

Hospital Database hospital.db

Getting the patients table[1]

```
mysql> select * from patients;
```

patient_id	first_name	last_name	gender	birth_date	city	province_id	allergies	height	weight
1	Donald	Waterfield	M	1963-02-12	Barrie	ON	NULL	156	65
2	Mickey	Baasha	M	1981-05-28	Dundas	ON	Sulfa	185	76
3	Jiji	Sharma	M	1957-09-05	Hamilton	ON	Penicillin	194	106
4	Blair	Diaz	M	1967-01-07	Hamilton	ON	NULL	191	104
5	Charles	Wolfe	M	2017-11-19	Orillia	ON	Penicillin	47	10
6	Sue	Falcon	F	2017-09-30	Ajax	ON	Penicillin	43	5

1. Show the first and last names of patients who do not have allergies. (null)

```
mysql> select first_name, last_name, allergies
        from patients
        where allergies IS NULL;
```

first_name	last_name
Donald	Waterfield
Blair	Diaz

2. Display all the names that start with the letter C

```
mysql> select first_name  
      from patients  
      where first_name like 'C%';
```

first_name
Charles

3. Show the first name and last name of patients that weigh within the range of 100 to 120 (inclusive)

```
mysql> select first_name, last_name, weight  
      from patients  
      where weight<=100 and weight>=100;
```

first_name	last_name	weight
Jiji	Sharma	106
Blair	Diaz	104
Thomas	ONeill	117

Getting the admissions table[2]

```
mysql> select * from admissions;
```

patient_id	admission_date	discharge_date	diagnosis	attending_doctor_id
1	2018-11-06	2018-11-08	Ovarian Dermoid-Cyct	21
1	2018-09-20	2018-09-20	Ineffective Breathin Pattern R/T Fluid Accumulatio	24
3	2019-01-24	2019-01-29	Cardiac Arrest	2
3	2018-10-21	2018-10-27	Congestive Heart Failure	8
6	2018-06-13	2018-06-15	Asthma Exacerbation	3
6	2018-11-08	2018-11-09	Uterine Fibroid	22

4. Show patient_id, first_name, and last_name from patients diagnosed with ‘Cardiac Arrest’.

```
mysql> select patients.patients_id, first_name, last_name
        from patients
        join admissions on admissions.patient_id = patients.patients_id
        where diagnosis= 'Cardiac Arrest';
```

patient_id	first_name	last_name
3	Jiji	Sharma

Getting the province_names table[3]

```
mysql> select * from province_names;
```

province_id	province_name
AB	Alberta
BC	British Columbia
MB	Manitoba
NB	New Brunswick
NL	Newfoundland and Labrador
NT	Northwest Territories
NS	Nova Scotia
NU	Nunavut
ON	Ontario

5. Show each patient's first name, last name, and full province name of each patient.

```
mysql> select first_name, last_name, province_name
      from patients
      join province_name on province_name.province_id = patients.province_id;
```

first_name	last_name	province_name
Donald	Waterfield	Ontario
Mickey	Baasha	Ontario
Jiji	Sharma	Ontario
Blair	Diaz	Ontario
Charles	Wolfe	Ontario
Sue	Falcon	Ontario

6. Natural Join to join the table 'patients' and 'admissions' using the common field 'patient_id': (shows only the records with common patient_id in both the tables)

```
mysql> select *
```

```
from patients
Natural Join admissions;
```

patient_id	first_name	last_name	gender	birth_date	city	province_id	allergies	height	weight	admission_date	discharge_date	diagnosis	attending_doctor_id
1	Donald	Waterfield	M	1963-02-12	Barrie	ON	NULL	156	65	2018-11-06	2018-11-08	Ovarian Dermoid-Cyct	21
1	Donald	Waterfield	M	1963-02-12	Barrie	ON	NULL	156	65	2018-09-20	2018-09-20	Ineffective Breathin Pattern R/T Fluid Accumulatio	24
3	Jiji	Sharma	M	1957-09-05	Hamilton	ON	Penicillin	194	106	2019-01-24	2019-01-29	Cardiac Arrest	2
3	Jiji	Sharma	M	1957-09-05	Hamilton	ON	Penicillin	194	106	2018-10-21	2018-10-27	Congestive Heart Failure	8
6	Sue	Falcon	F	2017-09-30	Ajax	ON	Penicillin	43	5	2018-06-13	2018-06-15	Asthma Exacerbation	3
6	Sue	Falcon	F	2017-09-30	Ajax	ON	Penicillin	43	5	2018-11-08	2018-11-09	Uterine Fibroid	22

7. Left Join to join the table ‘patients’ and ‘province_names’ using the fields ‘patient-id’ in ‘patients’ and ‘province_id’ in ‘province_names’:

(shows all the records of the left table joined with values of the right table and wherever the values are not present in the right table, it shows ‘null’)

```
mysql> select *
from patients
LEFT OUTER JOIN province_names on patients.patient_id = province_names.province_id;
```

patient_id	first_name	last_name	gender	birth_date	city	province_id	allergies	height	weight	province_id	province_name
1	Donald	Waterfield	M	1963-02-12	Barrie	ON	NULL	156	65	NULL	NULL
2	Mickey	Baasha	M	1981-05-28	Dundas	ON	Sulfa	185	76	NULL	NULL
3	Jiji	Sharma	M	1957-09-05	Hamilton	ON	Penicillin	194	106	NULL	NULL
4	Blair	Diaz	M	1967-01-07	Hamilton	ON	NULL	191	104	NULL	NULL
5	Charles	Wolfe	M	2017-11-19	Orillia	ON	Penicillin	47	10	NULL	NULL
6	Sue	Falcon	F	2017-09-30	Ajax	ON	Penicillin	43	5	NULL	NULL

8. Show unique birth years from patients and order them by ascending.

```
mysql> select DISTINCT YEAR(birth_date) AS birth_year
from patients
Order By birth_year;
```

birth_year
1957
1963
1967
1981
2017

**9. Show the total amount of male patients and the total amount of female patients in the patients table.
Display the two results in the same row.**

```
mysql> SELECT
      (SELECT count(*) FROM patients WHERE gender='M') AS male_count,
      (SELECT count(*) FROM patients WHERE gender='F') AS female_count;
```

Male	Female
5	1

Getting the doctors table[4]

```
mysql> select * from doctors;
```

doctor_id	first_name	last_name	specialty
1	Claude	Walls	Internist
2	Joshua	Green	Cardiologist
3	Miriam	Tregre	General Surgeon
4	James	Russo	Obstetrician/Gynecologist
5	Scott	Hill	Gastroenterologist
6	Tasha	Phillips	Psychiatrist

10. For each doctor, display their id, full name, and the first and last admission date they attended.

```
mysql> SELECT CONCAT(patients.first_name, ' ', patients.last_name) as patient_name, diagnosis,
        CONCAT(doctors.first_name, ' ', doctors.last_name) as doctor_name
        FROM patients
        JOIN admissions ON admissions.patient_id = patients.patient_id
        JOIN doctors ON doctors.doctor_id = admissions.attending_doctor_id;
```

doctor_id	full_name	first_admission_date	last_admission_date
1	Claude Walls	2018-06-10	2019-06-03
2	Joshua Green	2018-06-06	2019-06-03
3	Miriam Tregre	2018-06-06	2019-06-03
4	James Russo	2018-06-10	2019-06-04
5	Scott Hill	2018-06-06	2019-06-05
6	Tasha Phillips	2018-06-06	2019-06-02