1. Prime checker using recursion

Code:

#include <stdio.h>

#include <stdbool.h>

bool isPrime(int num, int i) {

if (num <= 2) {

if (num == 2)

return true;

else

return false;

}

if (num % i == 0)

return false;

if (i \* i > num)

return true;

return isPrime(num, i + 1);

}

int main() {

int num;

printf("Enter a positive integer: ");

scanf("%d", &num);

if (num <= 1) {

printf("The number is not prime.\n");

} else {

if (isPrime(num, 2))

printf("%d is a prime number.\n", num);

else

printf("%d is not a prime number.\n", num);

}

return 0;

}

Output:

Enter a positive integer: 19

19 is a prime number.

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Process exited after 18.85 seconds with return value 0

Press any key to continue . . .

