EE6310

Problem Set 3

1. Write a Python code that takes in a list of integers and returns the count of even numbers in the list. Implement this function using a while loop

count\_even = 0

index = 0

while index < len(numbers):

if numbers[index] % 2 == 0:

count\_even += 1

index += 1

print(count\_even)

1. Write a Python code that takes in a string and returns the reverse of that string. Implement this function using a while loop.

reversed\_string = ""

index = len(string) - 1

while index >= 0:

reversed\_string += string[index]

index -= 1

1. Write a Python code that takes in a list of numbers and returns the average of those numbers. Implement this function using a for loop.

total\_sum = 0

for num in numbers:

total\_sum += num

print(total\_sum / len(numbers))

1. Write a Python code that involves guessing a number between 1 and 100. The code will tell you whether the number is too high or too low.

print("Welcome to the Number Guessing Game!")

secret\_number = random.randint(1, 100)

attempts = 0

max\_attempts = 5

while attempts < max\_attempts:

guess = int(input("Guess the secret number (between 1 and 100): "))

if guess < secret\_number:

print("Too low! Try again.")

elif guess > secret\_number:

print("Too high! Try again.")

else:

print("Congratulations! You guessed the secret number:", secret\_number)

print("Number of attempts:", attempts + 1)

return

attempts += 1

print("Sorry, you ran out of attempts!")

print("The secret number was:", secret\_number)

1. Write a Python code that finds the two numbers in the list sums to a target value using the nested loop

pairs = []

for i in range(len(nums)):

for j in range(i + 1, len(nums)):

if nums[i] + nums[j] == target\_sum:

pairs.append((nums[i], nums[j]))

print(pairs)

1. Write a Python code that prints the numbers in the second list that is missing in the first list.

list2 = …

list1 = …

missing\_numbers = []

for num in list2:

if num not in list1:

missing\_numbers.append(num)

print(missing\_numbers)