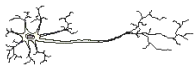

Lab #1—Baby Names Popularity Rankings

Objectives:

- Create an application that requires arrays and HashMaps.
- Read data on baby names popularity from several text files.
- Use the NetBeans GUI application to create and execute Java programs.

Problem Statement I: Write a Java based on the programming exercises 12.9, 21.11, and 21.13 from your text (Baby name popularity ranking) The popularity ranking of baby names from years 2001 to 2010 can be downloaded (without count of votes) from www.ssa.gov/oact/babynames and stored in files named babynameranking2001.txt, babynameranking2002.txt, . . . , babynameranking2010.txt. Each file contains one thousand lines. Each line contains a ranking, a boy's name, number for the boy's name, a girl's name, and number for the girl's name. For example, the first two lines in the file babynameranking2010.txt are as follows:

1	Jacob	21,875	Isabella	22,731
2	Ethan	17,866	Sophia	20,477

So, the boy's name Jacob and girl's name Isabella are ranked #1 and the boy's name Ethan and girl's name Sophia are ranked #2. 21,875 boys are named Jacob and 22,731 girls are named Isabella. This program allows the user to select the year, gender, and followed by a name, and displays the ranking of the name for the year. To achieve the best efficiency, create two arrays for boy's names and girl's names, respectively. Each array has 10 elements for 10 years. Each element in a given array is a map that stores a name and its ranking in with the name as the key.

Typical Splash screen, About form, images and icons, printing capabilities using the PrintUtilities class, validation with the Validation class, File menu selections and other that have been included in prior labs should also be included in this one as well.

Hints for this lab: The program needs to contain two arrays of size 10 each (boys and girls) with items being HashMaps. The key-value pair involving in a HashMap is name-rank pair that has to be read from each of the 10 files from years 2001 to 2010. The actual numbers of names given is not relevant in creating and using the HashMaps.

A start up zipped Lab 1 file is provided for you in the Labs folder of Canvas with the Data files, image of my baby daughter Penka (you are encouraged to find one free image on your own), PrintUtilities, Splash, and Validation classes. Download this file, extract it and follow the video recording for the solution of Lab 1 to create and submit one yourself before the due date. Recall that labs are graded with10 points maximum for each. So following the video recording to create the labs is one great way to get perfect score for them. Do it!

Screen Captures:

Problem Statement II (Optional): Design a BabyRanking class and an array of 10 LinkedLists (one for each year 2000-2009) of BabyRanking objects. Then create the array of HashMaps based on the LinkedLists.