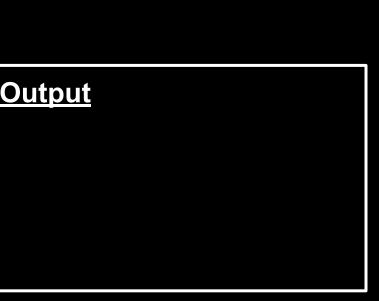
### **COMP** 110

#### Memory Diagrams

```
"""First memory diagram"""
3
    name: str = "Alyssa"
    print("Hello " + name)
4
    print("Bye " + name)
5
```

1	"""First memory diagran	า'''''
2		
3	<pre>name: str = "Alyssa"</pre>	
4	<pre>print("Hello " + name)</pre>	
5	<pre>print("Bye " + name)</pre>	
	Stack	
	Globals	



1	"""Second Memory Diagram"""	
2		
3	<pre>val: int = 1</pre>	
4	val2: int = val + 3	
5	<pre>print(val + 1)</pre>	
6	<pre>print(val2)</pre>	
	Stack	
	Globals	<u>Output</u>
		<u>Output</u>

### **COMP** 110

# CQ00 - Memory Diagrams Practice

```
2
3
    age: int = 20
4
    year: int = 2023
5
    age_in_2043: int = 2043 - year + age
    print("In 2043, you'll be " + str(age_in_2043))
6
7
8
    age = age + 1
9
    year = year + 1
    print("In " + str(year) + ", you'll be " + str(age))
10
```

"""Example environment diagram program."""

```
"""Example environment diagram program."""
 2
 3
    age: int = 20
 4
    year: int = 2023
5
    age in 2043: int = 2043 - year + age
 6
    print("In 2043, you'll be " + str(age_in_2043))
 7
 8
    age = age + 1
 9
    year = year + 1
10
    print("In " + str(year) + ", you'll be " + str(age))
  Stack
                                                 Output
  Globals
```

### **COMP** 110

# CQ01 - Memory Diagrams for Conditionals

```
"""Example environment diagram for conditionals."""
 2
 3
     secret: int = 3
 4
    guess: int = 1
 5
 6
     if guess == secret:
         print("Success!")
 7
 8
         print(str(quess) + " is the secret number!")
 9
     else:
10
         guess = guess + 1
11
         if guess == secret:
12
             print("Success on 2nd try!")
13
         else:
14
             print("Wrong guess. :(")
15
             if (guess == secret - 1):
                 print("Hint: The guess of " + str(guess) + " is off by only one number!")
16
```

```
"""Example environment diagram for conditionals."""
    secret: int = 3
    guess: int = 1
    if guess == secret:
        print("Success!")
        print(str(guess) + " is the secret number!")
    else:
10
        guess = guess + 1
11
        if guess == secret:
12
            print("Success on 2nd try!")
13
        else:
14
            print("Wrong guess. :(")
            if (guess == secret - 1):
15
                print("Hint: The guess of " + str(guess) + " is off by only one number!")
16
    Stack
```

Globals

<u>Output</u>