

Final Project Step 1

Create the following five classes:

1. **Person:** first name, last name, id, phone, home address
2. **Student:** first name, last name, id, phone, home address, gpa, major, courses taken, courses currently taking, courses to be taken to graduate, number of credits currently taking.
3. **Faculty:** first name, last name, id, phone, home address, office address, title, department, pay scale (from 1 to 12)

The id numbers are all unique among the above three classes. They are automatically generated sequentially starting from 1. They can NOT be changed once created.

Also, *courses taken*, *courses currently taking*, and *courses to be taken to graduate* are to be stored in arrays or array lists.

4. **Textbook:** book title, name of the author, publisher, book price, ISBN number, and the year published.
5. **Course:** course title, course number, CRN number, textbook, faculty, number of credits, an array of students, classroom address

Now create three bag classes:

1. **PeopleBag:** contains three arrays or array lists, one for each of the first three types of objects
2. **TextbookBag:** contains an array or an array list of all the textbooks
3. **CourseBag:** contains an array or array list of all the courses

For each bag, you need the following methods:

1. **add()** method to add objects into the bag,
2. **display()** method to display the whole content of the bag
3. **find()** method to search the bag. In the **PeopleBag**, you search by id, in the **TextbookBag**, by ISBN number, and in the **CourseBag**, by the CRN number.
4. **delete()** method to delete a given object. In the **PeopleBag**, you delete by id, in the **TextbookBag**, by ISBN number, and in the **CourseBag**, by the CRN number.
5. **load()** method to load data from a text file for that bag to use. You may design your own data file. And the data items are separated by commas for each object and data for different objects are separated by a newline.

Write a demo program to show your achievements up to this point.