Lab Report 02

Experiment Name: Extract all the primes found in task 1 into another array called only_primes[N].

Code:

```
#include <bits/stdc++.h>
using namespace std;

int main(){

   int prime[1000]= {0};
   int only_primes[1000] = {0};

   int N;
   cout<<"Enter a length: ";
   cin>>N;
   cout<<endl;

   for(int i=2;i<=N;i++){
      prime[i]=i;
   }

   for(int i=2;i<=N;i+=2){
      if(prime[i] % 2 ==0)
         prime[i]=0;
   }
   prime[2]=2;

   for(int i=3;i<=N;i+=3){
      if(prime[i] % 3==0)
         prime[i]=0;
   }
   prime[3]=3;
```

```
    for(int i=5;i<=N;i+=5){
        if(prime[i] % 5 ==0)
            prime[i]=0;
    }
    prime[5]=5;

    for(int i=7;i<=N;i+=7){
        if(prime[i] % 7 ==0)
            prime[i]=0;
    }
    prime[7]=7;

    for(int i=0;i<=N;i++){
            if(prime[i] != 0 )
              only_primes[i]  = prime[i];
    }

    for(int i=0;i<=N;i++){
            if(only_primes[i] != 0 )
              cout<<only_primes[i] <<endl;
    }
}
```

Output: