

Name _____

CPADS Reading Activity IV

Program #1

```
var = input('Input a value between 60 and 100: ')
val = int(var)

if val > 90:
    print('Great job!')
elif val > 80 and val < 90:
    print('Not bad')
elif val >= 70 and val < 80:
    print('Could be better')
else:
    print('Need more practice')
```

What is the output of the above program if the user inputs the value 95 when prompted?

What is the output of the above program if the user inputs the value 90 when prompted?

What is the output of the above program if the user inputs the value 80 when prompted?

What is the output of the above program if the user inputs the value 65 when prompted?

What is the output of the above program if the user inputs the value 40 when prompted?

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Program #2

```
def compute_val(input):  
    sum = 0  
  
    for i in range(input):  
        if i % 2 == 1:  
            sum = sum + i  
        else:  
            sum = sum - i  
  
    return sum  
  
def main():  
    val = compute_val(10)  
    print(val)  
  
main()
```

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

Program #3

```
val = 0  
  
while(val < 10):  
    print(val)
```

What is the output of the program above?

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Program #4

```
m = 5
n = 0

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

What is the output of the program above?

Program #5

```
print ('Please 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 #6

```
# 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 = 1
tryAgain = "yes"
guess = -1

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

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

    if guess != randomNumber:
        print('Sorry, that is not correct')
        tryAgain = 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 try again?