<" Sub : " << sub << "\n";

      int mul = num1 * num2;
      cout << " Mul : "<<mul<<"\n";

      float div = num1 / num2;
      cout << " div : " << div <<"\n";
```

```
      if (div == 0) {
            cout << "Error";
            exit(0);
      }
      return 0;

}
```

output-

```
Enter the value of num1 : 50
Enter the value of num2 : 2
 SUM : 52
 Sub : 48
 Mul : 100
 div : 25
```

5) Generate following pyramid , accept the level from the user as input

```
1
1 2
1 2 3
..... 1.............N
```

where N is the level accepted as input

code-

```
#include <iostream>
using namespace std;
int main() {
    int n;
    cout<<"enter row";
    cin>>n;
      for (int i = 1; i < n; i++) {
            for (int j = 1; j <= i; j++) {

                  cout <<j<<" ";
            }
            cout <<endl;
      }
      return 0;
}
```

output-

```
enter row5
1
1 2
1 2 3
1 2 3 4
```