Seneca College **July 01, 2019**
Applied Arts & Technology
SCHOOL OF COMPUTER STUDIES

JAC444 Final Code & Demo Due date: July 10, 2019

Workshop 7

Notes:

i. Each task should be presented during the lab, demo worth 70% of the workshop marks and code uploading worth the other 30%.
ii. Make sure you have all security and check measures in place (with proper use of Exceptional Handling where ever needed), like wrong data types etc.
iii. Make your project in proper hierarchy; introduce proper class coherence in your project. Proper packages and **your project should be handled by only one main method which should be in a TesterClass**.
iv. Given output structure is just for student to have a glimpse what the output can look, students are free to make the output better in any way.

Other inputs can be given during demo, so make sure you test your program properly.

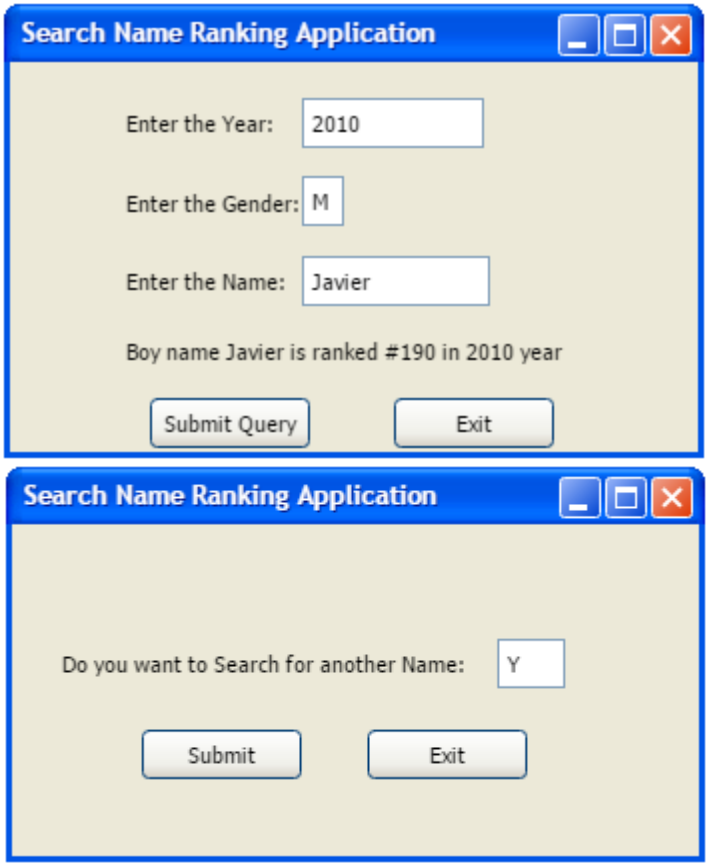
Task 1:

The popularity ranking of baby names from years 2001 to 2010 can be found attached with the workshop, 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:

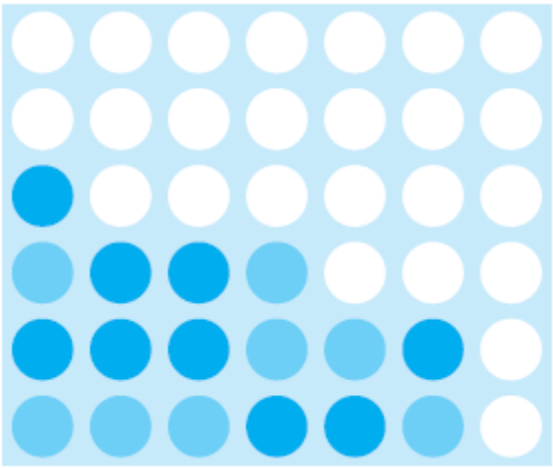
1. Jacob 21,875 Isabella 22,731
2. Ethan 17,866 Sophia 20,477

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.

Write a program that asks the user to enter the year, gender, and followed by a name, and displays the ranking of the name for the year. Here is a sample run:



Task 2: (Game – Connect four) (Students can implement the game with JavaFX or without)
Connect four is a two-player board game in which the players alternately drop colored disks into a seven-column, six-row vertically suspended grid, as shown below.



The objective of the game is to connect four same-colored disks in a row, a column, or a diagonal before your opponent can do likewise. The program prompts two players to drop a red or yellow disk alternately. In the preceding figure, the red disk is shown in a dark color and the

yellow in a light color. Whenever a disk is dropped, the program redisplays the board on the console and determines the status of the game (win, draw, or continue). Here is a sample run:

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Drop a red disk at column (0–6): 0 Enter

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| | | | | | | |
|R| | | | | | |
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Drop a yellow disk at column (0–6): 3 Enter
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| | | | | | | |
| | | | | | | |
|R| | |Y| | | |

. . .
. . .
. . .

Drop a yellow disk at column (0–6): 6 Enter
| | | | | | | |
| | | | | | | |
| | | |R| | | |
| | | |Y|R|Y| |
| | |R|Y|Y|Y|Y|
|R|Y|R|Y|R|R|R|
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The yellow player won
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