

CS 251

Program 07

Due: Wenesday, October 8th

Main topics: Composition - Aggregation
Inheritance

Program Specification:

You are to design and implement a set of exactly five classes which can be used to model the most basic feature of an organization.

- **Person** - has only a name.
- **Member** - extends Person to include a unique id.
- **Leader** - extends Member to include what term of a 2 year term of office they are in.
- **Org:**
 - A Person can only be the Leader of a single Org.
 - A Person can be a Member of multiple Orgs.
 - An Org has a name.
 - An Org has a single Leader.
 - An Org may have many Members.
 - An Org can generate a roster of its' Leader and all its Members.
- **Driver** - A class which must fully test all of the above classes' functionality by minimally constructing two unique Orgs - with unique Leaders, and multiple Members - at least one of which is a Member of multiple Orgs.

Rules and Requirements:

- When designing your classes you must use Inheritance, Composition and Aggregation correctly to "Enforce" the defining characteristics above.
- For each class (other than Driver):
 - An appropriate default and specifying constructor must be included. In derived classes, the corresponding *super* constructor must be utilized.
 - All access of instance variables (within each class), by the other instance methods **must** be made via the classes' accessor(s) and/or mutator(s).

Submission:

1. Use your web browser to open:

<https://uwm.courses.wisconsin.edu/>

2. Login to D2L

3. Under *2179 - Fall 2017* you should see *CEAS-Computer Science* and under that *Intro Computer Programming*
4. Click on Intro Computer Programming
5. Click on **Dropbox** in the lower top menu bar
6. Click on **Program 07** in the *Programming Assignments* folder of the the current window
7. Click the **Add a File** button in the left center of the current window
8. Click the **Upload** button in the right top of the *Submit a File* pop-up window
9. Use the *File Upload* pop-up window to find the Java source code file you wish to submit: e.g. *Program07.java*
10. Click on this file name in the right panel of the *File Upload* pop-up window
11. Click the **Open** button in the *File Upload* pop-up window
12. Click the **Add** button in the bottom right top of the *Submit a File* pop-up window
13. Click the **Submit** button in the top / bottom right right of the current window