S.No: 34	Exp. Name: ***Write a C program to demonstrate Functions without arguments and with return value***	Date:2023-01-17

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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

```
#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

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