For this homework, you should test your answers using Galax, an XQuery processor. See http://www.seas.upenn.edu/~zives/assignments.htm for information about where to download the Galax system for Windows, Linux, or Solaris. Alternatively, you can ssh to eniac-l.seas.upenn.edu (note the extra “-l”: ordinary eniac will not work) and run ~zives/galax/bin/galax on your query source file(s).

Consider the schemas for an online bookstore shown in Figures 1 and 2, derived from student answers to Problem 2 in the previous homework. These schemas are available at ~tjgreen/public/schema-a.xml and ~tjgreen/public/schema-b.xml, with corresponding sample data sets ~tjgreen/public/data-a.xml and ~tjgreen/public/data-b.xml.

**Problem 1 [25 points]:** Write an XML Schema capturing an integrated view of the two schemas.

**Problem 2 [25 points]:** Write a view in XQuery over the two schemas outputting XML that conforms to your integrated schema.

**Problem 3 [25 points]:** Write the following query in XQuery over your view from the previous problem: Find all books written by authors named Jim Gray.

**Problem 4 [25 points]:** Manually write the unfolding of the previous query over Schema A.