**Ex 6.6.1:** This and the next exercises involve certain programs that operate on the two relations

- **Product** (maker, model, type)
- **PC** (model, speed, ram, hd, price)

from our running PC exercise. Sketch the following programs, including SQL statements and work done in a conventional language. Do not forget to issue BEGIN TRANSACTION, COMMIT, and ROLLBACK statements at the proper times and to tell the system your transactions are read-only if they are.

a) Given a speed and amount of RAM (as arguments of the function), look up the PC’s with that speed and RAM, printing the model number and price of each.

b) Given a model number, delete the tuple for that model from both PC and Product.

c) Given a model number, decrease the price of that model PC by $100.

d) Given a maker, model number, processor speed, RAM size, hard-disk size, and price, check that there is no product with that model. If there is such a model, print an error message for the user. If no such model existed in the database, enter the information about that model into the PC and Product tables.

**Ex 6.6.2:** For each of the programs of Ex 6.6.1, discuss the atomicity problems, if any, that could occur should the system crash in the middle of an execution of the program.