

```

1  #include <iostream>
2  #include <string>
3
4  using namespace std;
5
6  bool isPrime(int num) {
7      if (num <= 1) {
8          return false; // 1 is not a prime number
9      }
10
11     for (int i = 2; i <= num / 2; i++) {
12         if (num % i == 0) {
13             return false; // Found a divisor, not a prime number
14         }
15     }
16
17     return true; // No divisors other than 1 and itself, prime number
18 }
19
20 int main() {
21     int num;
22
23     cout << "Enter a number: ";
24     cin >> num;
25
26     if (isPrime(num)) {
27         cout << num << " is a prime number." << endl;
28     } else {
29         cout << num << " is not a prime number." << endl;
30     }
31
32     for (int j = 1; j <= 20; j++) {
33         if (isPrime(j)) {
34             cout << j << " is a prime number." << endl;
35         } else {
36             cout << j << " is not a prime number." << endl;
37         }
38     }
39
40     return 0;
41 }

```