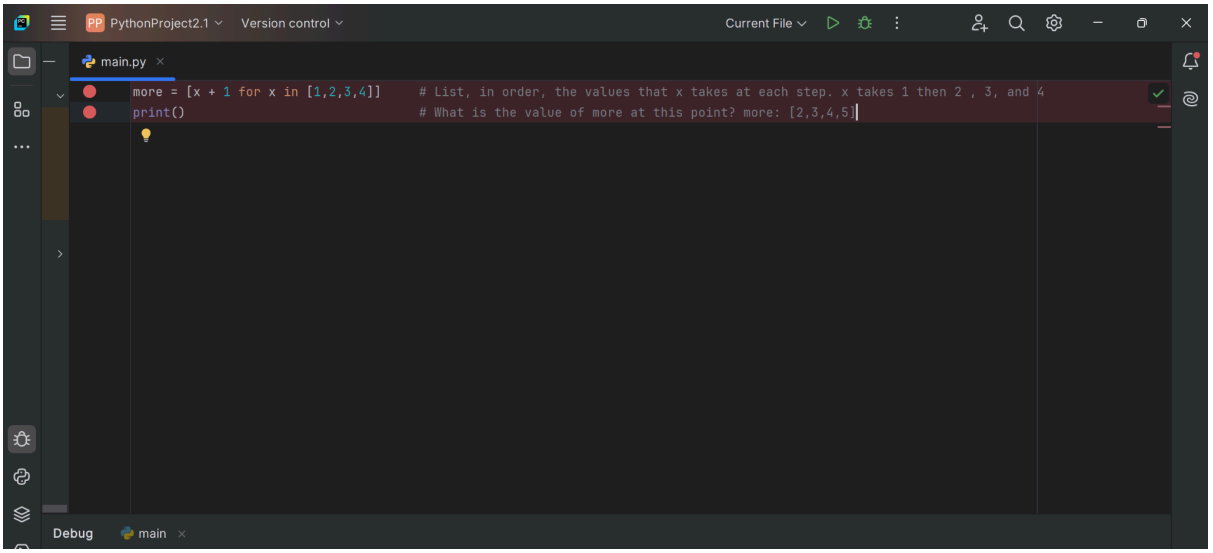
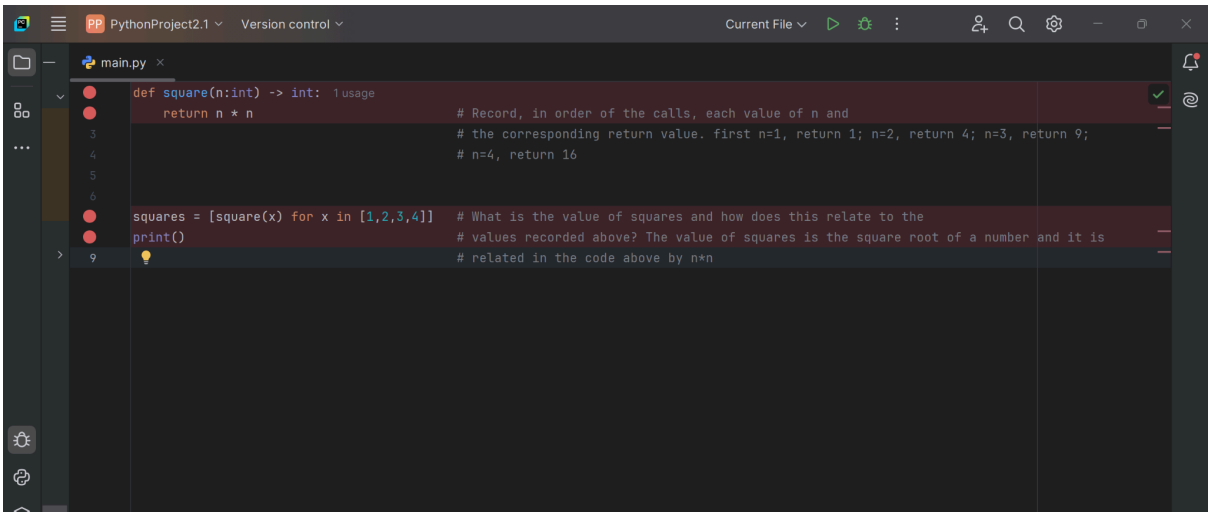
Task 1 : Evaluating Code with List Comprehensions

