

Task: 1

```
#include <iostream>
```

```
using namespace std;
```

```
int isPrime(int n) {
```

```
    if (n <= 1) {
```

```
        //base case
```

```
        return 0;
```

```
    }
```

```
    for (int i = 2; i * i <= n; ++i) {
```

```
        //checking if it's divisible by any number or not
```

```
        if (n % i == 0) {
```

```
            return 0;
```

```
        }
```

```
    }
```

```
    // if all condition is not satisfied then it will return true which means it is a prime number
```

```
    return 1;
```

```
}
```

```
int main(){
```

```
cout << "prime numbers between 300 and 500:" << endl;
```

```
for (int i = 300; i <= 500; ++i) {
```

```
    if (isPrime(i)==1) {
```

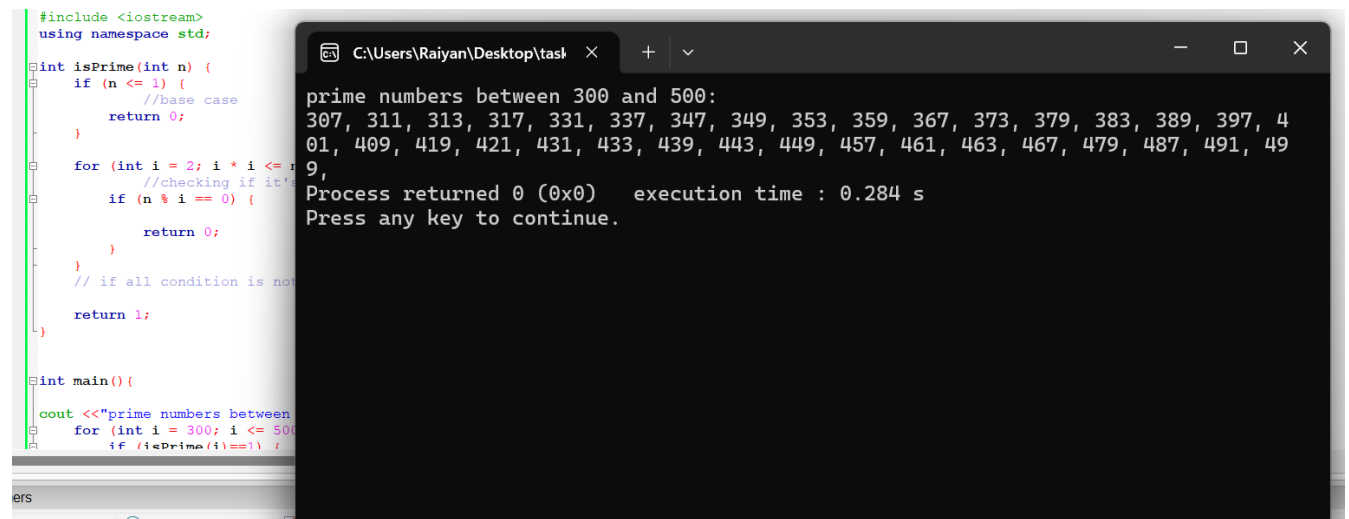
```
        cout << i << ", ";
```

```
    }
```

```
}
```

```
return 0;
```

```
}
```



The image shows a C++ program in a code editor on the left and its execution output in a terminal window on the right. The code defines an `isPrime` function and a `main` function that prints prime numbers between 300 and 500. The terminal output displays the list of prime numbers: 307, 311, 313, 317, 331, 337, 347, 349, 353, 359, 367, 373, 379, 383, 389, 397, 401, 409, 419, 421, 431, 433, 439, 443, 449, 457, 461, 463, 467, 479, 487, 491, 499. It also shows the process returning 0 and an execution time of 0.284 s.

```
#include <iostream>
using namespace std;

int isPrime(int n) {
    if (n <= 1) {
        //base case
        return 0;
    }
    for (int i = 2; i * i <= n; ++i)
        //checking if it's prime
        if (n % i == 0) {
            return 0;
        }
    // if all condition is not met
    return 1;
}

int main() {
    cout << "prime numbers between 300 and 500:" << endl;
    for (int i = 300; i <= 500; ++i)
        if (isPrime(i) == 1)
            cout << i << ", ";
    cout << endl;
    return 0;
}
```

```
C:\Users\Raiyan\Desktop\task > g++ prime.cpp && .\prime.exe
prime numbers between 300 and 500:
307, 311, 313, 317, 331, 337, 347, 349, 353, 359, 367, 373, 379, 383, 389, 397, 401, 409, 419, 421, 431, 433, 439, 443, 449, 457, 461, 463, 467, 479, 487, 491, 499,
Process returned 0 (0x0)   execution time : 0.284 s
Press any key to continue.
```