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

	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