

Name \_\_\_\_\_

**CPADS Lab Activity #9****Program #1**

```
val = 0

while (val < 10):
    print(val)
```

What is the output of the program above?

**Program #2**

```
m = 5
n = 0

while (m > n):
    print(m + n)
    m = m - 1
    n = n + 1
```

What is the output of the program above?

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**Program #3**

```
print ('Enter a series of numbers with values between 1 and 5 (inclusive)')
expected_vals = int(input('How many numbers would you like to input? '))
val = -1
total = 0
num_vals = 0

while ((val < 1 or val > 5) or num_vals != expected_vals):
    val = int(input('Enter a number: '))

    if (val >= 1 and val <= 5):
        total = total + val
        num_vals = num_vals + 1
    else:
        print('Invalid input value, try again')

print(total // expected_vals)
```

In English, describe what the program above does. What is the output of the program above?

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**Program #4**

```
# import a library that can generate random numbers
from random import randint

lowRange = 1
highRange = 5
# Create a random number between lowRange and highRange (inclusive)
randomNumber = randint(lowRange, highRange)

attemptNumber = 0
guessAgain= "yes"
guess = -1

print('Let\'s play a game.')
print('I\'m thinking of a number between', lowRange, 'and', highRange)

while guess != randomNumber and guessAgain!= "no":
    guess = int(input('Guess my number: '))
    attemptNumber = attemptNumber + 1;

    if guess != randomNumber:
        print('Sorry, that is not correct')
        guessAgain = input('Would you like to guess again? [yes/no]: ')

if guess == randomNumber:
    print('Yeah, you guessed correctly on attempt #', attemptNumber)
else:
    print('Quitter')
```

In English, describe what the program above does. Type the code into PyCharm to see how it works. When testing the code, experiment with different inputs. What happens if you supply a value less than 1? Greater than 5? What happens if you type **NO** (in capital letters) when prompted to guess again?