

```
1 //
2 // Created by hfwei on 2023/10/11.
3 //
4
5 #include <stdio.h>
6 #include <stdbool.h>
7
8 /**
9  * @brief decide whether number is a prime
10  * @param number the number to decide
11  * @return true if number is prime; false otherwise
12  */
13 bool IsPrime(int number);
14
15 int main(void) {
16     int max = 0;
17     scanf("%d", &max);
18
19     int count = 0;
20
21     for (int number = 2; number <= max; number++) {
22         if (IsPrime(number)) {
23             count++;
24             printf("%d ", number);
25         }
26     }
27
28     printf("\ncount = %d\n", count);
29
30     return 0;
31 }
32
33 bool IsPrime(int number) {
34     for (int factor = 2; factor * factor <= number; factor++) {
35         if (number % factor == 0) {
36             return false;
37         }
38     }
39
40     return true;
41 }
```