PROGRAMMING ASSIGNMENT 2

This assignment is to practice writing C++ function with specifications.

Recall that an integer number x is a prime if it is greater than 1 and if none of the numbers between 2 and $x-1$ divides x. Now, given the following function prototype,

```
// precondition: x is an integer, x>1 and x<100000;
// postcondition: return true if x is a prime number; return false otherwise.

bool isPrime(int x);
```

your task is to implement the function and come up with a client program (using `main`) to test this function. Note that you must not include the function implementation in the client program, but rather, you call the `isPrime` function to check if the number x is a prime (The client program and the function definitions can be kept in the same file). For example, when your program is running:

```
>Enter a number greater than 1 and less than 100000
>2
>true, 2 is a prime!

>Enter a number greater than 1 and less than 100000
>6
>false, 6 is not a prime!

>Enter a number greater than 1 and less than 100000
>7
>true, 7 is a prime!

>Enter a number greater than 1 and less than 100000
>1
>Oh-oh, 1 is too small!
```

Your program shall be continuously running until user hits "CTRL-C" to quit. Also, though this assignment doesn't ask you to do run time analysis of your algorithm, try to improve its efficiency. Keep in mind that the program can run slow for big integers if you don't implement carefully.

Turn in instruction:
Submit your source file username_hw2.cpp to CLEo after you fully test it.