

Student Name

Computer Programming

Engr. M Waleed Khan



Bahria University, Islamabad
Department of Software Engineering

Computer Programming Lab
(Fall-2022)

Teacher: Engr. M Waleed Khan

Student : ABDULHADI

Enrollment : 01-131232-
075

Lab Journal: X

Date: 12-10-2023

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 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

```

1 #include <iostream>
2
3 bool isPrime(int num) {
4     if (num <= 1)
5         return false;
6
7     for (int i = 2; i <= num/2; ++i) {
8         if (num % i == 0) {
9             return false;
10        }
11    }
12    return true;
13 }
14 void findPrimesInRange(int lower, int upper) {
15     std::cout << "Prime numbers in the range " << lower << " to " << upper << " are: ";
16
17     for (int i = lower; i <= upper; ++i) {
18         if (isPrime(i)) {
19             std::cout << i << " ";
20         }
21     }
22 }
23 int main() {
24     int choice;
25
26     std::cout << "Menu:\n";
27     std::cout << "1. Find Prime Numbers in a Range\n";
28     std::cout << "2. Check if a Number is Prime\n";
29     std::cout << "Enter your choice: ";
30     std::cin >> choice;
31     if (choice == 1) {
32         int lower, upper;
33         std::cout << "Enter the lower bound of the range: ";
34         std::cin >> lower;
35         std::cout << "Enter the upper bound of the range: ";
36         std::cin >> upper;
37         findPrimesInRange(lower, upper);
38     } else if (choice == 2) {
39         int num;
40         std::cout << "Enter a number: ";
41         std::cin >> num;
42         if (isPrime(num)) {
43             std::cout << num << " is a prime number.\n";
44         } else {
45             std::cout << num << " is not a prime number.\n";
46         }
47     } else {
48         std::cout << "Invalid choice.\n";
49     }
50     return 0;
51 }
52
53

```

```

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

```