# SQL Challenge

```
Employees *
 🔑 EmployeeID
    DepartmentID
    BossID
    Name
    Salary
```
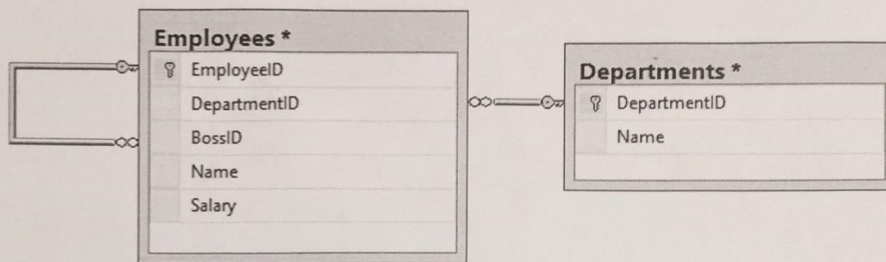
```
Departments *
 🔑 DepartmentID
    Name
```

1. List all employees (names) that work in the Finance department

   ~~SELECT *~~

   ~~FROM EmployeeID~~

   ~~WHERE DepartmentID = finance~~

   ```
   SELECT e.Name as 'finance_employees'
   FROM Employees e
   JOIN Departments
   ON e.DepartmentID =
                      d.DepartmentID
   WHERE d.Name = 'Finance';
   ```

2. List all departments along with the number of people there

   ```
   SELECT d.Name as 'departments', COUNT(*) num_people
   FROM    Departments d
   JOIN    Employees e
   ON      d.DepartmentID = e.DepartmentID
   GROUP BY d.Name;
   ```

3. List employees (names) who have a bigger salary than their boss

   ```
   SELECT e.Name as 'special_employees'
   FROM    Employees e
   JOIN    Employees e2
   ON e.EmployeeID = e2.BossID
   WHERE e.Salary > e2.Salary;
   ```

4. List employees who have the biggest salary in their departments

   ```
   SELECT d.Name as 'department', e.Name as 'employee', Max(e.Salary) as 'salary'
   FROM    Employees e
   JOIN    Departments d
   ON      e.DepartmentID = d.DepartmentID
   GROUP BY d.Name, e.Name;
   ```

5. List departments that have less than 3 people in it

   ```
   SELECT d.Name as 'department' FROM Department d
   JOIN Employees e
   ON d.DepartmentID = e.DepartmentID
   GROUP BY d.Name
   HAVING COUNT(e.EmployeeID) < 3;
   ```

6. List employees that don't have a boss in the same department

   ```
   SELECT e.Name as 'noboss_employee'
   FROM    Employees e
   JOIN    Employees e2
   ON      e.EmployeeID = e2.BossID
   WHERE e2.BossID is NULL
   OR    e.DepartmentID != e2.DepartmentID;
   ```