Seneca College

July 13, 2018

Applied Arts & Technology
SCHOOL OF COMPUTER STUDIES

JAC444 **Demo Due dates: July 20 and July 27, 2018**
Final Code Submission Date: July 27, 2018

Workshop 4

Notes:

i. Each task should be presented during the lab, demo worth 50% of the workshop marks and code uploading worth the other 50%.
ii. **At least one task** should be demoed in July 20th lab and the other task should be demoed on July 27th (Student can choose any task they want to give demo about first).
iii. Make sure you have all security and check measures in place, like exceptional handling and wrong data types etc.
iv. Given output structure is just for student to have a glimpse what the output can look, student 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 is downloaded 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:

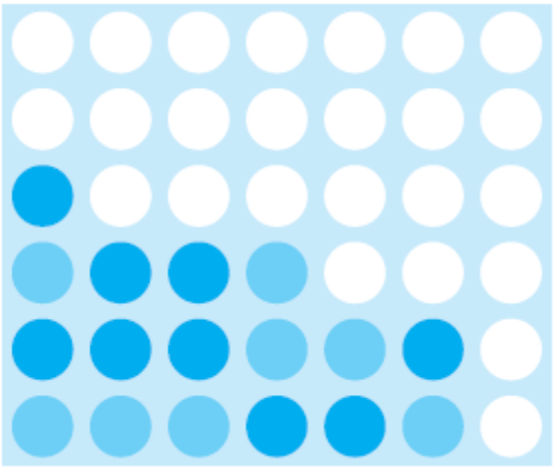
```
1. Jacob 21,875 Isabella 22,731
2. Ethan 17,866 Sophia 20,477
```

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.
Write a program that prompts 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:

```
Enter the year: 2010 ↵Enter
Enter the gender: M ↵Enter
Enter the name: Javier ↵Enter
Boy name Javier is ranked #190 in year 2010
Enter another inquiry? Y ↵Enter
Enter the year: 2001 ↵Enter
Enter the gender: F ↵Enter
Enter the name: Emily ↵Enter
Girl name Emily is ranked #1 in year 2001
Enter another inquiry? N ↵Enter
```

Task 2: (Game – Connect four)

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| | | | | | |
---------------
Drop a yellow disk at column (0-6): 3 ↵Enter
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
|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|
---------------
The yellow player won
```