

Homework 1

50 points

Due Thursday, January 24th, 11:59pm

From the Book, Introduction to Java Programming, Programming Exercise 11.2:

11.2 (*The **Person**, **Student**, **Employee**, **Faculty**, and **Staff** classes*) Design a class named **Person** and its two subclasses named **Student** and **Employee**. Make **Faculty** and **Staff** subclasses of **Employee**. A person has a name, address, phone number, and email address. A student has a class status (freshman, sophomore, junior, or senior). Define the status as a constant. An employee has an office, salary, and date hired. Use the **MyDate** class defined in Programming Exercise 10.14 to create an object for date hired. A faculty member has office hours and a rank. A staff member has a title. Override the **toString** method in each class to display the class name and the person's name.

Additional Requirements:

- Create a TestPerson.java to demonstrate all the classes you have created.
- As mentioned, you need to use the MyDate class defined in Programming exercise 10.14, and it needs to contain a year, month, and day, with a constructor, and getters and setters. However you do not need to implement any of the other requirements from 10.14 (such as a constructor which defaults to the current time).

Below is a screenshot of Exercise 10.14, with the requirements you need. (I have removed the requirements you don't need for MyDate).

- The variable *status* does NOT need to be a constant.
- The toString() method should be overridden in your children classes, and called from your TestPerson.java Note: each class in Java inherits the toString() method, so you can always call this.toString(). As a suggestion, the easiest way to use this might be overriding the toString() method in each of your child classes, then calling this.toString() inside the method.

NOTE- Your TestPerson.java does not need to be complicated. You can simply create your 4 children objects, and call toString() and one other method (probably a getter() method) on each object.

***10.14** (The `MyDate` class) Design a class named `MyDate`. The class contains:

- The data fields `year`, `month`, and `day` that represent a date. `month` is 0-based, i.e., 0 is for January.
- A constructor that constructs a `MyDate` object with the specified year, month, and day.
- Three getter methods for the data fields `year`, `month`, and `day`, respectively.

Submit to Canvas:

Submit 1 zip file of all the files in your src folder.

Scoring rubric:

The following rubric will be used:

Criteria	% Points
Program works exactly as specified in the book, produces correct output for all input values tested, and incorporates a good coding style, naming conventions and comments.	100%
Program works exactly as specified in the book, produces correct output for all input values tested, but lacks a good coding style, naming conventions and/or comments.	80%
Program nearly works as specified in the book, and logic is present that will correctly solve the problem with minor modifications.	60%
Program does not work but sufficient logic is present that will solve the problem with some modifications.	40%
Some logic is present, but the program fails to solve the problem and major modifications are necessary to fix the program.	20%
Either no attempt was made, or the attempt made shows no progress toward solving the problem.	0%