Started on	Wednesday, 13 March 2024, 11:17 AM
State	Finished
Completed on	Wednesday, 13 March 2024, 5:25 PM
Time taken	6 hours 7 mins
Marks	5.00/5.00
Grade	**50.00** out of 50.00 (**100**%)
Name	THEJESH N S 2022-CSD-A

Question **1**

Correct

Mark 1.00 out of 1.00

Write a program to return the nth number in the fibonacci series.

The value of N will be passed to the program as input.

NOTE: Fibonacci series looks like –

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, . . . and so on.

i.e. Fibonacci series starts with 0 and 1, and continues generating the next number as the sum of the previous two numbers.

• first Fibonacci number is 0,

• second Fibonacci number is 1,

• third Fibonacci number is 1,

• fourth Fibonacci number is 2,

• fifth Fibonacci number is 3,

• sixth Fibonacci number is 5,

• seventh Fibonacci number is 8, and so on.

For example:

Input:

7

Output

8

For example:

Input	Result
8	13

Answer: (penalty regime: 0 %)

```
n=int(input())
a,b=0,1
for i in range(1,n):
    a,b=b,a+b
print(a)
```

	Input	Expected	Got	
✔	4	2	2	✔
✔	8	13	13	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **2**

Correct

Mark 1.00 out of 1.00

You are choreographing a circus show with various animals. For one act, you are given two kangaroos on a number line ready to jump in the positive direction.
•The first kangaroo starts at position x1 and moves at a speed v1 meters per jump.
•The second kangaroo starts at position x2 and moves at a speed of v2 meters per jump and x2 > x1
•You have to figure out to get both kangaroos at the same position at the same time as part of the show before k jumps. If it is possible, return YES, otherwise return NO.

Input Format:
x1-position of kangaroo1
v1-Speed of kangaroo1
x2-position of kangaroo2
v2-Speed of kangaroo2
k-jumps

Output Format:
Both kangaroos are at the same position within k jumps, YES, otherwise NO.

For example:

Input	Result
0 3 4 2 6	YES

Answer: (penalty regime: 0 %)

```
x1=int(input())
v1=int(input())
x2=int(input())
v2=int(input())
k=int(input())
if v1==v2:
    print("NO")
else:
    position=x2-x1
    speed=v2-v1
    if position%speed==0 and position/speed>0 and position/speed<=k:
        print("NO")
    else:
        print("YES")
```

	Input	Expected	Got	

	Input	Expected	Got	
✔	0 3 4 2 6	YES	YES	✔
✔	0 3 2 4 8	NO	NO	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **3**

Correct

Mark 1.00 out of 1.00

In this exercise you will create a program that computes the average of a collection of values entered by the user. The user will enter 0 as a sentinel value to indicate that no further values will be provided. Your program should display an appropriate error message if the first value entered by the user is 0.

Hint: Because the 0 marks the end of the input it should not be included in the average.

Sample Input

1

2

3

4

5

0

The average is 3.0.

Answer: (penalty regime: 0 %)

```
a1=int(input())
a2=int(input())
a3=int(input())
a4=int(input())
a5=int(input())
a6=int(input())
a=a1+a2+a3+a4+a5+a6
a/=5
print("The average is ""%.1f"%a,end=".")
```

	Input	Expected	Got	
✔	1 2 3 4 5 0	The average is 3.0.	The average is 3.0.	✔
✔	11 22 33 44 55 0	The average is 33.0.	The average is 33.0.	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **4**

Correct

Mark 1.00 out of 1.00

Write a program that reads a positive integer, n, from the user and then displays the sum of all of the integers from 1 to n.

Sample Input

10

Sample Output

The sum of the first 10 positive integers is 55.0

For example:

Input	Result
10	The sum of the first 10 positive integers is 55.0

Answer: (penalty regime: 0 %)

```
a=int(input())
b=0
for i in range(1,a+1):
    b=b+i
print("The sum of the first",a,"positive integers is ""%.1f"%b)
```

	Input	Expected	Got	
✔	10	The sum of the first 10 positive integers is 55.0	The sum of the first 10 positive integers is 55.0	✔
✔	20	The sum of the first 20 positive integers is 210.0	The sum of the first 20 positive integers is 210.0	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

Write a program to check whether a given number is a perfect number or not.

Perfect number is a positive number which sum of all positive divisors excluding that number is equal to that number.

For example, 6 is perfect number since divisor of 6 are 1, 2 and 3.

Sum of its divisor is 1 + 2+ 3 = 6

Sample Test Cases

Test Case 1

Input

6

Output

YES

Test Case 2

45

Output

NO

For example:

Input	Result
6	YES

Answer: (penalty regime: 0 %)

```
a=int(input())
b=0
for i in range(1,a):
    if(a%i==0):
        b=b+i
if(a==b):
    print("YES")
else:
    print("NO")
```

	Input	Expected	Got	
✔	6	YES	YES	✔
✔	45	NO	NO	✔
✔	496	YES	YES	✔
✔	123	NO	NO	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

◄ Week-04_MCQ

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