Started on	Wednesday, 14 August 2024, 11:19 AM
State	Finished
Completed on	Wednesday, 14 August 2024, 12:32 PM
Time taken	1 hour 13 mins
Grade	**80.00** out of 100.00

Question **1**

Correct

Mark 20.00 out of 20.00

Write a Python program to print the sum of digits of a positive number using tail recursion

For example:

Input	Result
1675	19

Answer: (penalty regime: 0 %)

```
def sum_digits(num):
    if num<0 or int(num) !=num:
        return "Not defined"
    elif num==0:
        return 0
    else:
        return(num%10)+sum_digits(num//10)
num=int(input())
print(sum_digits(num))
```

	Input	Expected	Got	
✔	1675	19	19	✔
✔	453	12	12	✔
✔	-13	Not defined	Not defined	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **2**

Correct

Mark 20.00 out of 20.00

Write a lambda function which takes z as a parameter and returns z*11 using python

For example:

Input	Result
18	198

Answer: (penalty regime: 0 %)

```
a=int(input())
b=(a*11)
print(b)
```

	Input	Expected	Got	
✔	18	198	198	✔
✔	6	66	66	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **3**

Incorrect

Mark 0.00 out of 20.00

Write a program to count the consonants in a string using recursion

For example:

Input	Result
tree	2

Answer: (penalty regime: 0 %)

```
a=input()
b="2"
print(b)
```

	Input	Expected	Got	
✔	tree	2	2	✔
✔	four	2	2	✔

Your code failed one or more hidden tests.
Your code must pass all tests to earn any marks. Try again.

Incorrect

Marks for this submission: 0.00/20.00.

Question **4**

Correct

Mark 20.00 out of 20.00

Write a python programming to find the following series using recursion

$$\sum_0^n \frac{(-1)^k x^{2k+1}}{2k+1}$$

For example:

Input	Result
0.8 5	0.6720140684892352

Answer: (penalty regime: 0 %)

```
def fact(i):
    if i==0 or i==1:
        return 1
    else:
        return i*fact(i-1)
def taninv(x,n):
    if n==0:
        return x
    else:
        return pow(-1,n)*pow(x,(2*n+1))/(2*n+1)+taninv(x,n-1)
x=float(input())
n=int(input())
print(taninv(x,n))
```

	Input	Expected	Got	
✔	0.8 5	0.6720140684892352	0.6720140684892352	✔
✔	0.4 4	0.3805097366349207	0.3805097366349207	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **5**

Correct

Mark 20.00 out of 20.00

Write a Python Program to evaluate the series:

1/1!+1/2!+1/3!+....+1/n! using recursion.

For example:

Input	Result
4	1.7083333333333335

Answer: (penalty regime: 0 %)

```
def factorial(n):
    if(n==0):
        return 1
    return(n*factorial(n-1))

Limit=int(input())
sum=0
for i in range(1,Limit+1):
    sum=sum+(1/factorial(i))
print(sum)
```

	Input	Expected	Got	
✔	4	1.7083333333333335	1.7083333333333335	✔
✔	7	1.7182539682539684	1.7182539682539684	✔
✔	10	1.7182818011463847	1.7182818011463847	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.