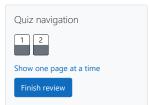
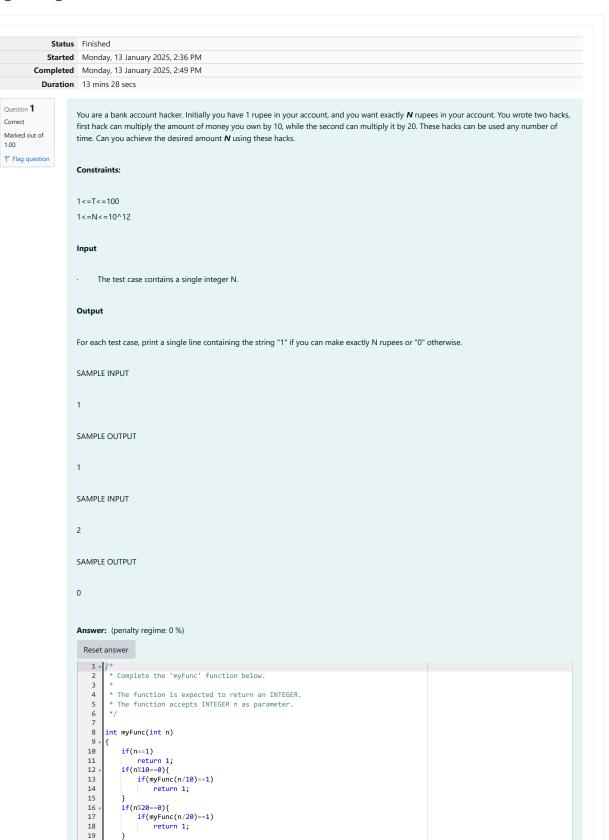
GE23131-Programming Using C-2024

Question 1

Correct





	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	~

20 21 22

return 0;

Question **2**Correct
Marked out of 1.00

Figure 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 \boldsymbol{X} .

The second line contains an integer ${\it N}$.

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

3

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

1

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
```

```
}
if(t==x)
return 1;
if(t>x)
return 0;
return powerSum(x,m+1,n)+powerSum(x-t,m+1,n);
```

	Test	Expected	Got	
~	printf("%d", powerSum(10, 1, 2))	1	1	~

Passed all tests! ✓