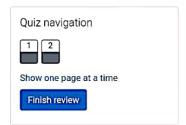
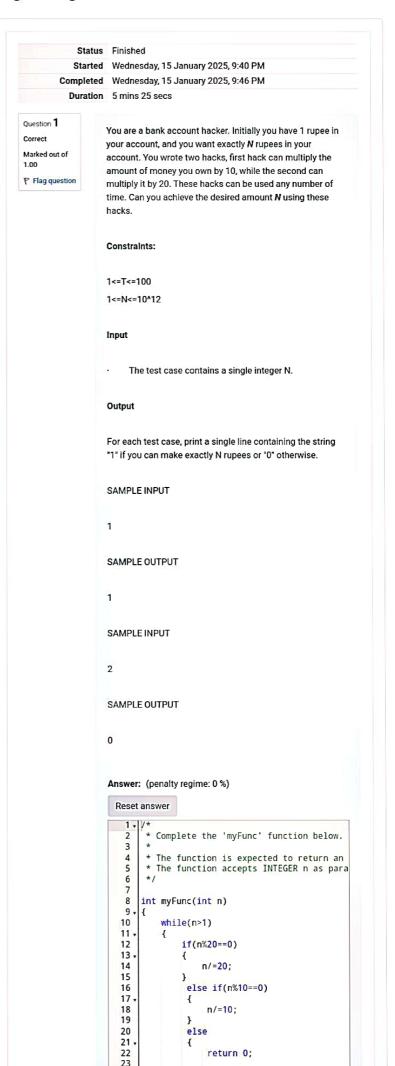
GE23131-Programming Using C-2024





	Test	Expected	Got	
~	printf("%d", myFunc(1))	1	1	~
~	printf("%d", myFunc(2))	0	0	~
~	printf("%d", myFunc(10))	1	1	~
~	printf("%d", myFunc(25))	0	0	~
~	printf("%d", myFunc(200))	1	1	~

Question 2
Correct
Marked out of 1.00

F Flag question

Find the number of ways that a given integer, X, can be expressed as the sum of the N^{th} powers of unique, natural numbers.

For example, if X = 13 and N = 2, we have to find all combinations of unique squares adding up to 13. The only solution is $2^2 + 3^2$.

Function Description

Complete the powerSum function in the editor below. It should return an integer that represents the number of possible combinations.

powerSum has the following parameter(s):

X: the integer to sum to

N: the integer power to raise numbers to Input Format

The first line contains an integer X.

The second line contains an integer \emph{N} .

Constraints

 $1 \le X \le 1000$

2≤N≤10

Output Format

Output a single integer, the number of possible combinations calculated.

Sample Input 0

10

2

Sample Output 0

1

Explanation 0

If X = 10 and N = 2, we need to find the number of ways that 10 can be represented as the sum of squares of unique numbers.

$$10 = 1^2 + 3^2$$

This is the only way in which 10 can be expressed as the sum of unique squares.

Sample Input 1

100

2

Sample Output 1

-

Explanation 1

```
100 = (10^2) = (6^2 + 8^2) = (1^2 + 3^2 + 4^2 + 5^2 + 7^2)
```

Sample Input 2

100

3

Sample Output 2

.

Explanation 2

100 can be expressed as the sum of the cubes of 1, 2, 3, 4. (1+8+27+64=100). There is no other way to express 100 as the sum of cubes.

Answer: (penalty regime: 0 %)

Reset answer

```
* Complete the 'powerSum' function below
 2
      * The function is expected to return an
* The function accepts following paramet
* 1. INTEGER x
* 2. INTEGER n
9
10
11
      int powerSum(int x, int m, int n)
12
            if(x==0)
13
14
15
                  return 1;
16
17
18
            if(x<0)
                  return 0;
19
            int count=0;
for(int i=m;;i++)
20
21
22
23
24
                  int power=1;
for(int j=0;j<n;j++)</pre>
25
26
27
28
                        power*=i;
                  }
if(power>x)
28
29 •
30
31
32
33
34
35
36 }
                        break;
                  count+=powerSum(x-power,i+1,n);
            return count;
```

