

Assignment 2

Part 1

1. This problem requires the use of MySQL. I have uploaded an SQL dump file with this assignment on canvas (*elmasri_company.sql*), which you will import into your MySQL instance. If you previously imported the **elmasri_company** database into your MySQL instance, you should drop this database and import it again using the file provided on canvas, to ensure that you are using a database that contains the correct schema and data for this exercise. You should also avoid adding, deleting, or modifying any data in the base tables of this database, as I will be looking for expected results based on the relational instance I've given you. You need to create an SQL script file (.sql file) that contains a series of SQL queries that retrieve the information requested for each of the items below:

- a. List the first name, middle initial, and last name of all employees who earn a salary greater than 27,000.
- b. List the first name, last name, and address of all employees who have a son as a dependent but do not have a daughter as a dependent.
- c. List the full name (first name, middle initial, and last name) of each employee in a single column named "Employee", sorting the employees in alphabetical order by last name. If the employee has a supervisor, list the full name of the supervisor in a single column named "Supervisor".
- d. List the name and total working hours for all projects based in Houston that have more than two employees working on them.
- e. List the SSN, first name, middle initial, and last name of all employees who work in the department that has the employee with the highest salary among all employees.
- f. List the project name and the department that manages that project for all projects that have supervisors working on them for at least 20 hours.
- g. List the name of the department whose employees have the greatest total of dependents.
- h. List the location(s) of the department that works the fewest number of hours on projects.

Part 2

Please download the `Premiere_Products_HW1.sql` file posted to Canvas with this assignment and import it into MySQL using the MySQL Workbench tool as shown in class. This script creates a copy of the Premiere Products database. Once you've imported the database, complete the following tasks in MySQL.

a. Create a table named "WarehouseDetail" in the database. The table should have two columns: WarehouseNum and Location. Set WarehouseNum as the primary key for this table.

b. Create the following records in the newly created WarehouseDetail table (the method demonstrated in class with the MySQL Workbench Results Grid):

- i. WarehouseNum = 1, Location = New Haven, CT
- ii. WarehouseNum = 2, Location = Boston, MA
- iii. WarehouseNum = 3, Location = White Plains, NY

c. Once you've populated the table with the records specified in item b, create a foreign key constraint on the Part table, making the Warehouse column in the Part table reference WarehouseNum in the WarehouseDetail table.

d. Create a new table named "PartInWarehouse" in the database. The table should have two columns: MyPartNum2 and MyWarehouseNum2. MyPartNum2 should be set as the primary key for this table.

- i. MyPartNum2 should be set as a foreign key to PartNum in the Part table.
- ii. MyWarehouse2 should be set as a foreign key to WarehouseNum in the WarehouseDetail table.

e. Create the following records in the newly created PartInWarehouse table:

- i. MyPartNum2 = FD21, MyWarehouseNum2 = 3
- ii. MyPartNum2 = KV29, MyWarehouseNum2 = 2
- iii. MyPartNum2 = AT94, MyWarehouseNum2 = 3

f. Show how the primary key constraint is being correctly enforced in the PartInWarehouse table by trying to add the following record to that table:

- i. MyPartNum2 = KV29, MyWarehouseNum2 = 1

g. Show how the foreign key constraint is being correctly enforced in the PartInWarehouse table by trying to add the following record to that table: i. MyPartNum2 = DW11, MyWarehouseNum = 5

h. Use the Export Data function in MySQL Workbench to export a self-contained dump file (.sql file) of your database. Please name your dump file as follows: [your UNH username]_HW1Q4.sql. For example, a student with the UNH username jsmith2 would name the file ***jsmith2_HW1Q4.sql***.