

## INTERMEDIATE - PART II

### Joins

1. Get all province id and province names from which we've had any patients

```
SELECT DISTINCT patients.province_id, province_names.province_name
FROM patients
LEFT JOIN province_names
ON patients.province_id = province_names.province_id;
```

2. Do we have any provinces from which we do not have any patients?

(This can also be answered with full outer join)

```
SELECT DISTINCT patients.province_id, province_names.province_name
FROM patients
RIGHT JOIN province_names
ON patients.province_id = province_names.province_id;
```

3. Get the patient id and admission date of all the patients who have been admitted

```
SELECT patients.patient_id, admissions.admission_date
FROM patients
INNER JOIN admissions
ON patients.patient_id = admissions.patient_id;
```

### Join and filtering/aggregation

4. Show patient\_id, first\_name, last\_name from patients whose diagnosis is 'Dementia'.  
Primary diagnosis is stored in the admissions table.

```
SELECT
patients.patient_id,first_name,last_name
,diagnosis
FROM patients
JOIN admissions
ON admissions.patient_id = patients.patient_id
WHERE diagnosis = 'Dementia';
```

5. Display the total number of patients from each province. Order by descending.

```
SELECT province_name,  
COUNT(*) AS patient_count  
FROM patients pa  
JOIN province_names pr  
ON pr.province_id = pa.province_id  
GROUP BY pr.province_id  
ORDER BY patient_count DESC;
```

### Multiple Joins

6. Show patient\_id, first\_name, last\_name, and attending doctor's specialty.  
Show only the patients who has a diagnosis as 'Epilepsy' and the doctor's first name is 'Lisa'  
Check patients, admissions, and doctors tables for required information.

```
SELECT patients.patient_id, patients.first_name,  
patients.last_name, doctors.specialty  
FROM patients  
JOIN admissions  
ON patients.patient_id = admissions.patient_id  
JOIN doctors  
ON admissions.attending_doctor_id = doctors.doctor_id  
WHERE diagnosis='Epilepsy'  
AND doctors.first_name = 'Lisa';
```