

## Topic: SQL queries

### Learning objective:

1. Practice writing SQL queries.

**Instruction:** Given the threetables database you created in the previous class participation, run addEmp.sql to add more rows into the database. Write SQL queries to answer the following questions in your team's Google Docs file. Don't include other attributes that are not asked in the questions in your answers.

Put the SQL statements of questions 2, 4, and 6 in <netid>.sql where <netid> is replaced by each team member's netid. Test that the statements run correctly in your local MySQL server. Submit the sql file.

1. Show eids of all employees who work on all departments in the dept relation. Show the eid and the number of departments the employee works for in descending order of eid.  
**Output:** eid of 121 and 6 as the number of departments.
2. List the values of eid and ename of all employees who have not worked in any department in three different ways. One way uses left join; another way uses the **in** operator; and another way uses the **exists** operator.  
**Output:** eid of 120
3. Find eids and names of the managers who manage the department with the largest budget.
4. For each department, print department ID, department name, and the highest salary of the employee who works in that department. List only departments with the highest salary paid within the department over 4 million dollars.
5. List employees who work in exactly three departments. Show the eid and ename values. It does not matter which three departments.
6. Find employees who work in Accounting, Human Resource, and Maintenance departments. These employees may work in additional departments. For each of these employees, show the name and the percent work time for the three departments combined.