Bahria University, Islamabad

Department of Software Engineering

Computer Programming Lab

(Fall-2023)

Teacher: Engr. M Waleed Khan

Student : ABDULHADI

Enrollment : 01-131232-075

Lab Journal: X

Date: 02-11-2023

Task No:	Task Wise Marks		Documentation Marks		Total Marks (20)
	Assigned	Obtained	Assigned	Obtained	
1	3				
2	3				
3	3		5		

4	3				
5	3				

Comments:

Signature

Program 01

```
#include<iostream>
using namespace std;
int main()
{
   int days,quantity,t,fine;
   cout<<"please tell us how many books do you want and how many days do you need"<<endl;
   cout<<"enter days"<<endl;
   cin>>days;
   cout<<"Enter the number of books"<<endl;
   cin>>quantity;

   if(days>=7){
      cout<<"your fine per day after due date will be charged"<<endl;
      fine+=300*quantity*t;
      cout<<fine<<endl;

   }else
   cout<<"there is no fine for you ";
```

```
    return 0;
}
```

Screenshots

```
#include<iostream>
using namespace std;
int main()
{
    int days,quantity,t,fine;
    cout<<"please tell us how many books do you want and how many days do you need"<<endl;
    cout<<"enter days"<<endl;
    cin>>days;
    cout<<"Enter the number of books"<<endl;
    cin>>quantity;

    if(days>=7){
        cout<<"your fine per day after due date will be charged"<<endl;
        fine+=300*quantity*t;
        cout<<fine<<endl;

    }else
    cout<<"there is no fine for you ";
    return 0;
}
```

```
please tell us how many books do you want and how many days do you need
enter days
2
Enter the number of books
03
there is no fine for you

...Program finished with exit code 0
Press ENTER to exit console.
```

Program 2

```
#include <iostream>


bool isPrime(int num) {
    if (num <= 1)
        return false;
```

```
    for (int i = 2; i <= num/2; ++i) {
        if (num % i == 0) {
            return false;
        }
    }

    return true;
}

void findPrimesInRange(int lower, int upper) {
    std::cout << "Prime numbers in the range " << lower << " to " << upper << " are:\n";

    for (int i = lower; i <= upper; ++i) {
        if (isPrime(i)) {
            std::cout << i << " ";
        }
    }
}

int main() {
    int choice;

    std::cout << "Menu:\n";
    std::cout << "1. Find Prime Numbers in a Range\n";
    std::cout << "2. Check if a Number is Prime\n";
```

```
std::cout << "Enter your choice: ";
std::cin >> choice;

if (choice == 1) {
    int lower, upper;

    std::cout << "Enter the lower bound of the range: ";
    std::cin >> lower;

    std::cout << "Enter the upper bound of the range: ";
    std::cin >> upper;

    findPrimesInRange(lower, upper);
} else if (choice == 2) {
    int num;

    std::cout << "Enter a number: ";
    std::cin >> num;

    if (isPrime(num)) {
        std::cout << num << " is a prime number.\n";
    } else {
        std::cout << num << " is not a prime number.\n";
    }
} else {
    std::cout << "Invalid choice.\n";
```

```
    }


    return 0;
}
```

Screenshots

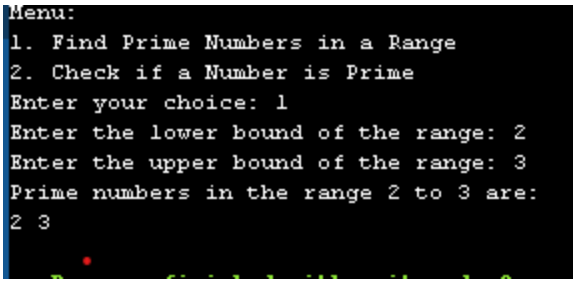
```cpp
#include <iostream>

bool isPrime(int num) {
    if (num <= 1)
        return false;

    for (int i = 2; i <= num/2; ++i) {
        if (num % i == 0) {
            return false;
        }
    }
    return true;
}
void findPrimesInRange(int lower, int upper) {
    std::cout << "Prime numbers in the range " << lower << " to " << upper << " are:

    for (int i = lower; i <= upper; ++i) {
        if (isPrime(i)) {
            std::cout << i << " ";
        }
    }
}
int main() {
    int choice;

    std::cout << "Menu:\n";
    std::cout << "1. Find Prime Numbers in a Range\n";
    std::cout << "2. Check if a Number is Prime\n";
    std::cout << "Enter your choice: ";
    std::cin >> choice;
    if (choice == 1) {
        int lower, upper;
        std::cout << "Enter the lower bound of the range: ";
        std::cin >> lower;
        std::cout << "Enter the upper bound of the range: ";
        std::cin >> upper;
        findPrimesInRange(lower, upper);
    } else if (choice == 2) {
        int num;
        std::cout << "Enter a number: ";
        std::cin >> num;
        if (isPrime(num)) {
            std::cout << num << " is a prime number.\n";
        } else {
            std::cout << num << " is not a prime number.\n";
        }
    } else {
        std::cout << "Invalid choice.\n";
    }
    return 0;
}
```


Menu:
1. Find Prime Numbers in a Range
2. Check if a Number is Prime
Enter your choice: 1
Enter the lower bound of the range: 2
Enter the upper bound of the range: 3
Prime numbers in the range 2 to 3 are:
2 3