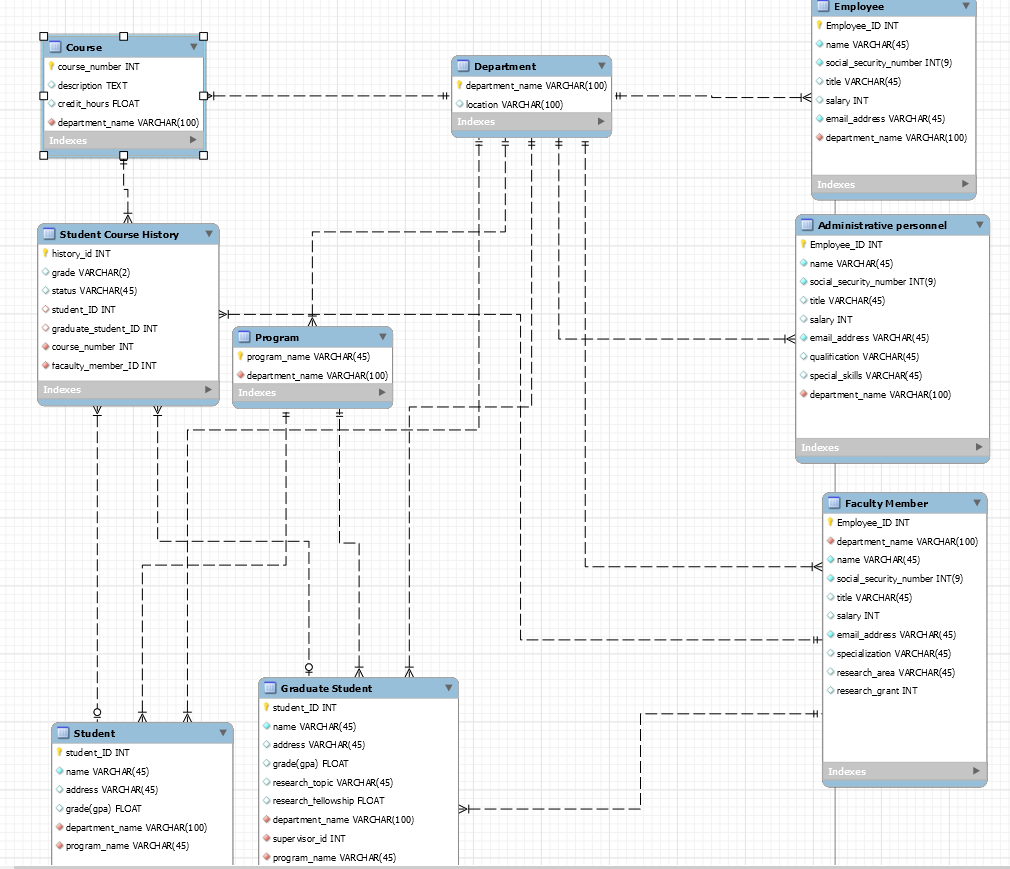
COMP353\_ASSIGNMENT1

YIFAN YANG

40038814

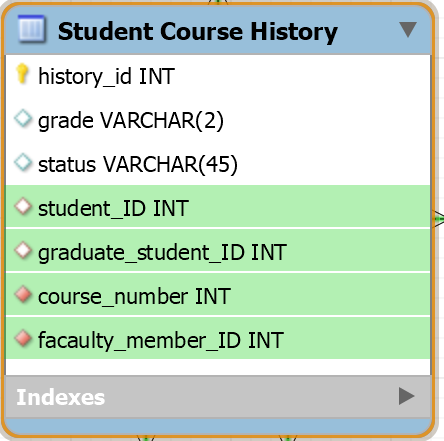
1.1ER diagram



1.2 comment and constraint

 is primary key

 is foreign key

The facaulty\_member\_ID is the professor ID in course history, which points to employee\_id in Facaulty Number table

**This table holds all history information for all people, so history\_id is auto increment, student should search their history by student\_ID**

The database generated by this ER diagram is not enough!!! (er\_diagram\_40038814.mwb)

because student\_ID is for undergraduate student, graduate\_student\_ID points to graduate student, however, **one of them must be not null**

