

CSCI 2300, Spring 2019

## Homework 1 [50 points]

### Overview

In this homework, you will use the concepts we learned in class to reinforce your understanding of:

- How to structure a Java program with multiple files
- How to break a problem description into a simple program design
- How to transition from a simple design to code
- How to use primitive and non-primitive data types in Java
- How to use select Java classes (Scanner, String, ArrayList, etc)

This is an individual homework assignment. Please review Academic Integrity section of the class syllabus for rules on individual homework assignments.

### Description

For this homework, you will design and implement a program for keeping track of a family tree. Suppose we have a CSV file with a list of people and their parents. Given this CSV file, we want to be able to answer the following questions:

- Who are a given person's parents?
- Who are a given person's siblings?
- Who are a given person's children?

For the purposes of this assignment, we will define "siblings" as people who have the same mother and father.

Your program will need a "menu", allowing the user to select his/her choice of an operation (like the menu we did in the "Book Catalog" example in class).

The CSV file lists a person's name (FIRST, LAST), followed by that person's father's name (FIRST, LAST), followed by that person's mother's name (FIRST, LAST). In other words, each line in the CSV file has 6 entries, separated by commas. Note that a person may be listed in the file as him/her-self and as someone's parent.

Create hw1 directory in your csci2300 git repository. Design and implement this program in the hw1 directory. Submit and push your .java files to the git repo. Do NOT submit .class files.

### Grading:

NOTE: The code you submit must compile. Code that does not compile will receive **at most** 50%.

[10 points] How well did you split the problem into classes?

[10 points] Does the program successfully load CSV file?

[10 points] Does the program allow to successfully view a person's parents?

[10 points] Does the program allow to successfully view a person's siblings?

[10 points] Does the program allow to successfully view a person's children?