3.14 Consider the insurance database of Figure 3.17, where the primary keys are underlined. Construct the following SQL queries for this relational database.

    a. Find the number of accidents involving a car belonging to a person named "John Smith".

    b. Update the damage amount for the car with license_plate "AABB2000" in the accident with report number "AR2197" to $3000.

3.15 Consider the bank database of Figure 3.18, where the primary keys are underlined. Construct the following SQL queries for this relational database.

    a. Find each customer who has an account at *every* branch located in "Brooklyn".

    b. Find the total sum of all loan amounts in the bank.

    c. Find the names of all branches that have assets greater than those of at least one branch located in "Brooklyn".

3.16 Consider the employee database of Figure 3.19, where the primary keys are underlined. Give an expression in SQL for each of the following queries.

    a. Find ID and name of each employee who lives in the same city as the location of the company for which the employee works.

    b. Find ID and name of each employee who lives in the same city and on the same street as does her or his manager.

    c. Find ID and name of each employee who earns more than the average salary of all employees of her or his company.

    d. Find the company that has the smallest payroll.

3.17 Consider the employee database of Figure 3.19. Give an expression in SQL for each of the following queries.

    a. Give all employees of "First Bank Corporation" a 10 percent raise.

    b. Give all managers of "First Bank Corporation" a 10 percent raise.

    c. Delete all tuples in the *works* relation for employees of "Small Bank Corporation".

3.18 Give an SQL schema definition for the employee database of Figure 3.19. Choose an appropriate domain for each attribute and an appropriate primary key for each relation schema. Include any foreign-key constraints that might be appropriate.

3.19 List two reasons why null values might be introduced into the database.

3.20 Show that, in SQL, **<> all** is identical to **not in**.