Task 3:- Importing python modules and Packages in python programming.

Aim:- To write python demonstrating importing python modules and Packages.

You are tasked with devebping a modules lar calculator application in python the calculator should support basic arithametic operations :- addition, substration, mulplication and division.

Algorithm:-

1) Define functions for addition, substraction, multiplication, and division.

2) Handle d Division by 2 ero by raising an error if the divisor is zero.

3) Import the module containing these functions.

4) Initialize two module Containing (a=10, b=5).

5) Call each function using mymathe function-name >(a, b).

6) print the results of all operations.

Program:-

```
def add (a,b);
    return a+b
def substract (a,b)
    return a-b
def multiply (a,b):
    return (a* b)
def divide (a,b)
    of b==0
    raise value erro("Cannot divide by zero"),
```

Output:-

Addition :- 15

substraction :- 5

multiplication :- 50

Division :- 250

```
a = $ 10
b = $5
print ("Additoin", my math. add (a,b))
print ("substraction", my math. subtract (a,b))
print ( "multiplication:" my math. multiply (a,b))
print ("Division:", my math. divide (a,h))
```

b) You are working on a python project that requires you to perform various mathematical operations and geometric area calculations. To organize your better, you decide to create a package named my package which includes sub packages pack 1 and pack 2 with two modules:- math functions and are functions Demonstrate the use of the use of the functions by performing a few calculations and printing these results.

Algorithm:-

1. Create math functions.py module;
2. Create area functions.py module;
3. create -enit-py files in Pack 1 and pack 2;
4. create main.py;
5. print the output as expected.

Program:-

1) create the math functions.py module def add (a,b):
```
        return a+b
    def subtract (a,b):
        return a-b
    def multiply (a,b):
        return (a*b)
    def divide (a,b):
        if b==0
            return "error 1 Division by zero".
        return a/b
```

2) create the area functions.py module import math
```
    def circle - area (radius):
        return math. pi* radius* radius
    def rectangle -area (length, width):
        return length width
    def triangle -area base, height);
        return 0-5* base *height.
```

Output:-

Addition: 15

substraction: 5

multiplication : 50

Division : 20

circle Area (radius = 7) : 153.9380400

2589985

Rectangle Area (5×10) : 50

Triangle Area (base = 6 . height = 8) : 2410

3) create -int-py in each package folder (pack 1 and pack 2)
from -math functions import add, substract, multiply, divide
from area functions import circle-area, rectangle-area, triangle
-area.

4) create the main-py file
from pack import area functions.
from pack import area functions.
# using math factions.
print ("Addition:", math functions.add (10,5))
print ("subtraction:", math functions. sub stract (10,5))
print ("Multiplication:", functions. multiply (10,5))
print ("Division!", math functions. divide (10,5))

using area functions
print ("Circle Area (radius=7):", area functions circle-area (7))
print ("Rectangle Area (5×10):", area functions. rectangle-area (5,10))
print ("Triangle Area (base=6. height=8").
area functions. triangle-area (6.8)

Result:- Thus, the program for emporting python modules and
packages was successfully executed and the output was
verified.

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EX No.	3
PERFORMANCE (5)	5
RESULT AND ANALYSIS (3)	5
VIVA VOCE (3)	5
RECORD (4)	
TOTAL (15)	20
SIGN WITH DATE	