S.No: 34	Exp. Name: *Write a C program to demonstrate Functions without arguments and with return value*	Date:2023-01-12

Aim:

Write a **C** program to demonstrate functions without arguments and with return value.

The below code is used to check whether the given number is a `prime` number or not.

Write the function **prime()**.

Sample Input and Output:

```
Enter a number : 5
The given number is a prime number
```

Source Code:

FunctionCategories8.c

```c
#include <stdio.h>
int prime();
void main() {
    if (prime() == 0) {
        printf("The given number is a prime number\n");
    }   else {
        printf("The given number is not a prime number\n");
    }
}
// Write the function prime()
int prime()
{
    int i,n,count=0;
    printf("Enter a number : ");
    scanf("%d",&n);
    for(i=1;i<=n;i++)
    {
        if(n%i==0)
        count++;
    }
    if(count==2)
    return 0;
    else
    return count;
}
```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
Enter a number : 5
The given number is a prime number

Test Case - 2
User Output
Enter a number : 27
The given number is not a prime number

Test Case - 3
User Output
Enter a number : 121
The given number is not a prime number

Test Case - 4
User Output
Enter a number : 1
The given number is not a prime number

Test Case - 5
User Output
Enter a number : 117
The given number is not a prime number

Test Case - 6
User Output
Enter a number : 137
The given number is a prime number