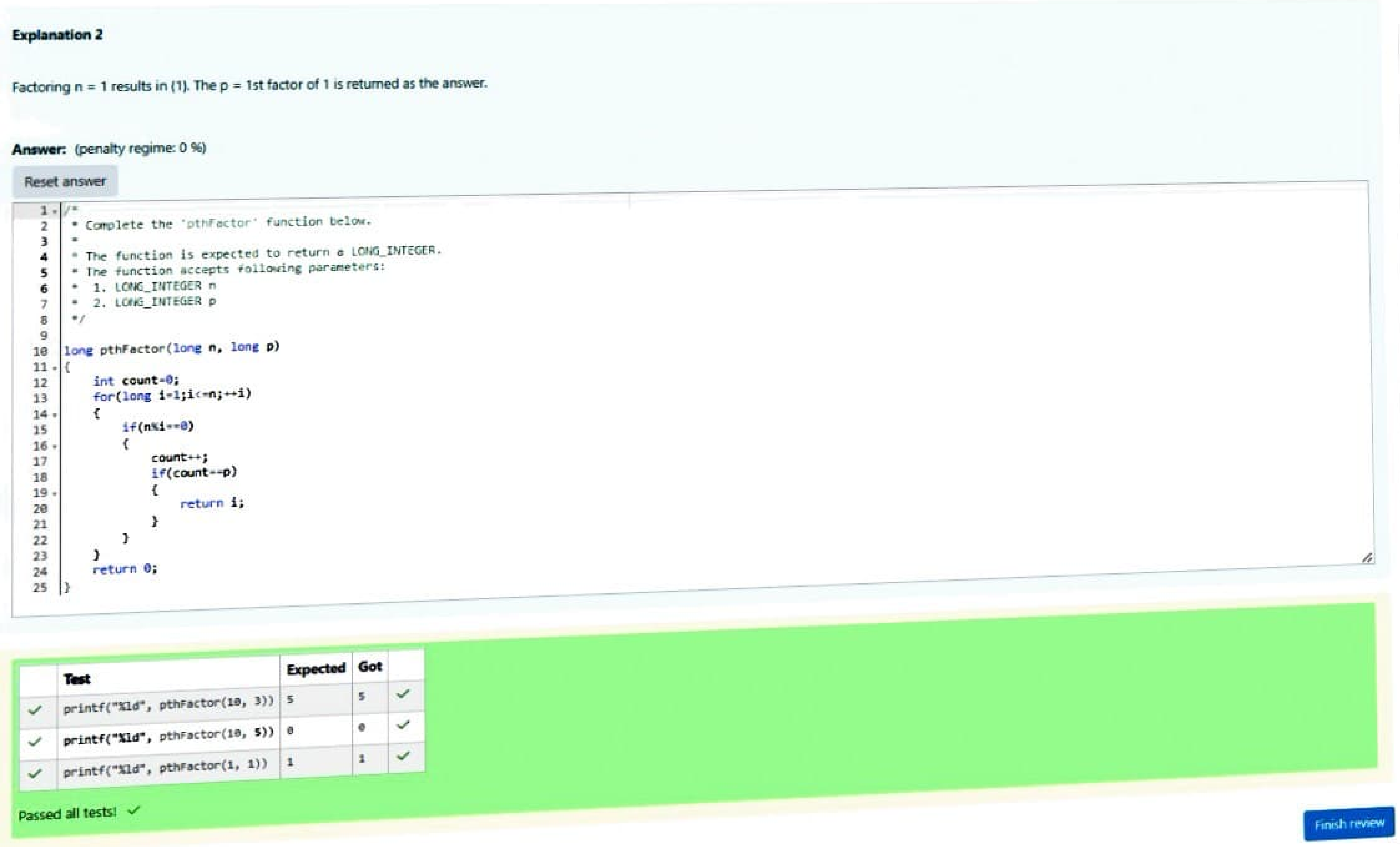


Explanation 2

Factoring n = 1 results in {1}. The p = 1st factor of 1 is returned as the answer.

