1. Give a definition for the following words in the context of Python classes:
   
   (a) Object
   (b) Class
   (c) Instance
   (d) Instance Variables
   (e) Methods
   (f) Constructor

2. Write a book class that holds the title, author, and page number as instance variables. Make sure to include a repr method.

3. I have two lists, one of which holds student names and the other holds student ID numbers. The \( i \)th name belongs to the \( i \)th ID. This is a bad system, however, because whenever I add a new student, I need to make sure all the ID numbers still match up. Write code that takes in two lists of this format, and returns a dictionary where the keys are the ID number and the values are the names.
4. Consider a *Student* class with one instance variable: a dictionary that maps class names to the grade points the student received in the class (4.0 if the student got A, 3.7 for an A-, etc.) Implement the following methods:
   
   (a) `getGrade(self, courseName)`

   (b) `listCourses(self)`

   (c) `addNewCourse(self, courseName, grade)`

   (d) `changeGrade(self, courseName, newGrade)`

   (e) `calculateGPA(self)`

   (f) `calculateCredits(self)` (assuming that all classes are 6 credits and a student only gets credits for grades of D- or better)