

CompSci 6

Introduction to Computer Science

October 27, 2011

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Announcements

- Read for next time Chap. 9.2-9.4
- Reading Quiz on Blackboard
 - Due before class next time
- Assignment 5 out tonight or tomorrow, due Nov 3
- Today
 - Apt – uniqueNames
 - Problem – most popular name

Popular Name Problem:

- Given a list of names, determine the most popular first name and print that name with all of its last names.
- Input: Names are always two words, names are in a file. If multiple names are on the same line they are separated by a “:”
- Output: Most popular first name, followed by a “:”, followed by corresponding last names separated by a blank

Example Input File with 5 lines

```
Susan Smith:Jackie Long:Mary White  
Susan Brandt  
Jackie Johnson:Susan Rodger:Mary Rodger  
Eric Long:Susan Crackers:Mary Velios  
Jack Frost:Eric Lund
```

Corresponding Output

```
Susan: Smith Brandt Rodger Crackers
```

One way to solve

- Create a list of unique first names
- Create a list of lists of last names that are associated with each first name

Example – two lists

Unique First names	Corresponding Last names
1 'Susan'	1 ['Smith', 'Brandt', 'Rodger', 'Crackers']
2 'Jackie'	2 ['Long', 'Johnson']
3 'Mary'	3 ['White', 'Rodger', 'Velios']
4 'Eric'	4 ['Long', 'Lund']
5 'Jack'	5 ['Frost']

Now can we solve the problem?

- Compute those two lists that are associated with each other
 - List of unique first names
 - List of corresponding last names
- Compute the max list of last names
- Now easy to print the answer.

Expanding the Problem

- Suppose we want to read from multiple data files
names1.txt, names2.txt, names3.txt