Lab : Functions in python

Step 1

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```
''' Python function to add two numbers

functions names will be adder1 and adder2 and both will take two values
and print the addition


'''

#METHOD 1
# keyword def functionname (parameters) :

def adder1(x,y):
    print x+y

                #returns nothing

# call the function
adder1(2,3)

# save this file on desktop with name "fun1.py"




#METHOD 2

def adder2(x,y):
    return x+y

#returns addition of x and y


# call the function
z=adder2(2,3)

#print the value of z using print statement
print z
```

Step 2

Calling Functions (given below)

Open Python Shell (GUI)

>>> import fun


```
>>> fun.adder1(12,15)
27
>>>
>>> fun.adder2(10,35)
45
>>>
```

Write python scripts using void functions (returns no value) and fruitful functions (returns some value) for following problems:

1. Calculate simple interest.

2. Find the area of a triangle.

3. Calculate compound interest.

4. Find the value of force when mass of a body and its acceleration is given.

5. Calculate the factorial of the given number

6. Convert a temperature from Celsius to Fahrenheit.

7. Convert a temperature from Fahrenheit to Celsius.

8. Compute the area of circle, when its diameter is given.

9. Compute the area of a cylinder, when its height and diameter is given.

10. Compute the volume of a cylinder, when its height and diameter is given.

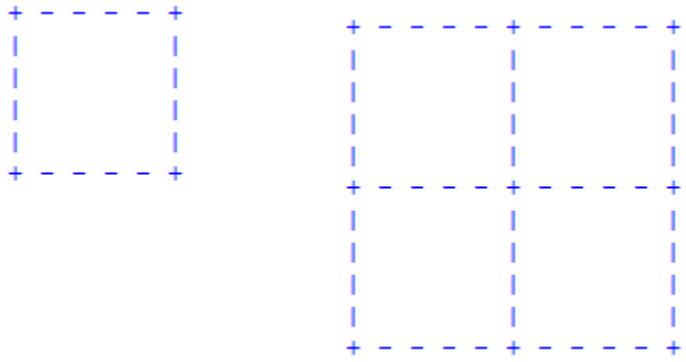
11. Compute the area of a rectangular prism, when its all sides are given.

12. Compute the volume of a rectangular prism, when its all sides are given.

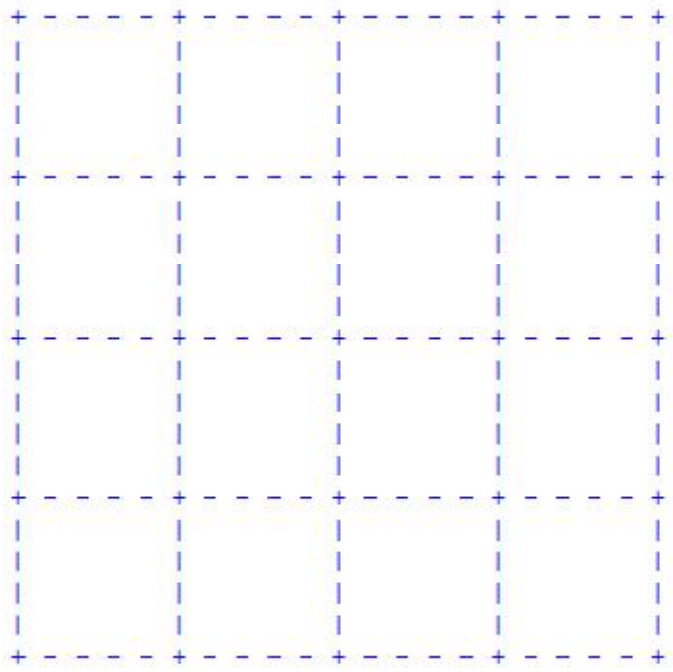
A. Write a python function to print following shapes

(Hint: to print more than one value on a line, you can print a comma separated sequence,

print one symbol at a time, don't print whole line in a single print statement)



B. Write a python function to print following shape



C. Repeat above Python script to print shapes other than square (Optional).

D. Write a function named **rightjustify** that takes a string named s as a parameter and prints the string with enough leading spaces.

E. A function object is a value you can assign to a variable or pass as an argument. For example, **do_twice** is a function that takes a function object as an argument and calls it twice:

```
def do_twice(f):
    f()
    f()
```

Here's an example that uses do_twice to call a function named print_spam twice.

```
def  print_spam():
    print  'spam'
do_twice(print_spam)
```

1. Type this example into a script and test it.

2. Modify do_twice so that it takes two arguments, a function object and a value, and calls the function twice, passing the value as an argument.

3. Write a more general version of print_sp, called print_2ice, which takes a string as a parameter and prints it twice.

4. Use the modified version of do_2ice to call print_2ice twice, passing 'spam' as an argument.

F. Write a function to print number 1 to 10 in ascending or descending order, based on user choice.