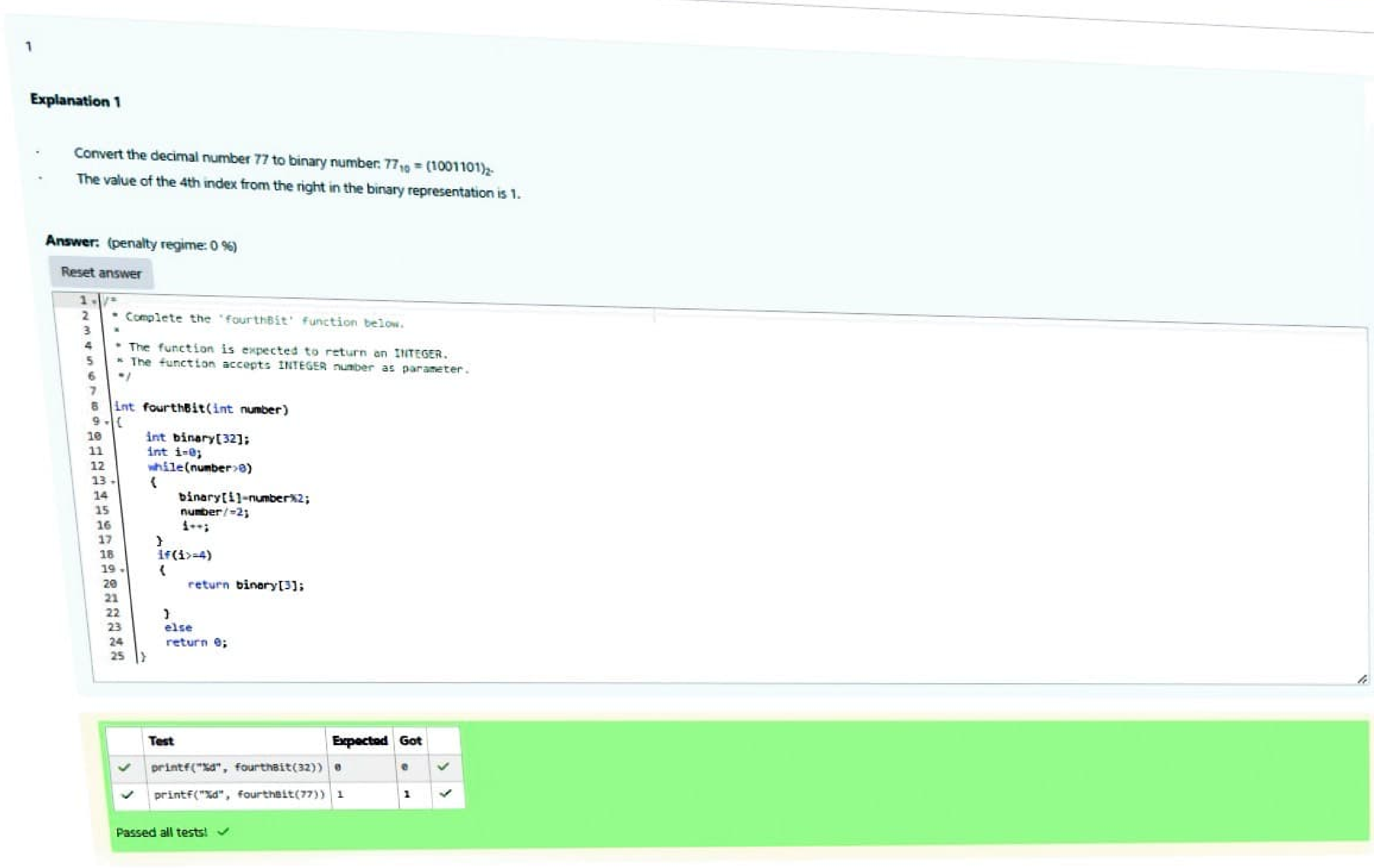
Answer: (penalty regime: 0 %)

```
/*
 * Complete the 'pthFactor' function below.
 *
 * The function is expected to return a LONG_INTEGER.
 * The function accepts following parameters:
 *  1. LONG_INTEGER n
 *  2. LONG_INTEGER p
 */

long pthFactor(long n, long p)
{
    int count=0;
    for(long i=1;i<=n;++i)
    {
        if(n%i==0)
        {
            count++;
            if(count==p)
            {
                return i;
            }
        }
    }
    return 0;
}
```

	Test	Expected	Got	
✓	printf("%ld", pthFactor(10, 3))	5	5	✓
✓	printf("%ld", pthFactor(10, 5))	0	0	✓
✓	printf("%ld", pthFactor(1, 1))	1	1	✓

Passed all tests! ✓



1

Explanation 1

- Convert the decimal number 77 to binary number: $77_{10} = (1001101)_2$.
- The value of the 4th index from the right in the binary representation is 1.

