

Lab : Functions in python

Demo 1:

```
File Edit Format Run Options Window Help
def fun1():
    print("inside fun1")
```

calling function fun1

```
>>> fun1()
inside fun1
```

Demo 2:

```
File Edit Format Run Options Window Help
def fun3(x):
    return x**2
```

function call to fun3

```
>>> fun3(3)
9
```

print statement take new after printing message, see demo 3

Demo 3:



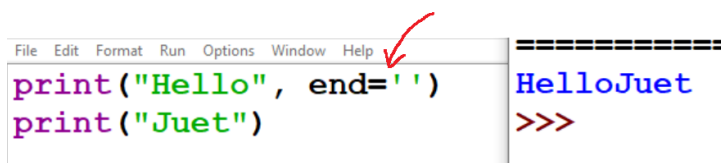
```
File Edit Format Run Options Window Help
print("Hello")
print("Juet")
>>>
```

=====

Hello
Juet
>>>

To print both messages in single line, see demo 4

Demo 4:



```
File Edit Format Run Options Window Help
print("Hello", end=' ')
print("Juet")
>>>
```

=====

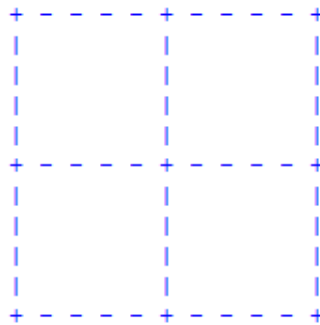
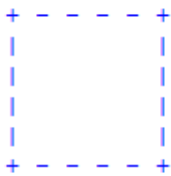
HelloJuet
>>>

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

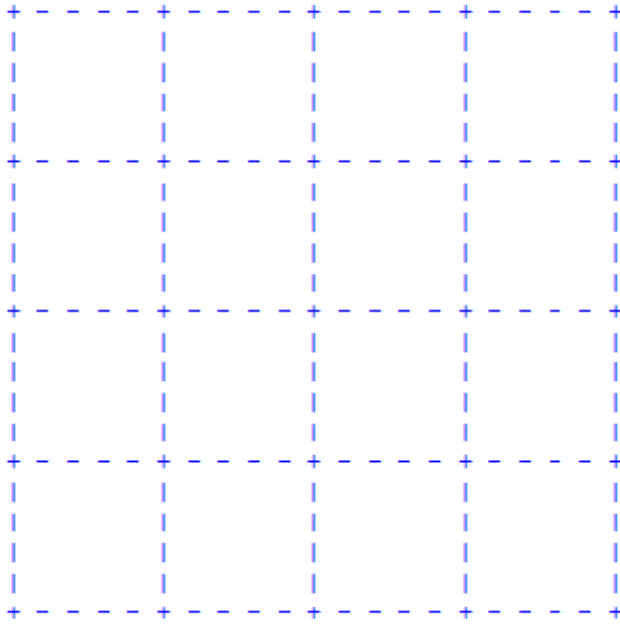
1. Calculate simple interest.
2. Find the area of a triangle.
3. Calculate compound interest.
4. Find the value of force when mass of a body and its acceleration is given.
5. Calculate the factorial of the given number
6. Convert a temperature from Celsius to Fahrenheit.
7. Convert a temperature from 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: 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.

Examples:

Left Justified:

```
Jaypee  
University  
Of  
Engineering  
And  
Technology
```

Right Justified:

```
Jaypee|  
University  
Of  
Engineering  
And  
Technology
```

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.