

checkPrime.c

```
1 #include <stdio.h>
2 #include <math.h>
3
4 // check if a number is prime
5
6 int main(){
7
8     int num, i, isPrime = 1;
9
10    printf("Enter a positive integer: ");
11    scanf("%d", &num);
12
13    if (num <= 1) {
14        isPrime = 0; // numbers less than or equal to 1 are not prime
15    } else {
16        for (i = 2; i <= sqrt(num); i++) {
17            if (num % i == 0) {
18                isPrime = 0; // found a divisor, not prime
19                break;
20            }
21        }
22    }
23
24    if (isPrime) {
25        printf("%d is a prime number.\n", num);
26    } else {
27        printf("%d is not a prime number.\n", num);
28    }
29
30    return 0;
31 }
```