Programming Languages and Techniques (CIS120)

Lecture 31

April 11, 2014

Histogram Demo, continued

Announcements

- HW 09 due Tuesday at midnight

- Today's lecture: learn about IO & collections libraries *through example* via in-class design exercise *continued*
  - Read Chapter 29
  - Ask questions!

Design Example: Histogram.java

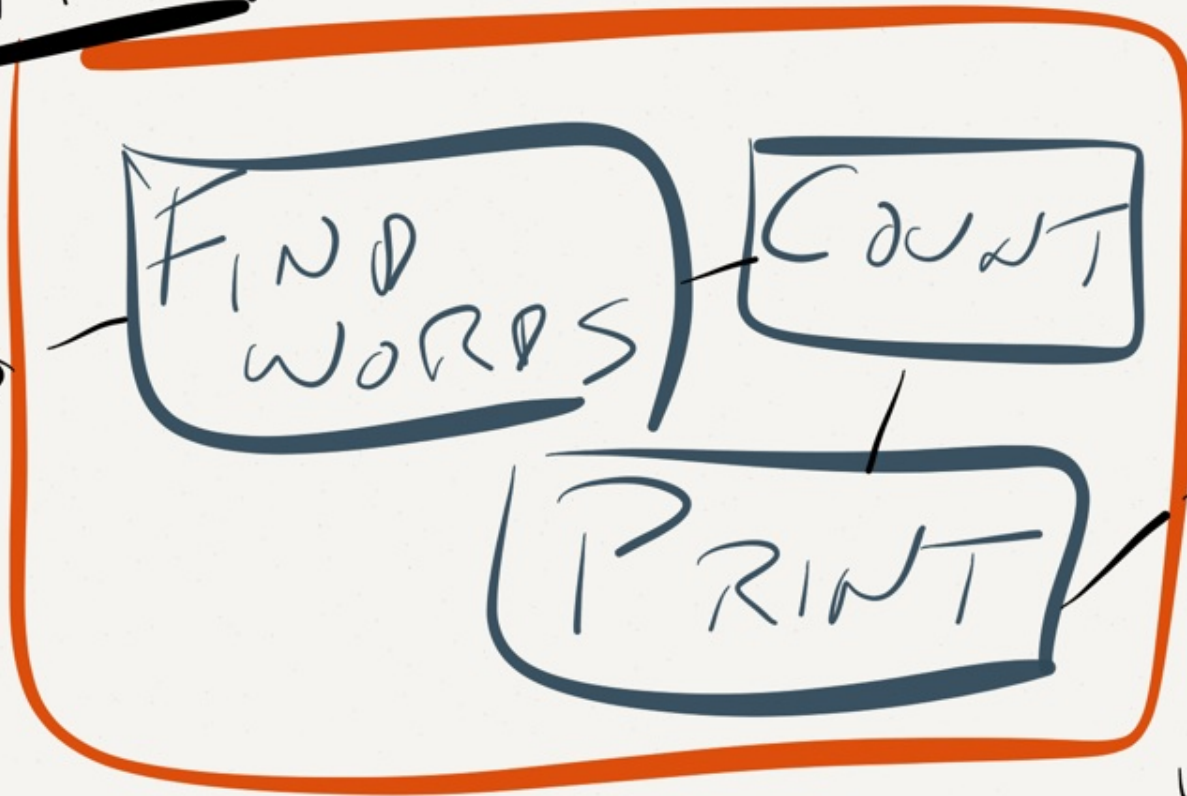A design exercise using java.io and
the generic collection libraries

Problem Statement

Write a command-line program that, given a filename for a text file as input, calculates the frequencies (i.e. number of occurrences) of each distinct word of the file. The program should then print the frequency distribution to the console as a sequence of "word: freq" pairs (one per line).

Histogram result:

The : 1	each : 1	line : 2	should : 1
Write : 1	file : 2	number : 1	text : 1
a : 4	filename : 1	occurrences : 1	that : 1
as : 2	for : 1	of : 4	the : 4
calculates : 1	freq : 1	one : 1	then : 1
command : 1	frequencies : 1	pairs : 1	to : 1
console : 1	frequency : 1	per : 1	word : 2
distinct : 1	given : 1	print : 1	
distribution : 1	i : 1	program : 2	
e : 1	input : 1	sequence : 1	

TEXT FILE

FIND WORDS → COUNT → PRINT → PRINTED HISTOGRAM