Task 3 :- Importing python modules and packages in the python programing.

Aim :- To aim python demonstrating importing python modules and packages.

a) You are tasked with developing a modular calculator application in python. The calculator should support basic arthematic operating addition, subtraction, multiply and division, Additionally, you should create a main program to handle user input and display the results.

Algorithm :-

1. Define functions for addition, sub, multiply and division.
2. Handle division by zero by raising an error if the division is zero
3. input the module containing these func.
4. Initialize 2 numbers
5. call each number using my math.
   < function_name > (a, b)
6. Print the result of all operations

output

Addition : 15

Subtraction : 5

Multiplication : 50

Division : 20

```
def add (a,b):
    return a+b

def subtract (a,b):
    return a-b
    return a+b

def multiply (a,b):
    return a*b
    return a*b
def divide (a,b):
    if b==0:
        raise ValueError ("cannot divide by zero")
    return a/b
import mymath
a = 10
b = 5
Print ("Addition:", mymath.add (a,b))
Print ("subtraction:", mymath.subtract (a,b))
Print ("Multiplication:", mymath.multiply (a,b))
Print ("Division:", mymath.divide (a,b))
```

8. You are working on a phyton project that requires you to perform various mathematical operations and geometric are of calculation. To organize your code and create a package. The use of functions by performing a calculation and printing the result.

Program

```
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:
        raise ValueError ("Cannot divide by zero")
    return a/b
import my math
a = b
b = 5
Print ("Addition:", my math . add (a, b))
Print ("Subtraction:", my math . subtract (a, b))
Print ("Multiplication:", my math . multiply (a, b))
Print ("Division:", my math . divide (a, b))
```

Algorithm

1. create math function . py module.
2. Create area function . Py module
3. create - int - Py files in Pack1 and Pack2 :
4. create main pg :
5. Print the output as expected .

Program

1. Create the math function 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! 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
```

Output

circle area (radius = 7): 153.93804002589985

Rectangle area (5x10): 50

Triangle area (base = 6, height = 8): 24.0

3. Create _ init _ py in each package folder (Pack and Pack2)
from . mathfunction import add, subtract, multiply, divide
from . area function import circle_area, rectangle_area, triangle

4. create the main Py file

from pack import math functions

from pack import area function

using math functions

Print ("Addition:", math functions . add (10, 5))

Print ("substraction:", math function . subtract (10, 5))

Print ("Multiplication:", math function . multiply (10, 5))

Print ("Division:", math function . Divide (10, 9)

using area function

Print ("circle area (radius = 7):", area function . circle (7))

Print ("Rectangle area (5x10):", area function, rectangle (5,10))

Print ("triangle area (base = 6, height = 8):", area

functions triangle _ area (6, 8))

Result:

Thus, the program for importing python modules and Packages was success fully executed and the output was verified.