Started on	Monday, 25 March 2024, 9:22 AM
State	Finished
Completed on	Monday, 25 March 2024, 9:44 AM
Time taken	21 mins 24 secs
Marks	5.00/5.00
Grade	**50.00** out of 50.00 (**100**%)
Name	ADHITHYA PG 2022-CSD-A

Question **1**

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 %)

```
1  num=int(input())
2  sum=0
3  count=0
4  while(num!=0):
5      count+=1
6      sum+=num
7      num=int(input())
8  print("The average is {}.".format(sum/count))
```

	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 **2**

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 %)

```
1  n=int(input())
2  sum=0
3  for i in range(1,n):
4      if(n%i==0):
5          sum+=i
6  if(sum==n):
7      print("YES")
8  else:
9      print("NO")
```

	Input	Expected	Got	
✔	6	YES	YES	✔

	Input	Expected	Got	
✔	45	N0	N0	✔
✔	496	YES	YES	✔
✔	123	N0	N0	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

	Input	Expected	Got	
✔	45	N0	N0	✔
✔	496	YES	YES	✔
✔	123	N0	N0	✔

Question **3**

Correct

Mark 1.00 out of 1.00

Write a program to find the count of ALL digits in a given number N. The number will be passed to the program as an input of type int.

Assumption: The input number will be a positive integer number>= 1 and<= 25000.

For e.g.

If the given number is 292, the function should return 3 because there are 3 digits in this number

If the given number is 1015, the function should return 4 because there are 4 digits in this number

For example:

InputResult

292 3

1015 4

For example:

Input	Result
293	3

Answer: (penalty regime: 0 %)

```
1  n=int(input())
2  count=0
3  while(n>0):
4      count+=1
5      n=n//10
6  print(count)
```

	Input	Expected	Got	
✔	293	3	3	✔
✔	6788	4	4	✔
✔	52321	5	5	✔

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 to find the sum of the series 1 +11 + 111 + 1111 + . . . + n terms (n will be given as input from the user and sum will be the output)

Sample Test Cases

Test Case 1

Input

4

Output

1234

Explanation:

```
as input is 4, have to take 4 terms.
```

```
1 + 11 + 111 + 1111
```

Test Case 2

Input

6

Output

123456

For example:

Input	Result
3	123

Answer: (penalty regime: 0 %)

```python
1  n=int(input())
2  sum=0
3  sum1=0
4  for i in range (0,n):
5      sum=sum+10**i
6      sum1+=sum
7  print(sum1)
```

	Input	Expected	Got	
✔	1	1	1	✔
✔	3	123	123	✔

	Input	Expected	Got	
✔	4	1234	1234	✔
✔	7	1234567	1234567	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

	Input	Expected	Got	
✔	4	1234	1234	✔
✔	7	1234567	1234567	✔

Passed all tests! ✔

Question **5**

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 %)

```
 1  x1=int(input())
 2  v1=int(input())
 3  x2=int(input())
 4  v2=int(input())
 5  k=int(input())
 6  value=v1*v2
 7  if(value==k):
 8      print("YES")
 9  else:
10      print("NO")
```

	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.

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