PROGRAMMING FUNDAMENTALS
Lab Experiment #11

OBJECTIVE:
Functions in Python

TOOLS REQUIRED:
Personal computer with windows and Python installed

DESCRIPTION:
In this lab, the students practice their skills on functions in Python. Functions are block of code in Python written to perform a specific task. Functions can be called as many times as required and provide a great way to organize your code.

Following lab tasks are designed to practice and learn the concepts of functions in Python. Pay attention to the lab instructor who will explain each task and then work your way to complete the tasks.

LAB TASK:
1.   Open Python IDLE terminal and then create a new file. Name it "lab11_1.py". write a program with a user-defined function which takes a string as argument and returns reverse of string

2.   Create "lab11_2.py" and Create a Python program named "lab8_2.py" with a user-defined function called calculate_square. The function should take an integer as an argument and return the square of that number. Implement the program to fulfill the following requirements

3.   Create "lab11_3.py". Write a program with a function that takes two numbers as input and returns the greatest common divisor (GCD). For two numbers a and b, the GCD is the largest number that divides both a and b.

4.   Modify "lab11_3.py". Make the user-defined function compute either GCD or least common multiple (LCM). The function now takes three arguments i.e., two numbers and a string with either "lcm" or "gcd" value and then returns the answer accordingly.

5.   Create "lab11_4.py". Write a program that implements a tic-tac-toe game.

QUESTIONS:
Q # 1: Predict the output of the following code:

```
num=10
def func():
    num+=5
    return
print("num=",num)
```

Ans.

Q # 2: Can functions in Python be called both by value and reference?

Ans.

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Q # 3: What is a recursive function?

Ans.

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Q # 4: Which one of the following is incorrect?

A.   The variables used inside function are called local variables.
B.   The local variables of a particular function can be used inside other functions, but these cannot be used in global space
C.   The variables used outside function are called global variables
D.   In order to change the value of global variable inside function, keyword global is used.

Ans.

_____

Name: _____

Roll #: _____

Date: _____

Subject Teacher

Remarks: