Assignment 6 PartI

CS 2000: Python Programming Language

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    In this assignment, you will write a generator for a csv file. The purpose of this portion of the assignment is for you to demonstrate understanding of the Python programming language and idioms. I expect you to put some critical thought into what functionality makes sense and how it would be implemented in a pythonic manner. It is worth 5 points and is due (04/13/2018), 12:00 pm.

1. CSV Parser

CSV (comma separated value) is a common format for data files. In general, a csv with m rows (records) and n columns (fields) looks something like:

```
field 1 name,      field 2 name,      ...,   field n name
record 1 field 1,  record 1 field 2,  ...,   record 1 field n
record 2 field 1,  record 2 field 2,  ...,   record 2 field n
⋮                                      ⋮
record m field 1,  record m field 2,  ...,   record m field n
```

As you can see, the first row is a header which gives the names of the fields and each subsequent row is a record. An example of a CSV file where each record represents a person is given below:

```
first, last, age
Sherri, Melton, 43
Gretchen, Hill, 28
Karen, Puckett, 47
Patrick, Song, 54
Elsie, Hamilton, 35
Hazel, Bender, 19
Malcolm, Wagner, 76
Dolores, McLaughlin, 33
Francis, McNamara, 21
```

Table1. Example csv file, people.csv

2. Task

Create a Python generator **csvopen**. The generator should take a single argument, a csv file name, and should yield the following information of the file excluding the header:

1: Melton, Sherri
GH is number 2
3: Puckett, Karen
PS is number 4
5: Hamilton, Elsie
6: Bender, Hazel
MW is number 7
8: McLaughlin, Dolores
9: McNamara, Francis
[I do not want to see StopIteration ☺]

Using the people.csv file example, you should be able to use your csvopen generator as follows:

```python
if (age % 2):
        print ('{0}: {1}, {2}'.format(rownum, last, first)
else:
        print ('{0}{1} is number {2}'.format(first[0], last[0], rownum)
```

3. What to turn in:

(Remember READABILITY COUNTS!)

• On e-Learning, submit your Python file whose name <hw#6PartI_LastName.py>. Please format your Python code in the following manner:

Name: <your name here>

Date: <#/#/#>

Homework: <#>

Your code