**Lab 8: Function**

Q0: Write the following program to find the sum of two numbers using a function.

def sumOfTwoNumbers(number1, number2):

totalOfTwoNumbers = number1 + number2

return totalOfTwoNumbers

#Alternatively you can simplify the above function as follows:

"""

def sumOfTwoNumbers(number1, number2):

return number1+number2

"""

firstNumber = int(input('Enter first number: '))

secondNumber = int(input('Enter second number: '))

total = sumOfTwoNumbers(firstNumber, secondNumber)

print('Sum of the given two numbers is', total)

#Alternatively you can print as follows:

#print('Sum of', firstNumber, 'and', secondNumber, 'is', total)

Sample input/output:

Enter first number: 23

Enter second number: 7

Sum of the given two numbers is: 30

Q1: Write a program with an application of a function to find the difference between two numbers using a function.

Sample input/output:

Enter first number: 3

Enter the second number: 7

The difference between the given two numbers is: 4

Q2: Write a program to find the average of three numbers using a function.

Sample input/output:

Enter first number: 3

Enter second number: 7

Enter third number: 5

Average of the given three numbers is: 5

Q3: Write a program to design a calculator which uses a function for each of these four operations namely add, subtract, multiply and divide. Use a proper selection structure to call any one of these functions defined. **[Note: Design the solution using pseudocode before coding]**

Sample input/output:

Calculator Program

1. ADD

2. SUBTRACT

3. MULTIPLY

4. DIVIDE

Choose the operation from the given options: 3

Enter first number: 2

Enter the second number: 3

The product of 2 and 3 is 6.

Q4: Write a program that reads the radius of a circle (as a **float** value) and computes and prints the diameter or circumference or the area of that circle. You must use separate functions to calculate diameter, circumference, and area (name them as *diameter, circumference,* and *area*). You must also use a function called *menu* which gets input from the user to determine what he/she wants to compute (i.e. diameter, circumference, or area). Use the value 3.14159 forπ. Alternatively, you can use the pi constant (math.pi) from the math library. Import the math library as follows before using the constant:

import math

**[Note: Design the solution using a flowchart before coding]**

Q5**.** Write a program to create a function that takes two arguments, name, age, and print value.

Q6. Write a program to create a function staff() using the following conditions.

* 1. It should accept the staff’s name and salary and display both.

b. If the salary is missing in the function call then assign default value 9000 to the

salary

**[Note: Design the solution using a flowchart before coding]**

Q7. Create an outer function that will accept two parameters, a and b

a. Create an inner function inside an outer function that will calculate the addition of a and b

b. At last, an outer function will add 5 into addition and return it

**[Note: Design the solution using a flowchart before coding]**