CS1 - Exercise 2

**1. Assign a variable x the value 0. Within a while loop, increment x by 1 for each iteration of the loop. Have the loop terminate once x has:**

**- Been an even number two times**

**- AND**

**- Been an odd number three times**

**2. Write a function that prints out every integer between inputs a and b. If a is greater than b, or if a and b are equal, print “bad input” and exit the function. To get full credit, use a for-loop, NOT a while-loop.**

**3. Write a function that takes in a string and prints out every letter in that string. [Hint: remember that strings share certain qualities with lists. How do you index into a list?]**

**4. Write a function that takes in a string and outputs the same string but with all the vowels capitalized.**

**5. Which of the following if statements will cause you to lose a point on the exam?**

**happy = True**

**if happy == True:**

**print(“don’t write boolean conditions like this”)**

**if happy:**

**print(“do write boolean conditions like this”)**

**6. Evaluate the following code:**

**a = True**

**b = False**

**c = False**

**d = True**

**print(a and b)**

**print(a or b or c)**

**print(c or d and b or c)**

**print(b or c or a)**

**7. Write a function that detects whether an integer is even or odd. [Hint: %]**

**8. Write a function that takes in an array full of 1’s and 0’s (e.g. [0, 1, 1, 0, 0, 1] and outputs an array with all the 1’s and 0’s flipped. If any of the elements in the array are not a 1 or a 0, print “bad input” to the console and exit the function.**