Lesson 14:

1. Quiz: Antisymmetric Square

def antisymmetric(list\_matrix):

if not list\_matrix:

return True

if len(list\_matrix) != len(list\_matrix[0]):

return False

for index in range(0, len(list\_matrix)):

for j\_index in range(0, len(list\_matrix)):

if list\_matrix[index][j\_index] != -list\_matrix[j\_index][index]:

return False

return True

1. Quiz: Recognize Identity Matrix

def is\_identity\_matrix(list\_matrix):

if len(list\_matrix) != len(list\_matrix[0]):

return False

for index in range(0, len(list\_matrix)):

for j\_index in range(0, len(list\_matrix)):

if index == j\_index:

if list\_matrix[index][j\_index] != 1:

return False

else:

if list\_matrix[index][j\_index] != 0:

return False

return True

1. Quiz: Numbers in Lists

def numbers\_in\_lists(number\_string):

number\_list = list(map(int, number\_string))

big\_number = 0

result\_list = []

sub\_list = []

for number in number\_list:

if not result\_list:

big\_number = number

result\_list.append(number)

else:

if number <= big\_number:

sub\_list.append(number)

else:

big\_number = number

if sub\_list:

result\_list.append(sub\_list)

sub\_list = []

result\_list.append(number)

if sub\_list:

result\_list.append(sub\_list)

return result\_list

1. Quiz: Frequency Analysis

def freq\_analysis(message):

lowercase\_alphabet = list(string.ascii\_lowercase)

freq\_list = []

for letter in lowercase\_alphabet:

freq\_list.append(message.count(letter) / float(len(message)))

return freq\_list