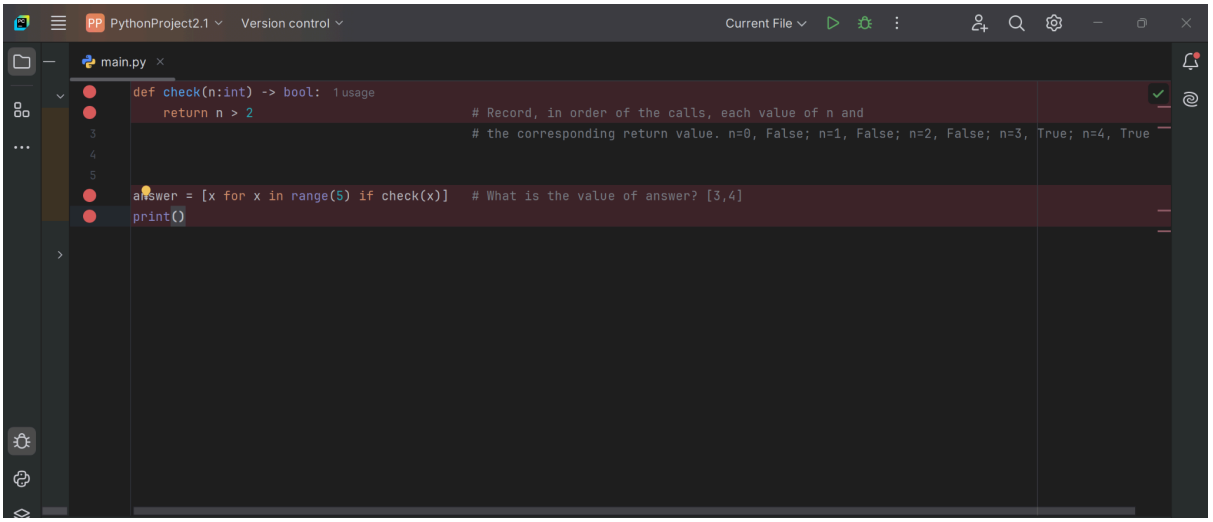
a.



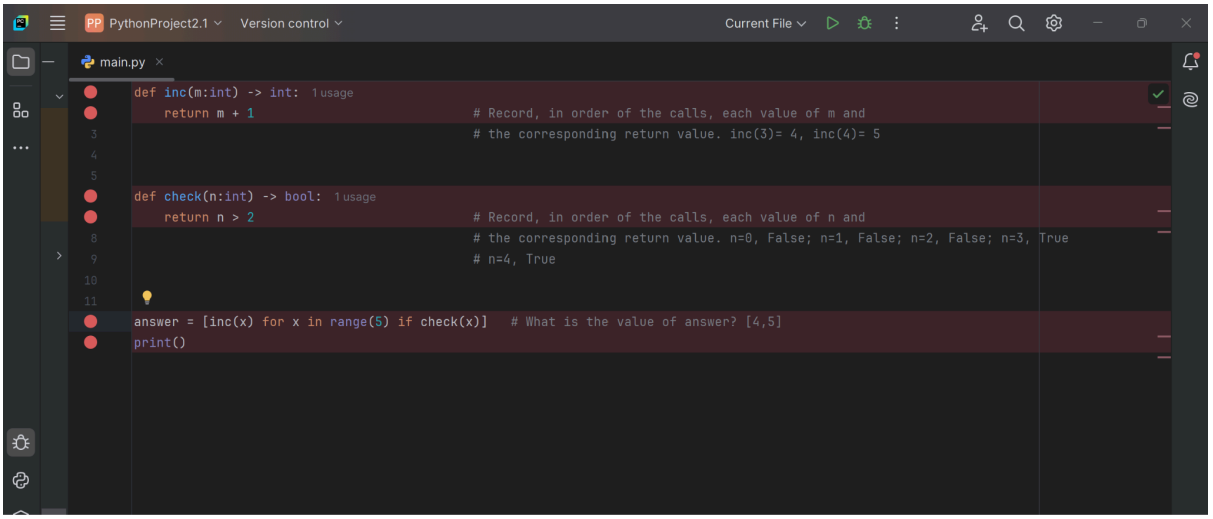
b.



c.

