

FIRST QUIZ

You have 15 minutes from the start of class to complete this quiz. Read the questions with care; work with deliberate speed. Don't give us more than we ask for. The usual instructions apply. Good luck!

Problem 1 (12 points)

Suppose you're automating the records of a library. Write a complete definition of the class `Book`; it should include each of the following components

- Fields for the book's title, author (both Strings), and year of publication (a number)
- A constructor function that fills all the fields with its arguments
- Accessor (getter) functions for each of the fields
- A `toString` function that returns the book information in this form (assuming that the author Gerald Weinberg wrote the book *The Psychology of Computer Programming* in 1971):

`<i>The Psychology of Computer Programming</i> by Gerald M. Weinberg (1971).`

We have provide a copy of the restaurants program as a reference.

Problem 2 (10 points)

Your library management program will also have a class `BookList` for the collection of books. Write the method `printRecentBooks` as described below. Assume the `BookList` class has a field called `theBooks` that contains an `ArrayList` of all the books.

```
// Take a publication year as an argument and print out each book published in that
// year or later.
public void printRecentBooks (int cutoffYear) {
```

```
}
```

Problem 3 (3 points)

We know that we can write Java code to implement any kind of repetition task using a while loop. So why does Java give us four different kinds of loops? What's the advantage of that additional complexity? Answer in one or two brief English sentences, but don't just say, "It's more convenient."