CSCI-UA.0002 – While Loops and Boolean Expressions

1. Write the output of each program in the space adjacent to it. If there is an error, indicate that an error will occur.
   
1. \(x, y = 0, 0\)
   while \(x \leq 2\) or \(y \leq 4\):
   \(x += 2\)
   \(y += 2\)
   print(\(x, y\))

2. \# assume that the user types in 2 when prompted for input
   start = input('plz enter a number\n>')
   number = start
   while number < 10:
       print(number)
       number += 3

3. number = 1
   while number < 5:
       if number > 3:
           print('%s is too big' % (number))
       else:
           print(number * 'hi')
       number += 1

4. x = 0
   while x != 5:
       print(x)
       x += 2

2. Fill in the blanks in the program below.
   It will continue to ask for numbers as long as the number entered meets one of the following conditions:

   1. it's even
   2. it's equal to 7

   Once the user enters a number that does not meet the above conditions, stop asking for numbers and then print out all of the numbers that have been entered. See example ^

   all_numbers = ''
   answer = int(input('give me an even number (7 is ok too)\n>'))
   while __________________________________________________
       all_numbers ______________________________________________
       answer = int(input('give me an even number (7 is ok too)\n>'))
   print(all_numbers)

3. Use DeMorgan's Laws and logical opposites to simply the boolean expression below:

   while not (num < 1 or num > 6): # simplify this while loop's condition