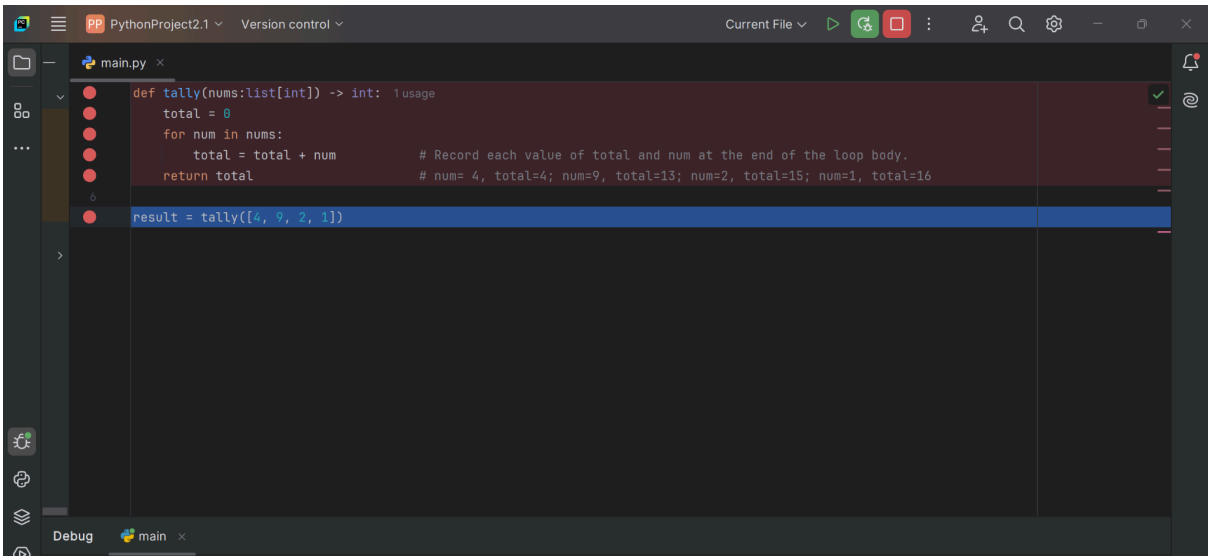

PythonProject2.1
Version control
Current File
main.py
def check(n:int) -> bool: 1 usage
return n > 2 # Record, in order of the calls, each value of n and
# the corresponding return value. n=0, False; n=1, False; n=2, False; n=3, True; n=4, True
answer = [x for x in range(5) if check(x)] # What is the value of answer? [3,4]
print()

d.

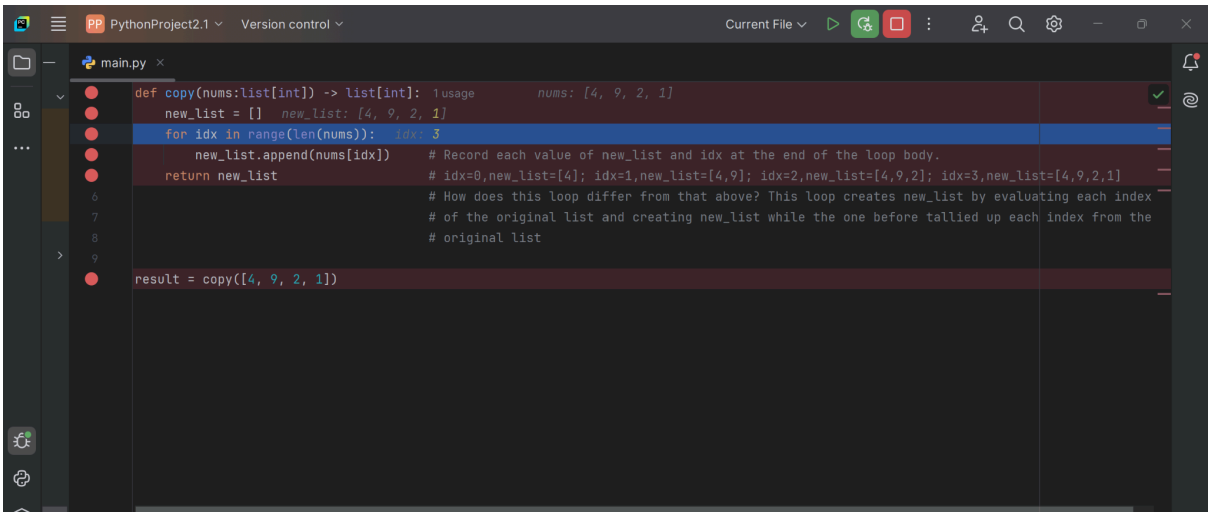

PythonProject2.1
Version control
Current File
main.py
def inc(m:int) -> int: 1 usage
return m + 1 # Record, in order of the calls, each value of m and
the corresponding return value. inc(3)= 4, inc(4)= 5
def check(n:int) -> bool: 1 usage
return n > 2 # Record, in order of the calls, each value of n and
# the corresponding return value. n=0, False; n=1, False; n=2, False; n=3, True
# n=4, True
answer = [inc(x) for x in range(5) if check(x)] # What is the value of answer? [4,5]
print()