Answer: (penalty regime: 0 %)

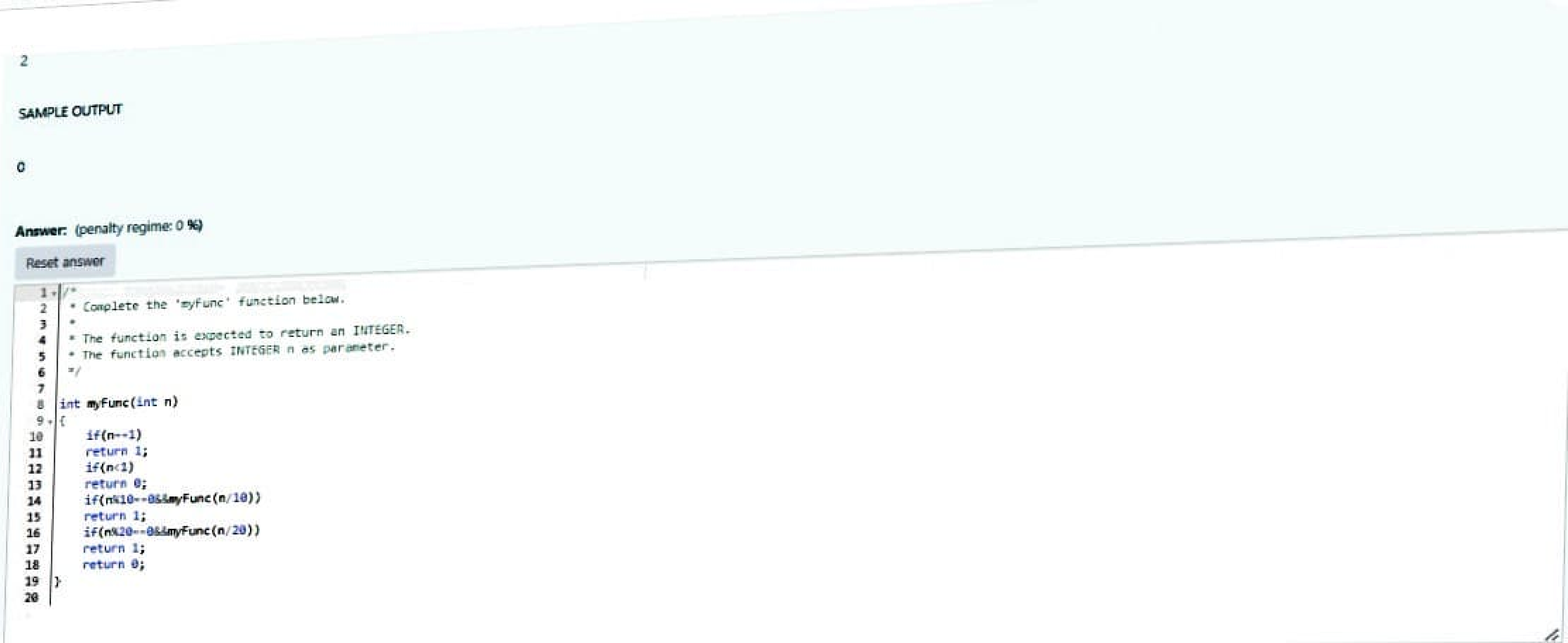
```c
/*
 * Complete the 'fourthBit' function below.
 *
 * The function is expected to return an INTEGER.
 * The function accepts INTEGER number as parameter.
 */

int fourthBit(int number)
{
    int binary[32];
    int i=0;
    while(number>0)
    {
        binary[i]=number%2;
        number/=2;
        i++;
    }
    if(i>=4)
    {
        return binary[3];

    }
    else
    return 0;
}
```

	Test	Expected	Got	
✓	printf("%d", fourthBit(32))	0	0	✓
✓	printf("%d", fourthBit(77))	1	1	✓

