Week-11 Program-03

Write a C program to check whether the given input number is Prime number or not using recursion. So, the input is an integer and output should print whether the integer is prime or not. Note that you have to use recursion.

Sample Test Cases

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>51</td>
<td>51 is not a prime number</td>
</tr>
<tr>
<td>29</td>
<td>29 is a prime number</td>
</tr>
<tr>
<td>13</td>
<td>13 is a prime number</td>
</tr>
<tr>
<td>40</td>
<td>40 is not a prime number</td>
</tr>
</tbody>
</table>

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Sample solutions (Provided by instructor)

```
#include <stdio.h>
int checkPrime(int, int); // Function to check prime or not
int main()
{
    int num, check;
    scanf("%d", &num); // The number is taken from test case data
    check = checkPrime(num, num/2);
    if (check == 1)
    {
        printf("%d is a prime number\n", num);
    }
    return 0;
}
```
```c
int checkPrime(int num, int i)
{
    if (i == 1)
        return 1;
    else
    {
        if (num % i == 0)
            return 0;
        else
            return checkPrime(num, i - 1);
    }
}
```

```c
12
else
13 { printf("%d is not a prime number\n", num);
14 return 0;
15 }
16
int checkPrime(int num, int i)
{
    if (i == 1)
    { return 1;
    }
    else
    {
        if (num % i == 0)
            return 0;
        else
        { return checkPrime(num, i - 1);
        }
    }
```
