-- At first I have created 'XYZ Corp.' database with 'employees' and 'departments' tables.

CREATE DATABASE xyz\_corp;

CREATE TABLE employees (

    id INT PRIMARY KEY,

    name VARCHAR(26) NULL,

    age INT NULL,

    salary INT NULL,

    department\_id INT

);

CREATE TABLE departments (

    id INT PRIMARY KEY,

    name VARCHAR(26),

    manager VARCHAR(12)

);

-- Use the employees table to answer the following questions:

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

SELECT \* FROM employees; -- we use 'SELECT' extracts data from a database.

-- 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; -- we use 'WHERE' command to extract only those records that fulfill a specified condition.

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

SELECT AVG(salary) FROM employees; --'AVG()' function used to get average value.

-- 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'); --'COUNT()' function for counting entity.

-- e. Write a query to update the salary column of the employee with an id of 1001 to 60000.

UPDATE employees SET salary = 60000 WHERE id = 1001; -- 'SET' used to assign values for variables.

-- f. Write a query to delete all employees whose salary is less than 30000.

DELETE FROM employees WHERE salary < 30000; --'DELETE' command deletes data from a database.

-- Use the departments table to answer the following questions:

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

SELECT \* FROM departments;

-- b. Write a query to select only the name and manager columns of the "Finance" department.

SELECT name,

manager FROM departments WHERE name = 'Finance';

-- c. Write a query to calculate the total number of employees in each department.

SELECT departments.name,

COUNT(\*) FROM employees JOIN departments ON employees.department\_id = departments.id GROUP BY departments.name;

-- d. Write a query to insert a new department called "Research" with a manager named "John Doe".

INSERT INTO departments (name, manager) VALUES ('Research', 'John Doe'); --'INSERT INTO' command inserts new data into a database.