*-- 1. a. Find the total number of people who owned cars that were involved in accidents in 1989.*

**select** count(distinct person.driver\_id)  
**from** person, accident, participated  
**where** accident.date **like** '%1989%' **and** participated.report\_number = accident.report\_number **and** participated.driver\_id = person.driver\_id;

*-- 1. b. Find the number of accidents in which the cars belonging to “John Smith” were involved.*

**select** count(accident.report\_number)

**from** person, accident, participated

**where** accident.report\_number = participated.report\_number **and** participated.driver\_id = person.driver\_id **and** person.name = 'John Smith'

*-- 1. c. Add a new accident to the database; assume any values for required attributes.*

**insert into** accident

**values** ('1111234', '01-Jan-2020', 'McAllen');

**insert into** participated

**select** owns.driver\_id, car.car\_license, '1111234', '3000'

**from** person, owns, car

**where** owns.driver\_id = person.driver\_id **and** owns.car\_license = car.car\_license **and** person.name = 'John Smith' **and** car.model = ‘Toyota';

*-- 1. d. Delete the Mazda belonging to "John Smith".*

**delete from** car

**where** car.model = 'Mazda' **and** car.car\_license **in**

(**select** owns.car\_license

**from** person, owns

**where** person.name = 'John Smith' **and** person.driver-id = owns.driver-id);

*-- 1. e. Update the damage amount for the car with license number “AABB2000” in the accident with report number “AR2197” to $3000.*

**update** participated, accident

**set** participated.damage\_amount = '3000' *-- I do not know if SQL allows dollar signs in the fields.*

**where** participated.car-license = 'AABB2000' **and** accident.report-number = 'AR2197' **and** accident.report-number = participated.report-number;

*-- 2. a. Find the names of all employees who work for First Bank Corporation.*

**select** employee.employee\_name  
**from** employee, works, company  
**where** works.employee\_id = employee.employee\_id **and** works.company\_id = company.company\_id **and** company.company\_name = 'First Bank Corporation';

*-- 2. b. Find the names and cities of residence of all employees who work for First Bank Corporation.*

**select** employee.employee\_name, employee.city

**from** employee, works, company

**where** works.employee\_id = employee.employee\_id **and** works.company\_id = company.company\_id **and** company.company\_name = 'First Bank Corporation';

*-- 2. c. Find the names, street addresses, and cities of residence of all employees who work for First Bank Corporation and earn more than $10,000.*

**select** employee.employee\_name, employee.city, employee.street

**from** employee, works, company

**where** works.employee\_id = employee.employee\_id **and** works.company\_id = company.company\_id **and** company.company\_name = 'First Bank Corporation' **and** works.salary > ‘10000';

*-- 2. d. Find all employees in the database who live in the same cities as the companies for which they work.*

**select** employee.employee\_name

**from** employee, works, company

**where** works.employee\_id = employee.employee\_id **and** works.company\_id = company.company\_id **and** company.city = employee.city;

*-- 2. e. Find all employees in the database who live in the same cities and on the same streets as do their managers.*

**select** X.employee\_name

**from** employee **as** X, employee **as** Y, manages **as** M

**where** M.employee\_id = Y.employee\_id **and** M.manager\_id = X.employee\_id **and** X.city = Y.city **and** X.street = Y.street;

*-- 2. f. Find all employees in the database who do not work for the First Bank Corporation.*

**select** employee.employee\_name  
**from** employee, works, company  
**where** employee.employee\_name **not in**  
(**select** employee.employee\_name  
**from** employee, works, company  
**where** works.employee\_id = employee.employee\_id **and** works.company\_id = company.company\_id **and** company.company\_name = 'First Bank Corporation');

*-- 2. g. Find all employees in the database who earn more than each employee of Small Bank Corporation.*

**select** employee.employee\_name  
**from** works, employee  
**where** works.employee\_id = employee.employee\_id **and**   
works.salary **> all**  
(**select** works.salary  
**from** works, company, employee  
**where** company.company\_name = 'Small Bank Corporation'  
**and** works.employee\_id = employee.employee\_id  
**and** works.company\_id = company.company\_id);

*-- 2. h. Assume that the companies may be located in several cities. Find all companies located in every city in which Small Bank Corporation is located.*

**select** **distinct** C1.company\_name

**from** company **as** C1, company **as** C2

**where** C2.city **in**

(**select** C1.city

**from** company as C1

**where** C1.company\_name = 'Small Bank Corporation');

*-- 2. i. Find all employees who earn more than the average salary of all employees of their company.*

**select** W1.salary, C1.company\_name, E1.employee\_name  
**from** works **as** W1, company **as** C1, employee **as** E1  
**where** W1.company\_id = C1.company\_id  
**and** W1.employee\_id = E1.employee\_id  
**and** W1.salary > (select avg(W2.salary) **as** avg2\_salary  
**from** works as W2, company as C2  
**where** C2.company\_name = C1.company\_name);

*-- 2. j. Find the company that has the most employees.*

**create view** employee\_number(company\_is, company\_workers)

**as**

**select** C1.company\_name **as** company\_is, **count**(W1.company\_id) **as** company\_workers  
**from** works **as** W1, company **as** C1  
**group by** C1.company\_name;

**select** company\_is

**from** employee\_number

**where company\_workers** = (**select** **max**(company\_workers) **from** employee\_number);

*-- 2. k. Find the company that has the smallest payroll.*

**create view** payroll(company\_is, company\_salary)

**as**

**select** C1.company\_name **as** company\_is, sum(W1.salary) **as** company\_salary

**from** works **as** W1, company **as** C1

**group by** C1.company\_name;

**select** company\_is

**from** payroll

**where company\_salary** = (**select** **min**(company\_salary) **from** payroll);

*-- 2. l. Find those companies whose employees earn a higher salary, on average, than the average of First Bank Corporation.*

**select** avg(W1.salary) **as** avg\_salary, C1.company\_name  
**from** works **as** W1, company **as** C1  
**group by** C1.company\_name  
**having** avg\_salary > (select avg(W2.salary) **as** avg2\_salary  
**from** works **as** W2, company **as** C2  
**where** C2.company\_name = 'First Bank Corporation');