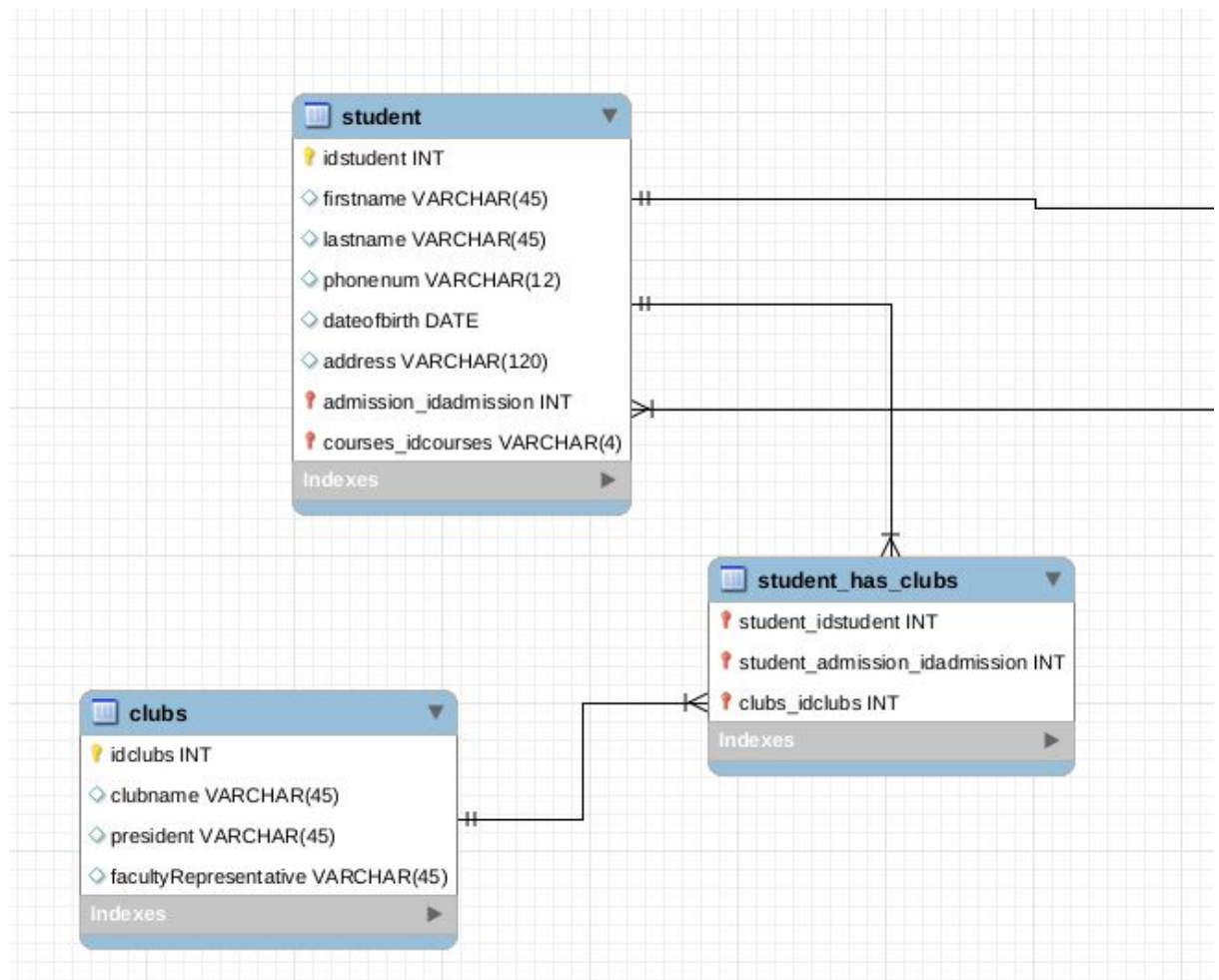


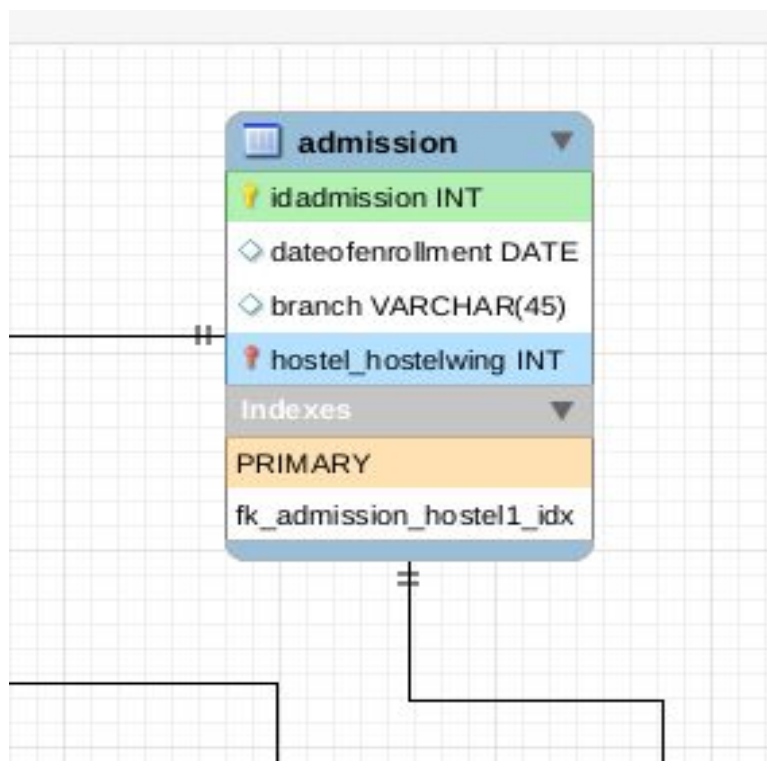
