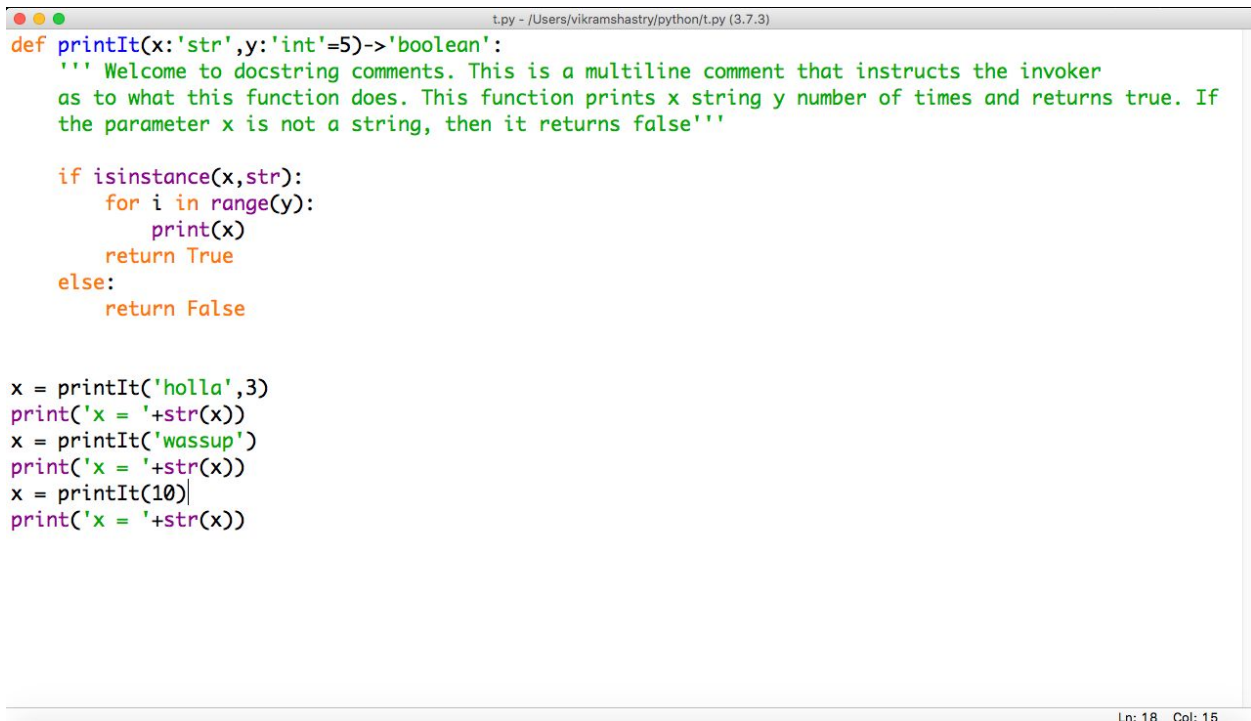


# Uttara Python Lab 2

- 1) Define a function named sum to take in 2 parameters, add the two and return the sum.
  - a) First code and test this. Invoke this function, pass 10 and 20 and verify if you get 30 as the result. Now pass “hello” and “world” as arguments and check the result.
  - b) How to validate the parameters to ensure you are getting only numbers? I want you to change your implementation to return a string with value “invalid” if the 2 parameters are not numbers (either int or float) else return the sum.
  - c) Change the function to accept any number of numbers and sum it up and return the result(hint: use varargs).
- 2) Try basic edge cases -
  - i) do not pass required arguments
  - ii) pass more than the require number
  - iii) type help(range) and go through the documentation to understand how this function works. Do you understand which are default arguments?
  - iv) code a function f2 within a function f1 and invoke it. Does it work? Can you invoke it outside of f2?
- 3)
  - a) Print 1 to 10 to monitor
  - b) Print all odd numbers from 1 to 100 to monitor
- 4) Code a function called printIt(x,y). The function should print x value y number of times. If y is not passed as an argument, then the function should print x 5 times to the console (hint: use default arguments).
- 5) Create a function to take 3 parameters x,y & z. Try providing default value only to y and check if it succeeds. Change y to \*y and check if it succeeds. Can you reason as to why this works the way it does?

6) Create a function named `isEven()` to accept one parameter `x` and return `true/false` based on whether the parameter is an `int` number and is an even number. Do all validations. Create a docstring comment(do you know what this is?) and add annotations to indicate to the invoker what type of parameter can be passed & what type of return can be expected.

Ex: This code shows you how to write a docstring, annotations, default argument, invocation of functions, using `range`, etc



```
t.py - /Users/vikramshastry/python/t.py (3.7.3)
def printIt(x:'str',y:'int'=5)->'boolean':
    ''' Welcome to docstring comments. This is a multiline comment that instructs the invoker
    as to what this function does. This function prints x string y number of times and returns true. If
    the parameter x is not a string, then it returns false'''

    if isinstance(x,str):
        for i in range(y):
            print(x)
        return True
    else:
        return False

x = printIt('holla',3)
print('x = '+str(x))
x = printIt('wassup')
print('x = '+str(x))
x = printIt(10)
print('x = '+str(x))
```

Ln: 18 Col: 15

7) Create a file called `Test.py`. Code a function to test whether a given input number is prime. In it, reuse `isEven()` coded earlier by tweaking it to return `true/false`. How do you use a function in one file in another?