

Please, complete the readings indicated on Quercus (also linked below) before completing this part of the prep:

- [NULL values in SQL](#)
- [Joins in SQL](#)

All readings are also available via the Lectures page on Quercus.

For the queries in **prep5.txt**, follow these rules:

- **Duplicates:** Do not remove any duplicates.
- **Technique:** Use the technique specified. You could solve these in other ways, for instance with GROUP BY and aggregation, but the purpose of this prep is to practice various kinds of joins. If you don't use the specified technique, your answer may be graded as incorrect due to having differences in what duplicates are or are not present.
- **Order:** The order in which your tuples are returned does not matter, unless explicitly specified.

How to Submit

Enter your answers into **prep5.txt**: your answers should all be placed under the line of ---s. For example, your answers should look as follows:

```
=====
[Q1] The question will be asked here.
-----
ENTER YOUR ANSWER HERE
=====
```

You may run the automated self-tests on MarkUs in order to check the correctness of your answers. To do this, submit your prep5.txt and then click on the "Automated Testing" tab. Click "Run tests": your results should appear after a few minutes.

Employee Schema

sales(eid, day, amount)

employee(eid, name, salary, dept)

manages(manager, junior)

department(did, name, division)

employee[dept] \subseteq department[did]

$\text{manages}[\text{manager}] \subseteq \text{employee}[\text{eid}]$

$\text{manages}[\text{junior}] \subseteq \text{employee}[\text{eid}]$

$\text{sales}[\text{eid}] \subseteq \text{employee}[\text{eid}]$