### SQL

1. Simple table to represent java object
   1. Expand to two tables with foreign key relationships
   2. Expand to query with order by
   3. Expand to query with group by, sum, etc.
   4. Deadlocks - how to avoid them - indexes, etc.
2. Discussion around normalization/denormalization
   1. Why normalize?  More efficient space usage, updates are faster
   2. Why denormalize?  More efficient return of data
3. Replication technologies
4. Find the  employee name and corresponding manager name from an employee table, which consists 3 columns: 1. Empid 2.emp\_name 3. Manager\_Id

https://blog.sqlauthority.com/2016/03/27/self-join-explain-example-interview-question-week-064/

SELECT e1.Name EmployeeName, **ISNULL**(e2.name, 'Top Manager') AS ManagerName

FROM Employee e1

**LEFT JOIN** Employee e2

ON e1.ManagerID = e2.EmployeeID

1. Highest salary

<https://oracle-base.com/articles/misc/rank-dense-rank-first-last-analytic-functions>

<https://javarevisited.blogspot.com/2015/11/2nd-highest-salary-in-oracle-using-rownumber-rank-example.html>

SELECT name, MAX(salary) AS salary

FROM employee

WHERE salary < (SELECT MAX(salary)

FROM employee);