Solution:

a. Write a query to select all columns and rows from the employees table.

SELECT * FROM employees;

b. Write a query to select only the name and salary columns of all employees with a salary greater than 50000.

SELECT name, salary FROM employees WHERE salary > 50000;

c. Write a query to calculate the average salary of all employees.

SELECT AVG(salary) FROM employees;

d. Write a query to count the number of employees who work in the "Marketing" department.

SELECT COUNT(*) FROM employees WHERE department_id = (SELECT id FROM departments WHERE name = 'Marketing');

e. To update the salary column of the employee with an id of 1001 to 60000, use the following SQL command:

UPDATE employees SET salary = 60000 WHERE id = 1001;

f. To delete all employees whose salary is less than 30000, use the following SQL command:

DELETE FROM employees WHERE salary < 30000;

a. To select all columns and rows from the departments table, use the following SQL command:

SELECT * FROM departments;

b. To select only the name and manager columns of the "Finance" department, use the following SQL command

SELECT name, manager FROM departments WHERE name = 'Finance';

c. To calculate the total number of employees in each department, use the following SQL command:

SELECT departments.name, COUNT(*) as total FROM employees INNER JOIN departments ON employees.department_id = departments.id GROUP BY departments.name;

d. To insert a new department called "Research" with a manager named "John Doe", use the following SQL command:

INSERT INTO departments (name, manager) VALUES ('Research', 'John Doe');