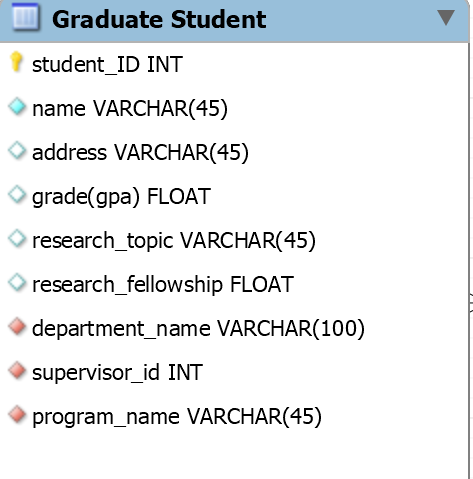
**so you should use the script below**

alter table `comp353\_assignment1`.`Student Course History`

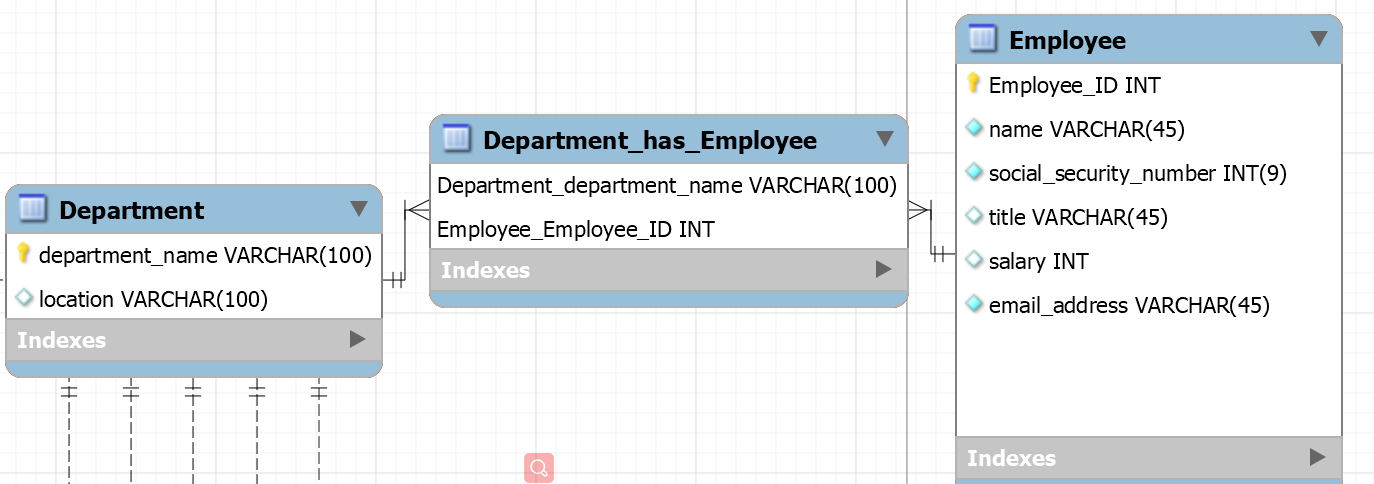
ADD CONSTRAINT check ( (student\_ID is null and graduate\_student\_ID is not null)

or (graduate\_student\_ID is not null and student\_ID is null)

)

 The supervisor\_id points to employee\_id in Facaulty Number table,which means the graduate student supervised by professor

I'm not sure whether an employee is allowed to work in several departments, so if there is such need, you can just turn 1-n to m-n like this



inharitance problem, ISA is not supported in ER diagram like this, so I present every entity in complete form

1.3

First use script ‘university\_generation\_40038814.sql’

Then use the script below

alter table `comp353\_assignment1`.`Student Course History`

ADD CONSTRAINT check ( (student\_ID is null and graduate\_student\_ID is not null)

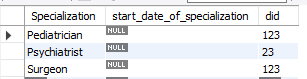
or (graduate\_student\_ID is not null and student\_ID is null)

)

2

Before using hospital\_generation\_40038814.sql, please drop original schema ,cause both of the schema has name 'comp353\_assignment1'

