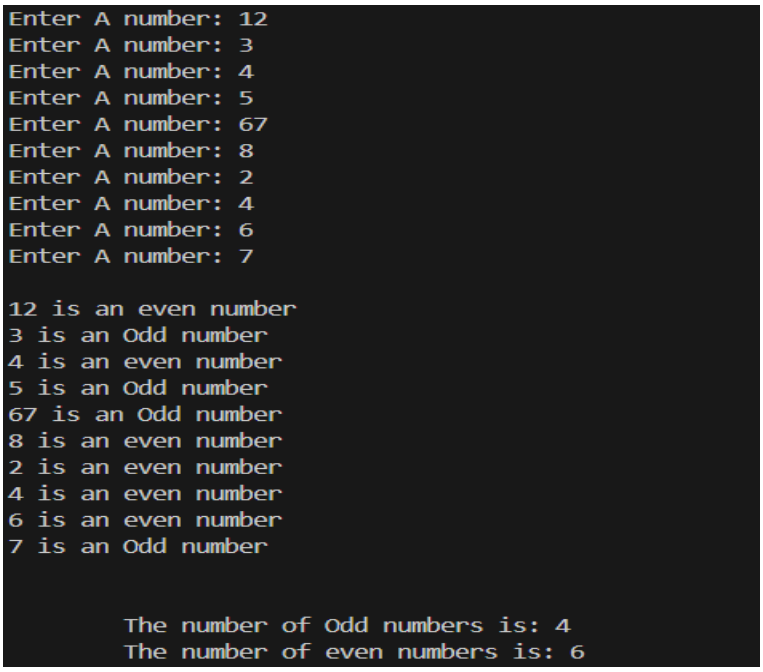
MUHAMMAD MAAZ 24P-3032 BSE-1B

Task #01:

```
#include<iostream>
using namespace std;
int main()
{
    int array[10];     int i;

    for(i=0;i<10;i++)   //Loop for Taking input for array.
    {
        cout<<"Enter A number: ";
        cin>>array[i];
    }
    cout<<endl;
    int even=0,odd=0;
    for(i=0;i<10;i++)   //Loop to go through array and find how many are
odd/even.
    {
        if(array[i]%2==0)
        {
            cout<<array[i]<<" is an even number."<<endl;
            even++;
        }
        else if(array[i]%2!=0)
        {
            cout<<array[i]<<" is an Odd number."<<endl;;
            odd++;
        }
    }
    cout<<"\n\n\tThe number of Odd numbers is: "<<odd<<endl;
    cout<<"\tThe number of even numbers is: "<<even<<endl;

    return 0;
}
```

Screenshot(TASK#01):



TASK #02:

```
#include<iostream>
using namespace std;
int main()
{
    int rating[10], stars;

    for(int i=0;i<10;i++)
    {
    cout<<"Enter Rating from 1-5: ";
    cin>>rating[i];
        if(rating[i]>=1 && rating[i]<=5)
        {
            continue;
        }       //Applying Conditions so that only valid rating is entered.
        else
        {
            cout<<"Invalid Input! Program exits.";
            return 1;   //Returning 1 to show something is not right.
        }
    }
    int max=rating[0], min=rating[0], sum=0;
    for(int i=0;i<10;i++)
    {
        //Loop to find and note the max and min rating.
        if(max<rating[i])
        {
            max=rating[i];
        }
        else if(min>rating[0])
        {
            min=rating[i];
        }
        //Summation for calculation of average.
        sum += rating[i];
    }


    cout<<"\nThe Max Rating is: "<<max<<endl;
    cout<<"The Minimum Rating is: "<<min<<endl;
    cout<<"The average Rating is: "<<sum/10;  //To store space, Not using another
variable for average.
```

```
    return 0;
}
```

