

## CSG1207/CSI5135: Systems and Database Design

### Lab 06 - Solutions

#### Standard Disclaimer

*Many questions you encounter in this and other labs have more than one solution which is valid and correct. There are often numerous ways to achieve the same results in an SQL query.*

*The solutions provided here may NOT be the only correct answers to the questions. If you have arrived at solution to a lab task that differs substantially from what is provided here and would like feedback on your solution, please contact your tutor.*

#### Lab Tasks

- Q1.**        `SELECT last_name, job_id, salary  
FROM employee  
WHERE salary >= 12000;`
- Q2.** C.
- Q3.**        `SELECT first_name + ' ' + last_name AS 'full_name'  
FROM employee  
WHERE gender IS NULL  
ORDER BY first_name;`
- Q4.**        `SELECT employee_id, last_name, salary  
FROM employee  
WHERE salary < 5000 OR salary > 15000  
ORDER BY salary DESC;`  
(Note: An alternate solution using NOT BETWEEN is also possible)
- Q5.**        `SELECT last_name, hire_date, salary  
FROM employee  
WHERE hire_date BETWEEN '01-JUN-1997' AND '20-SEP-1999'  
AND salary > 5000;`  
(Note: Other date formats exist – be sure to test whichever you use!)
- Q6.**        `SELECT last_name  
FROM employee  
WHERE last_name LIKE '%a%' AND last_name LIKE '%e%'  
ORDER BY last_name DESC;`

**Q7. Errors:** Missing single quote marks around date, missing parentheses around the OR comparisons, and "<" is used instead of ">" in the salary comparison.

```
SELECT *
FROM employee
WHERE (hire_date < '01-JAN-1988' OR gender = 'F')
AND salary >= 15000;
```

**Q8.**

```
SELECT first_name, job_id
FROM employee
WHERE job_id IN ('IT_PROG', 'ST_CLERK', 'SA_REP')
AND first_name LIKE '[A-D]%'
ORDER BY first_name;
```

**Q9.**

```
SELECT TOP 3 last_name, salary, job_id
FROM employee
WHERE job_id NOT LIKE 'AD%'
ORDER BY salary DESC;
```

### Challenge Query!

**Q10.**

```
SELECT first_name + ' ' + last_name AS 'the_thief'
FROM employee
WHERE job_id IN ('ST_MAN', 'ST_CLERK', 'SA_MAN', 'SA_REP')
AND (first_name LIKE '%el%' OR last_name LIKE '%el%')
AND (gender = 'F' OR gender IS NULL)
AND hire_date <= '15-JUN-1997';
```

#### Notes:

- The thief is Ellen Abel.
- Just `gender = 'F'` on its own is not suitable, as it does not account for employees with no gender recorded in the database – those employees *may* be female.
- The perfume (indicating a female thief) is not needed to identify the thief – the rest of the evidence is enough to narrow it down to one.