Programming Problem Set #2

1) Write a program called `second.py` to read the textfile `caractacus.txt`, remove every second letter (alphabetical or numerical), and save the resulting string to a text file called `trimmed_caractacus.txt`.

2) Write a program called `multidimensional.py` to store the following table of information in a multidimensional array and save it in a text file called `epl.txt`.

Position	Club	Points
1	Liverpool	12
2	Man City	10
3	Leicester City	8
4	Crystal Palace	7

   The text in the epl.txt file should have the same structure as the table, so 5 rows of 3 columns. Keeping the list structure (like square brackets) is fine.

3) Write a program called `randomsearch.py` that stores a dictionary of 100 random integers (between 1 and 1000, inclusive) and a list of the same random numbers. Take input from the command line for a number to search for. Search for that number in the dictionary and the list, printing out "[Number] is present in dictionary" and "[Number] is present in list" when it is found. Print "[Number] not found in dictionary" and "[Number] not found in list" if the number isn't present in the dictionary/list.

4) Write a program called `palindrome.py` to output 7-digit palindromes that are square numbers. A palindrome is a number that is the same when read forwards and backwards, for example 12321.

   An example of a 3-digit palindrome that is a square number is: 121 = 11 x 11.

   Your output should look like:

   "12321 is a palindrome"

   except have 7 digit palindromes and show each of them on a new line.

Grading:

Rubric pending