2.1



Sol:

SELECT doctor.\*

FROM doctor

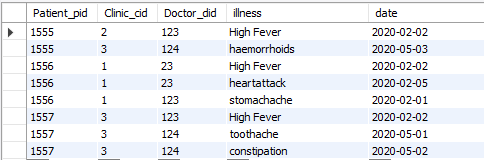
JOIN specialization on doctor.did=specialization.did

GROUP BY specialization.did

HAVING count(\*)>=2



2.2

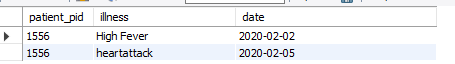


Sol:

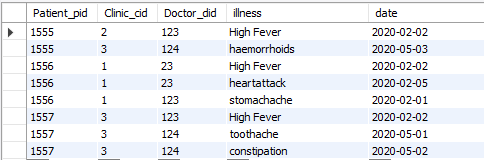
SELECT patient\_pid,illness,date

FROM consult

WHERE patient\_pid=1556 AND (consult.date between '2020-02-02' AND '2020-02-06')



2.3



Sol:

SELECT patient.pname,doctor.dname,clinic.cid,consult.date,clinic.city

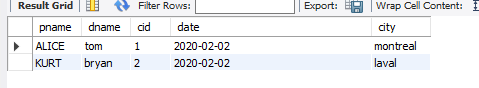
FROM consult

JOIN doctor ON consult.Doctor\_did=doctor.did

JOIN clinic ON consult.Clinic\_cid=clinic.cid

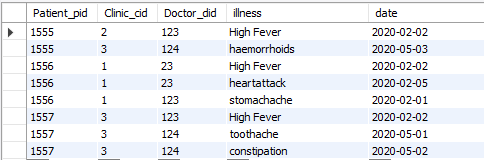
JOIN patient ON consult.Patient\_pid=patient.pid

WHERE (clinic.city='montreal' or clinic.city='laval') and (consult.date BETWEEN '2020-01-01' AND '2020-03-15') AND consult.illness='High Fever'

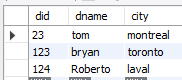


2.4

Consult:



Doctor:



Sol:

SELECT p.\*,d.dname,Count(\*) as consult\_time

FROM consult c

JOIN doctor d on c. Doctor\_did=d.did

JOIN patient p on p.pid=c.Patient\_pid

WHERE d.dname='Roberto'

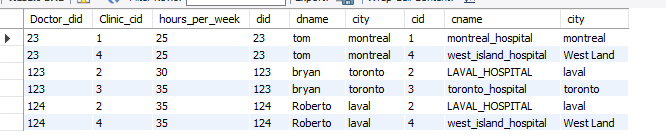
GROUP BY Patient\_pid

HAVING count(\*)>=2



2.5.

The table below is the join of works\_in, doctor,clinic



Sol:

SELECT doctor.did,doctor.dname,clinic.city

FROM works\_in

JOIN doctor on doctor.did=works\_in.Doctor\_did

JOIN clinic on clinic.cid=works\_in.Clinic\_cid

WHERE doctor.did not in (

SELECT doctor.did

FROM works\_in

JOIN doctor on doctor.did=works\_in.Doctor\_did

JOIN clinic on clinic.cid=works\_in.Clinic\_cid

WHERE clinic.city='West Land'

)

and doctor.did in (

SELECT doctor.did

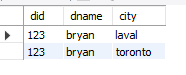
FROM works\_in

JOIN doctor on doctor.did=works\_in.Doctor\_did

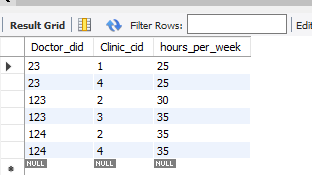
JOIN clinic on clinic.cid=works\_in.Clinic\_cid

where clinic.city='laval'

)



2.6

work\_in

Sol:

SELECT doctor.dname,doctor.city,SUM(works\_in.hours\_per\_week) as 'total'

FROM works\_in

JOIN doctor on doctor.did=works\_in.Doctor\_did

GROUP BY Doctor\_did

HAVING total>=60

