VIT - Vellore

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BCSE102P_Structured and Object Oriented Programming Lab_VL2024250502365

VIT V_BCSE102P_Lab 2_COD_Easy_Functions

Attempt : 1
Total Mark : 20
Marks Obtained : 20

Section 1 : Coding

1. Problem Statement

Misha wants to check and print whether the given number N is a neon number or not. Write a program that uses a function and helps her to complete this task.

A neon number is a number where the sum of digits of the square of the number is equal to the number.

Function Prototype: int neon(int)

Example 1

Input:

9

Output:

9 is a neon number

Explanation:

92 = 81, and the sum of its digits (8+1) is equal to the original number (9).

Example 2

Input:

12

Output:

12 is not a neon number

Explanation:

(12)2=144, and the sum of its digits (1+4+4) is not equal to the original number (12).

Answer

```
// You are using GCC
#include<stdio.h>

int neon(int n)
{
   int square = n*n;
   int sum = 0;

   while(square>0){
      sum +=square%10;
      square /=10;
   }
   return sum == n;
}
int main(){
   int N;

   scanf("%d",&N);
```

```
   if (neon(N)){
      printf("%d is a neon number",N);
   }
   else {
      printf("%d is not a neon number",N);
   }
   return 0;
}
```

Status : Correct ***Marks : 10/10***

2. Problem Statement

Design a program to input a numeric base and exponent, efficiently calculate and display the result of the base raised to the given exponent. Use a function called calculatePower() that calculates and outputs the result.

Answer

```
// You are using GCC
#include<stdio.h>

int calculatePower(int base,int power)
{
   int result = 1;
   for (int i = 0; i < power; i++){
      result *= base;
   }
   return result;
}
int main(){
   int base,exponent;

   scanf("%d",&base);
   scanf("%d",&exponent);

   int result = calculatePower(base,exponent);

   printf("%d\n",result);
```

```
    return 0;
}
```

Status : Correct ***Marks : 10/10***