5COSC002W DATABASE SYSTEMS
2019-2020 Tutorial 06
Querying a table in SQL

Tutorial 06 Case study for querying a database table

Carefully consider the logical ERD shown below for the ***MegaFirm*** organisation (figure 1)**.**

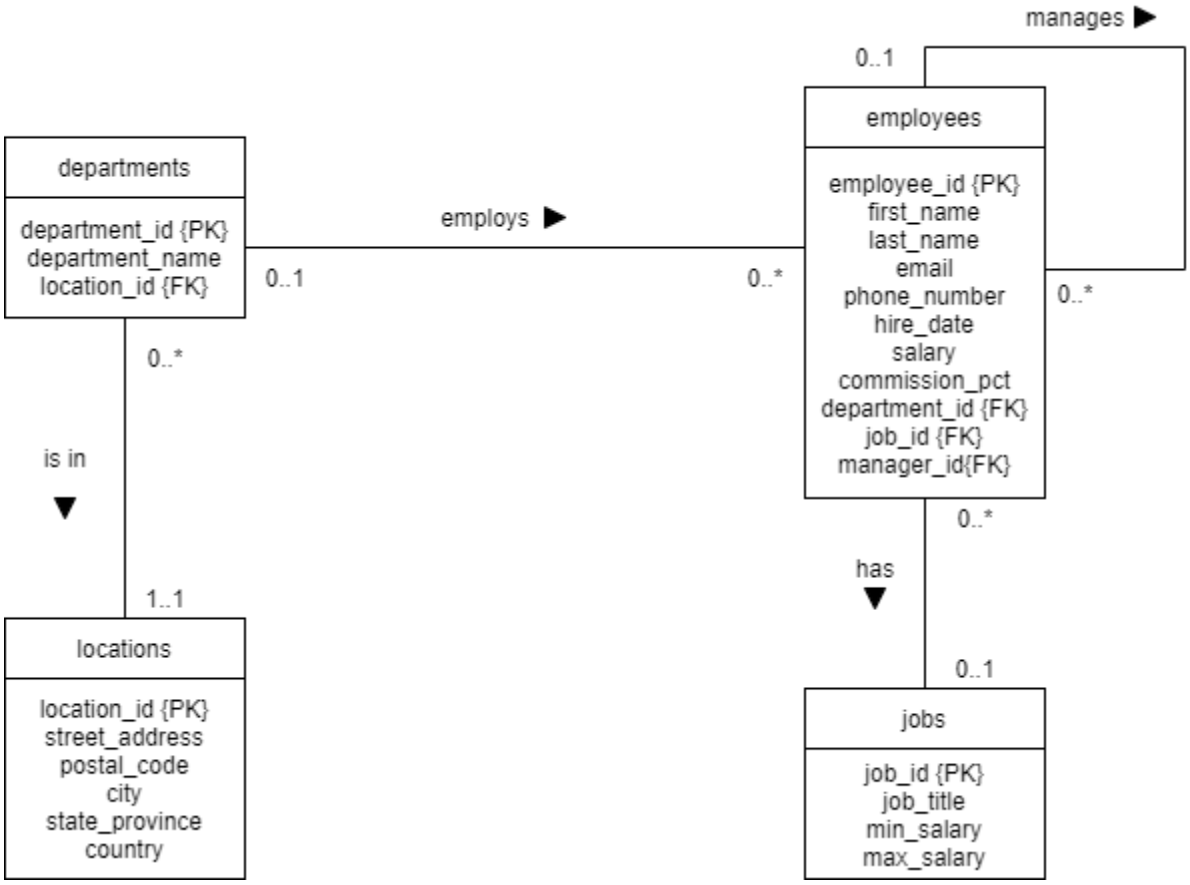

Figure 1: MegaFirm Logical ERD

Open a code editor like Notepad++ and access the MySQL RDBMS through phpMyAdmin

On Blackboard, in the '*Welcome & Essential Module Docs'* section, open the *'Software Guide'* and follow the instructions for points 2, 3 and 4 to open Notepad++ (or any other code editor) and access the MySQL Database Management System (DBMS) through phpMyAdmin.

Use the tables for MegaFirm in MySQL as created and populated in Tutorial 05

If you have not created and populated the tables for MegaFirm, get the "Tutorial 05- SQL Script" in *'Section 03 – Implementation & Data Manipulation in SQL'.*
Open the script in Notepad++ and copy and paste the code in the SQL area of phpMyAdmin (2nd tab 'SQL') and run it by clicking on "Go".
Alternatively, import the script (6th tab 'Import') and execute it.

Tutorial 06 Question 01

1.1. Write a simple SQL query to display the content of the employees table.

1.2. Write a simple SQL query to display the content of the departments table.

1.3. Write a simple SQL query to display the employee number, last name, job code, hire date and department id for each employee.

1.4. Write a simple SQL query to display the department id and department name for each department.

Tutorial 06 Question 02

2.1. Create a query that displays the last name and salary of employees earning more than £45,000.

2.2. Modify this query to display the last name and salary for all employees whose salary is not in the range of £47,000 to £57,000.

2.3. Create a query that displays the last name, hire date and department id of employees called Matos

2.4. Create a query that displays the last name, hire date and salary of employees hired after 1st January 2016.

Tutorial 06 Question 03

3.1. Create a report to display the last name, job id, and start date for the employees with the last names of Matos and Taylor. Order the query in ascending order by start date.

3.2. Create a query to list the last name, salary and department ids for employees who earn between £37,000 and £57,000 and are in department 20 or 40. Label the columns Employee, Yearly Salary, and DepId respectively.

3.3. Create a query to list the last name, job id, hire date and salary of employees who work in department 40 and who earn more than 41000 as well as those who work in the same department and were hired before the 15th February 2016.

Tutorial 06 Question 04

4.1. Create a query to display all employee last names in which the third letter of the name is a.

4.2. Create a query to display the last name of all employees who have both an a and an t in their last name.

5.3. Create a query that displays the last name and hire date for all employees who were hired in 2014.

Tutorial 06 Question 05

5.1 Create a query to display the last name, job id, and salary for all employees whose job id is 902 or 903 and whose salary is not equal to £35000, £41000, or £51000.

5.2 Create a query to display the last name, job id, salary, hire date for all employees for which, either their job id is 909 or 911 and their salary is less than 45000, or they were hired before 3rd March 2017 and their last names contains the letter ‘o’ as the one letter before last.