Function programming Assignment

1- (i)

Write a function `func1()` such that it can accept a variable length of argument and print all arguments value

Expected output: - `func1(20, 40, 60)`

```
20
40
60
```

1-(ii)

Write a function calculation() such that it can accept two variables and calculate the addition and subtraction of them. And also it must return both addition and subtraction in a single return call

Hint-
```
def calculation(a, b):
# Your Code
res = calculation(40, 10)
print(res)
```

2(i)

Write a recursive function to calculate the sum of numbers from 0 to 10

2(ii)

Write a Python function to find the Max of three numbers.

2(iii)

Write a Python program to reverse a string

Sample String : "1234abcd"
Expected Output : "dcba4321"

2(IV)

Write a Python function to calculate the factorial of a number (a non-negative integer). The function accepts the number as an argument.

HINT- Factorial - https://www.mathsisfun.com/numbers/factorial.html

3(i)

Write a Python function that accepts a string and calculate the number of upper case letters and lower case letters.
Sample String : 'The quick Brow Fox'
Expected Output :
No. of Upper case characters : 3
No. of Lower case Characters : 12

3(ii)

Write a Python function that takes a number as a parameter and check the number is prime or not

Hint –Prime number:- https://www.mathsisfun.com/prime_numbers.html

4 (i)

Search few built in function in python such as sum(), max() and len(). Prepare a list of such built in functions which makes task easier while writing codes.

4(ii)

Make program while using built in function-

Sum()

Max()

Min()

Len()

5 (i)

Write a function to calculate area and perimeter of a rectangle

Hint – Use google to understand maths for this program.

5(ii)

Write a function that returns the sum of multiples of 3 and 5 between 0 and limit (parameter). For example, if limit is 20, it should return the sum of 3, 5, 6, 9, 10, 12, 15, 18, 20.

6-

Write a function called **fizz_buzz** that takes a number.

1. If the number is divisible by 3, it should return “Fizz”.
2. If it is divisible by 5, it should return “Buzz”.
3. If it is divisible by both 3 and 5, it should return “FizzBuzz”.
4. Otherwise, it should return the same number.

7-

Write a function called **showNumbers** that takes a parameter called **limit.** It should print all the numbers between 0 and limit with a label to identify the even and odd numbers. For example, if the limit is 3, it should print:

- 0 EVEN
- 1 ODD
- 2 EVEN
- 3 ODD

8-

Write a function called **show_stars(rows).** If **rows** is 5, it should print the following:

- *
- **
- ***
- ****
- *****

9-

Write a function for checking the speed of drivers. This function should have one parameter: speed.

a. If speed is less than 70, it should print “Ok”.
b. Otherwise, for every 5km above the speed limit (70), it should give the driver one demerit point and print the total number of demerit points. For example, if the speed is 80, it should print: “Points: 2”.
c. If the driver gets more than 12 points, the function should print: “License suspended”