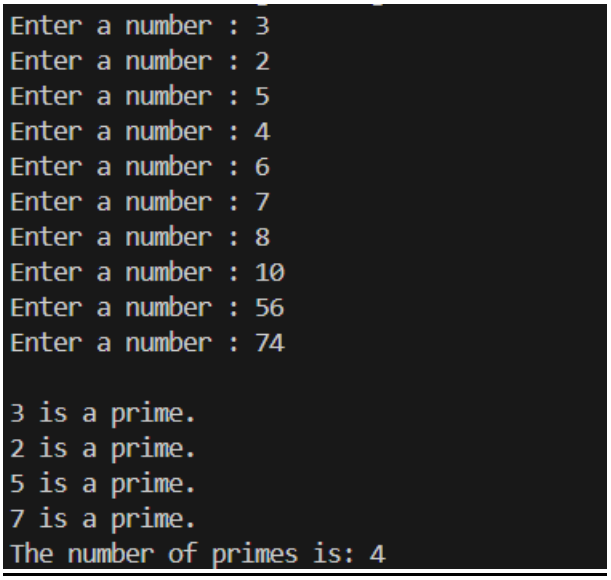
Screenshot(TASK#02)

```
Enter Rating from 1-5: 1
Enter Rating from 1-5: 5
Enter Rating from 1-5: 5
Enter Rating from 1-5: 5
Enter Rating from 1-5: 5
Enter Rating from 1-5: 5
Enter Rating from 1-5: 5
Enter Rating from 1-5: 5
Enter Rating from 1-5: 5
Enter Rating from 1-5: 5

The Max Rating is: 5
The Minimum Rating is: 1
The average Rating is: 4
```

TASK #03:

```
#include<iostream>
using namespace std;
int main()
{
    int primes=0, array[10];
    int i, temp, j, k;
    for(i=0;i<10;i++)
    {
        cout<<"Enter a number : ";
        cin>>array[i];
    }
    for(i=0;i<10;i++)
    {
        temp=array[i];
         k=0;   //For each iteration--->each number of Array, k starts from 0.
        for(j=1;j<=temp;j++)
        {
            if (temp%j == 0)
            {
                k++;  //This will count factors of that number of array.
            }

        }

      if(k==2)  //If a number has 2 factors it's prime. Otherwise not.
        {
            cout<<array[i]<<" is a prime."<<endl;
            primes++;   //Number of primes incremented.
        }

    }

    cout<<"The number of primes is: "<<primes;

    return 0;
}
```

Screenshot(TASK#03)



TASK #04:

```
#include<iostream>

using namespace std;

int main()

{
    int stops[10]={1,2,3,4,5,6,7,8,9,10};
    int passengers[10]={24,17,20,29,22,25,33,19,27,15};
    int sum=0,code;  int i=0;
    cout<<"\nEnter the Stop code: ";
    cin>>code;
    bool isfound = true;
    while(i<10)
    {
        if(stops[i] == code)
        {
            cout<<"The stop was found at index: "<<i<<endl;
            isfound = false;  //if condition not met, isFound does not change so
"Stop code not found" is printed.
            break;
        }
        i++;
    }
    if(isfound)
    {
        cout<<"\n\n\tStop code not found!"<<endl;
    }
    int max=passengers[0], min = passengers[0]; int maxstop;
    for(i=0;i<10;i++)
    {
        if(passengers[i]>max)
        {
            max=passengers[i];  //To store max passengers stop and its index.
            maxstop=i;
        }
        sum += passengers[i];  //for calculation of average.
```

```
    }
    cout<<"\n\nThe Highest passengers are "<< max <<" at stop "<< maxstop <<endl;
    int average = sum/10;    //Average for my array is 23.

    cout<<"The stops with passengers higher than average are: ";

    for(i=0;i<10;i++)
    {
        if(average<passengers[i])
        {
            cout<< stops[i] << " ";
        }    //Please note that here, the index is not printed, but stop code.
    }
    cout<<endl<<endl;

    return 0;
}
```

Screenshot: (TASK#04)

```
Enter the Stop code: 4
The stop was found at index: 3


The Highest passengers are 33 at stop 6
The stops with passengers higher than average are: 1 4 6 7 9
```