CompSci 101
Introduction to Computer Science

TOP 10 NAMES
over the last 100 years

Male:
1. James
2. John
3. Robert
4. Michael
5. William
6. David
7. Richard
8. Joseph
9. Charles
10. Thomas

Female:
1. Mary
2. Patricia
3. Elizabeth
4. Jennifer
5. Linda
6. Barbara
7. Susan
8. Margaret
9. Jessica
10. Dorothy

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Prof. Rodger

Announcements

- Reading for next time on calendar page
  - RQ 13 Due Thursday
- Assignment 5 Due Thursday
  - Assignment 6 out today – due Nov 6
- APT 6 due Today!
  - APT 7 due Nov 4

- Finish lecture notes from last time

Enumerate

- An iterator, generates a sequence

- Generates tuples of (index, item)

- Used with for loop to get both index and item

- for (index,item) in somelist:

  – You get both at the same time!

- Redo find position of longest name with iterator

Problem: Popular Name

- 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
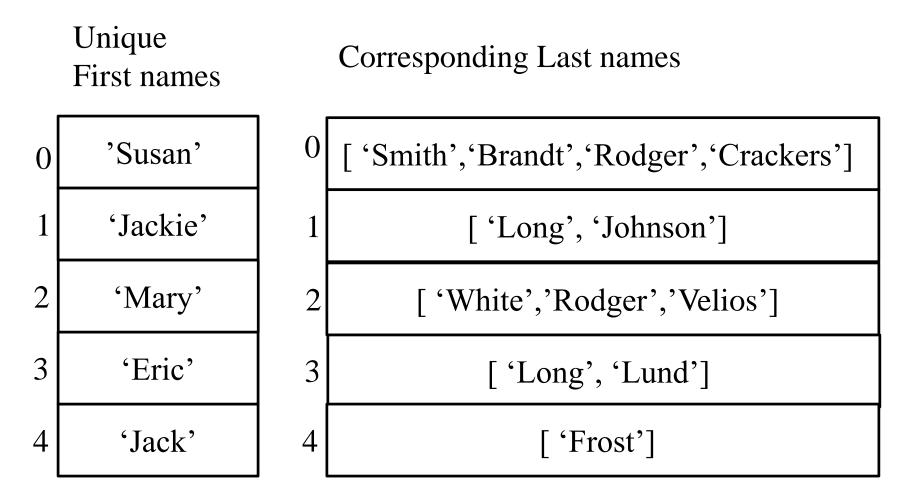Eric Long:Susan Crackers:Mary Velios
Jack Frost:Eric Lund

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
0	'Susan'	0	['Smith','Brandt','Rodger','Crackers']
1	'Jackie'	1	['Long', 'Johnson']
2	'Mary'	2	['White','Rodger','Velios']
3	'Eric'	3	['Long', 'Lund']
4	'Jack'	4	['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.
- See popular.py

Submit code from class here:

- www.bit.ly/101fall14-1028-01

Expanding the Problem

- Suppose we want to read from multiple data files

  names1.txt, names2.txt, names3.txt

See popular.py