

Name _____

CPADS Lab Activity #3

Program #1

```
def main():
    count = 5

    for num in range(count):
        print(num)
        print(count)

main()
```

In English, describe what the program above does. What output you think the above program will produce? Verify your prediction by typing the code into PyCharm and running the program.

Program #2

```
def main():
    total = 0
    count = 4

    for num in range(count):
        total = total * num

    print(total)

main()
```

In English, describe what the program above does. What output you think the above program will produce? Verify your prediction by typing the code into PyCharm and running the program.

Name _____

Program #3

```
def doSomething(val):
    total = 0
    for i in range(val):
        total = total + i
    return total

def main():
    # Define variables
    num1 = 10
    num2 = 4
    num3 = 0

    # Do computation
    result1 = doSomething(num1)
    print(result1)

    # Do another computation
    for j in range(num2):
        num3 = doSomething(j)

    # Print output
    print(num3)

main()
```

In English, describe what the program above does. What value does the print statement output? Verify your prediction by typing the code into PyCharm and running the program.

Name _____

Sketch what output you think the following program will produce.

Program #4

```
import turtle

def doSomething(t,len,val):
    ang = 180 - 180/val
    t.pendown()
    for i in range(val):
        t.forward(len)
        t.right(ang)
        t.forward(len)

def main():
    bob = turtle.Turtle()
    bob.delay = 0.01

    # Define variables
    size = 25

    # Draw graphics
    for i in range(3):
        doSomething(bob,size,2*i+3)
        bob.penup()
        bob.forward(size*3)

    # Press enter to exit
    input('Press enter to exit')

main()
```

Verify your prediction by typing the code into PyCharm and running the program.