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?

**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?

**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 ('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?

**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?