Task 2 Evaluating Code with Loops

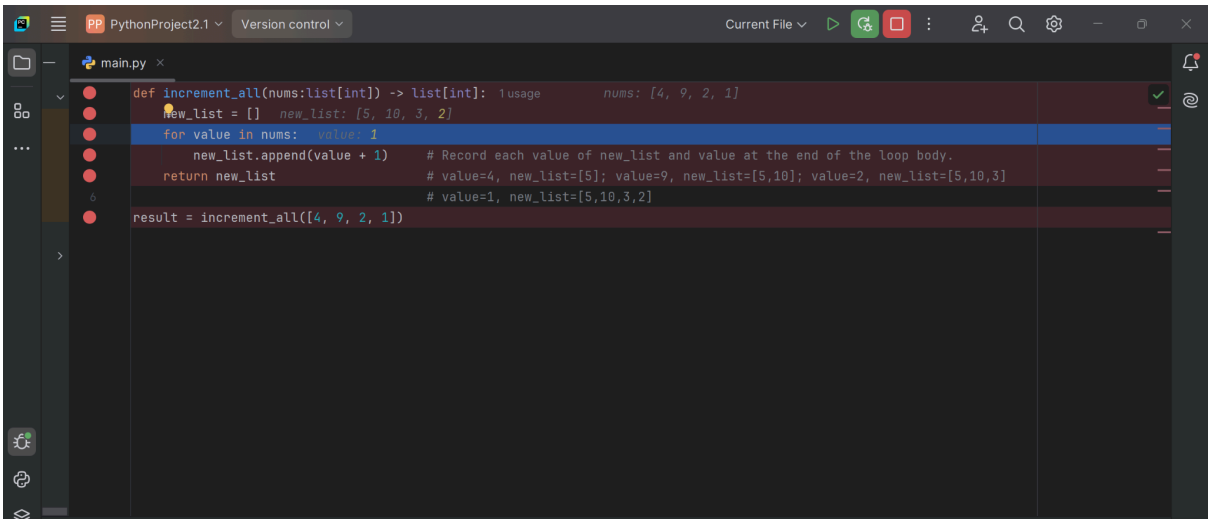
a.



b.



c.



Task 3 Evaluating Code with Test Cases

https://github.com/CSC-101/lab3-omardadam.git

Worksheets

Week 3 Worksheet 1.

1.) [n * 2 for n in [4,6,3]]

n= n= n=

[4, 6, 3]

n*2= n*2= n*2=

[8, 12, 6]

2.) x=10

[n*10 for n in [4, 6, 3]]

n= n= n=

[4, 6, 3]

n*10 = n*10 = n*10 =

[40, 60, 30]

3.) def f(a:int) -> int:

if a > 0

return a

else:

return 0

[f(n) for n in [4, -2, -3, 5]]

a= a= a= a=

[4, -2, -3, 5]

f(a)= f(a)= f(a)= f(a)=

[4, 0, 0, 5]

Week 3 Worksheet 2

1. `[n for n in [4,6,3] if n < 5]`

n= n= n=

[4, 6, 3]

n= n=

[4, 3]

2.) x=4 `[n for n in [4,6,3] if n >= 4]`

n= n= n=

[4, 6, 3]

n= n=

[4, 6]

3.) `[s for s in ['hello', 'aloha', 'ciao', 'hola'] if vowel_count(s) > 2]`

s= s= s= s=

['hello', 'aloha', 'ciao', 'hola']

s= s=

['aloha', 'ciao']

Week 3 Worksheet 2

1. list1 = [3, 1, 4, 5, 2]
2. max = list1[0]
3. for n in list1:
   if n > max:
   max = n

Known Bindings

Line 5	Iteration 1	Iteration 2	Iteration 5
	list1 = #list1	list1 = #list1	list1 = #list1
	max = 3,	max = 3,	max = 5
	n = 3	n = 1	n = 2

Week 3 Worksheet 4

1.

```
1 list 1 = [3, 1, 4, 5, 2]
2 max_idx = 0
3 for idx in range(len(list 1)):
      if list1[idx] > list1[max_idx]:
          max_idx = idx
```

Lists
list1 = [3, 1, 4, 5, 2]

Known Bindings					
Line 1	list = [3, 1, 4, 5, 2]				
Line 2	max_idx = 0				
	Iteration 1	Iteration 2	Iteration 3	Iteration 4	Iteration 5.
Line 3	idx = 0	idx = 1	idx = 2	idx = 3	idx = 4
Line 4	list1[idx] = 3	list1[idx] = 1	list1[idx] = 4	list1[idx] = 5	list1[idx] = 2
Line 5	max_idx = 0	max_idx = 0	max_idx = 2	max_idx = 3	max_idx = 3