1. Write a program that checks the length of each element of the following array. If the length is an even number, print "Even Steven!". If it is an odd number, print "Odd Todd!". (Hint: you might want to look up the "modulo (%)" operator in Python)

   ["Arthur", "Ford", "Trillian", "Zaphod", "Marvin", "Eddie"]

2. Consider the following string:

   'Arthur blinked at the screens and felt he was missing something important. Suddenly he realized what it was. "Is there any tea on this spaceship?" he asked.'

   Using regular expressions, answer the following questions. Make sure to check for the "no match" case. (Note: I recommend typing the string in, rather than using copy/paste)
   (a) How many whitespaces are there in the string?
   (b) How many matches are there to an 'i' followed by at least one 's'? Perform this search case insensitively.
   (c) Replace every "i" with an "e" and print out the new string.
   (d) Split the string into sentences, and print each sentence out on a different line.

3. Here is a list of fruits:

   ['apple', 'strawberry', 'banana', 'kiwi']

   And a list of vegetables:

   ['carrots', 'celery', 'broccoli']

   And a list of sandwiches:

   ['pbj', 'blt', 'ham', 'hummus']

   I would like my lunch to contain either a fruit or a vegetable, and a sandwich. Write a program to evaluate whether the following lunches are acceptable:

   Apple, strawberry, banana
   PBJ, apple
   pbj, carrots
   ham, BLT, hummus
   hummus, apple

4. Consider the following list of DNA motifs:

   ['ACG', 'AGC', 'TCG', 'TGC', 'ACCG', 'AGG', 'TCCCG', 'ACCA']

   We would like to find all motifs that consist of an A or a T, followed by at least one C, followed by a G. Write a program that finds all such motifs, and then prints each one out, along with a count of how many C's there are in the middle.