Passed all tests! ✓



2

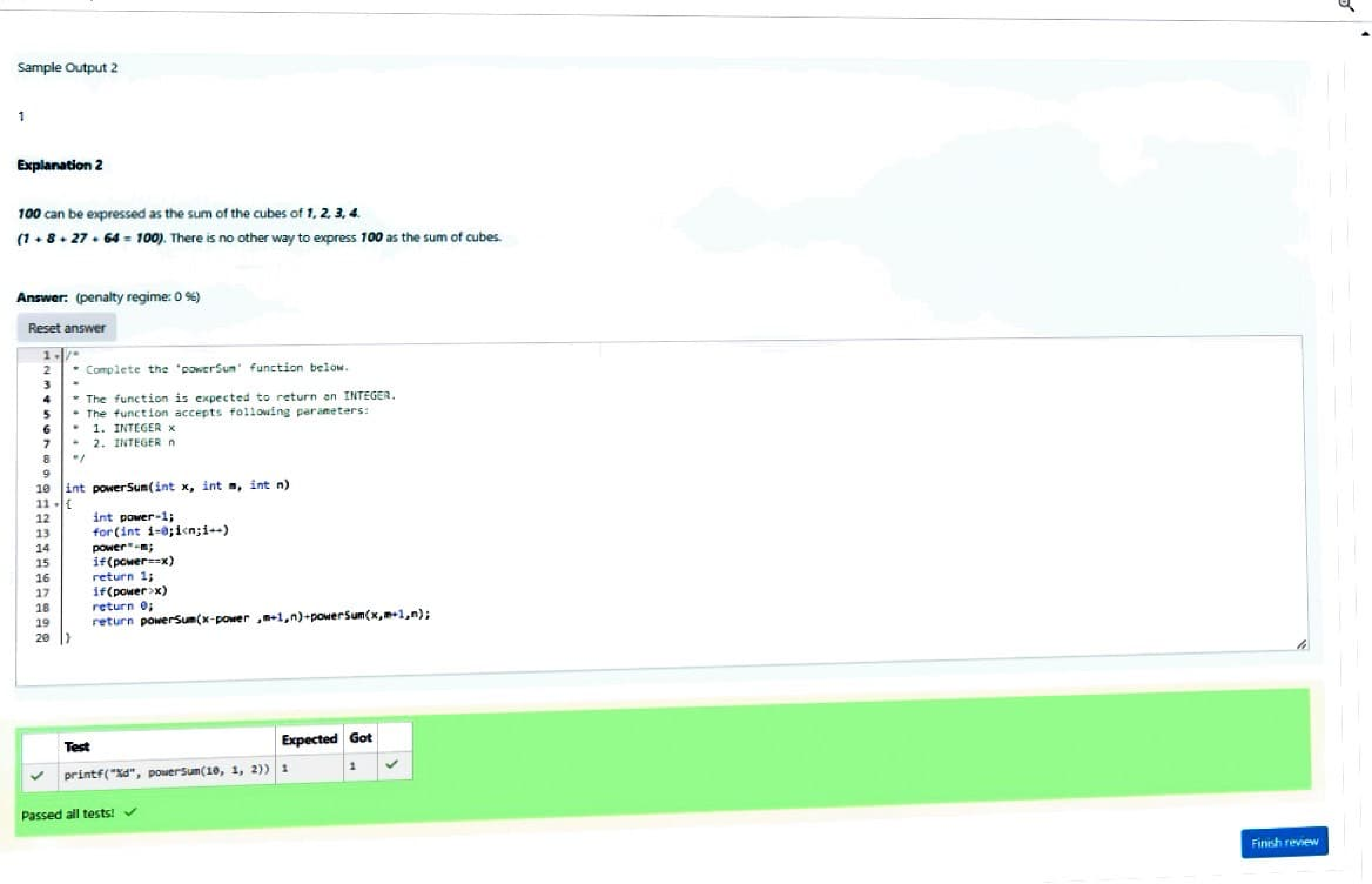
SAMPLE OUTPUT

0

Answer: (penalty regime: 0 %)

```c
/*
 * Complete the 'myFunc' function below.
 *
 * The function is expected to return an INTEGER.
 * The function accepts INTEGER n as parameter.
 */

int myFunc(int n)
{
    if(n==1)
    return 1;
    if(n<1)
    return 0;
    if(n%10==0&&myFunc(n/10))
    return 1;
    if(n%20==0&&myFunc(n/20))
    return 1;
    return 0;
}
```



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 %)

```c
/*
 * Complete the 'powerSum' function below.
 *
 * The function is expected to return an INTEGER.
 * The function accepts following parameters:
 *  1. INTEGER x
 *  2. INTEGER n
 */

int powerSum(int x, int m, int n)
{
    int power=1;
    for(int i=0;i<n;i++)
    power*=m;
    if(power==x)
    return 1;
    if(power>x)
    return 0;
    return powerSum(x-power ,m+1,n)+powerSum(x,m+1,n);
}
```

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

Passed all tests! ✓