H1-Lu-Lu

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#Lu Lu- H1

#1. creating variable littleX=4, bigX=9, someList=[2,4,6,8,10] for \
    later use
littleX = 4
bigX = 9
someList=[2,4,6,8,10]
```

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#2. make a function Avg which take two inputs a and b and compute \
    the average.
Avg(a,b)=(a+b)/2
print Avg(littleX , bigX)
print n(Avg(littleX , bigX))
```

```
13/2
6.50000000000000
```

```
#3. Make a function called sqList that takes as input a list and \
    returns as output the list formed by squaring each elementof the \
    input list.  Then usesqListon the inputsomeListfrom #1.
def sqList(list):
    for i in range(0,len(list)):
        list[i]*=list[i]
    return list

print sqList(someList)
```

```
[4, 16, 36, 64, 100]
```

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#4.  Make a function called funTimes that takes as input a positive \
    integer n and prints the following to screen:
def funTimes(n):
    if n <= 0:
        print 'Please input a positive integer.'
    else:
        for i in range (2,2+n):
```

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            print range(1,i)

funTimes(1)
print ""
funTimes(5)
print ""
funTimes(10)
```
[1]

[1]
[1, 2]
[1, 2, 3]
[1, 2, 3, 4]
[1, 2, 3, 4, 5]

[1]
[1, 2]
[1, 2, 3]
[1, 2, 3, 4]
[1, 2, 3, 4, 5]
[1, 2, 3, 4, 5, 6]
[1, 2, 3, 4, 5, 6, 7]
[1, 2, 3, 4, 5, 6, 7, 8]
[1, 2, 3, 4, 5, 6, 7, 8, 9]
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

```
#5. Make a function called unitNormalVect that takes as input two \
   numbersaandband returns the list
def unitNormalVect(a,b):
    if a==0 or b==0:
        return "Please enter non zero vectors."
    else:
        c = sqrt(a^2 + b^2)
        return [b/c, -a/c]
    return

unitNormalVect(0,0)
print""
unitNormalVect(1,2)
print""
unitNormalVect(4,5)
```
'Please enter non zero vectors.'

[2/5*sqrt(5), -1/5*sqrt(5)]

[5/41*sqrt(41), -4/41*sqrt(41)]