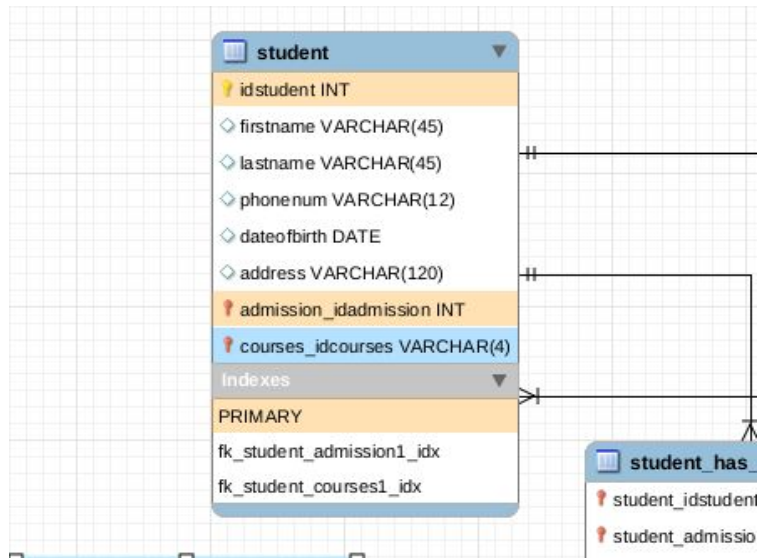
1. Showcase one Many-Many relation.

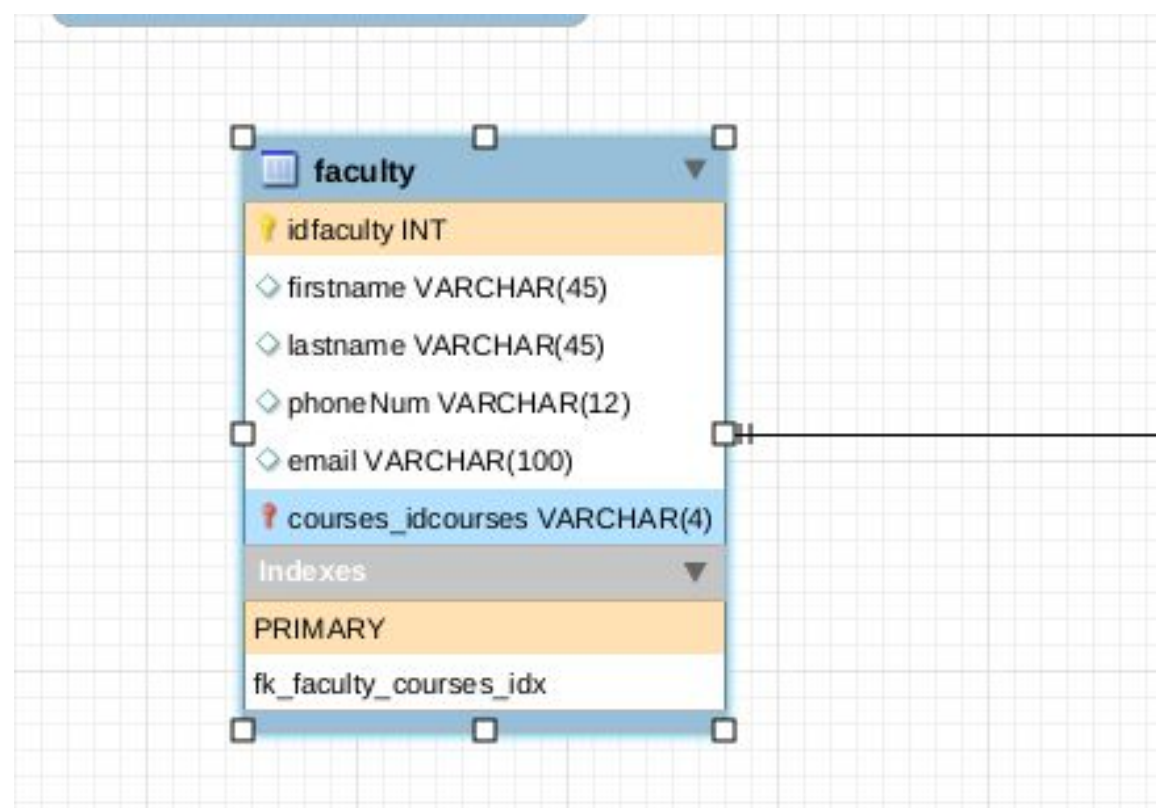
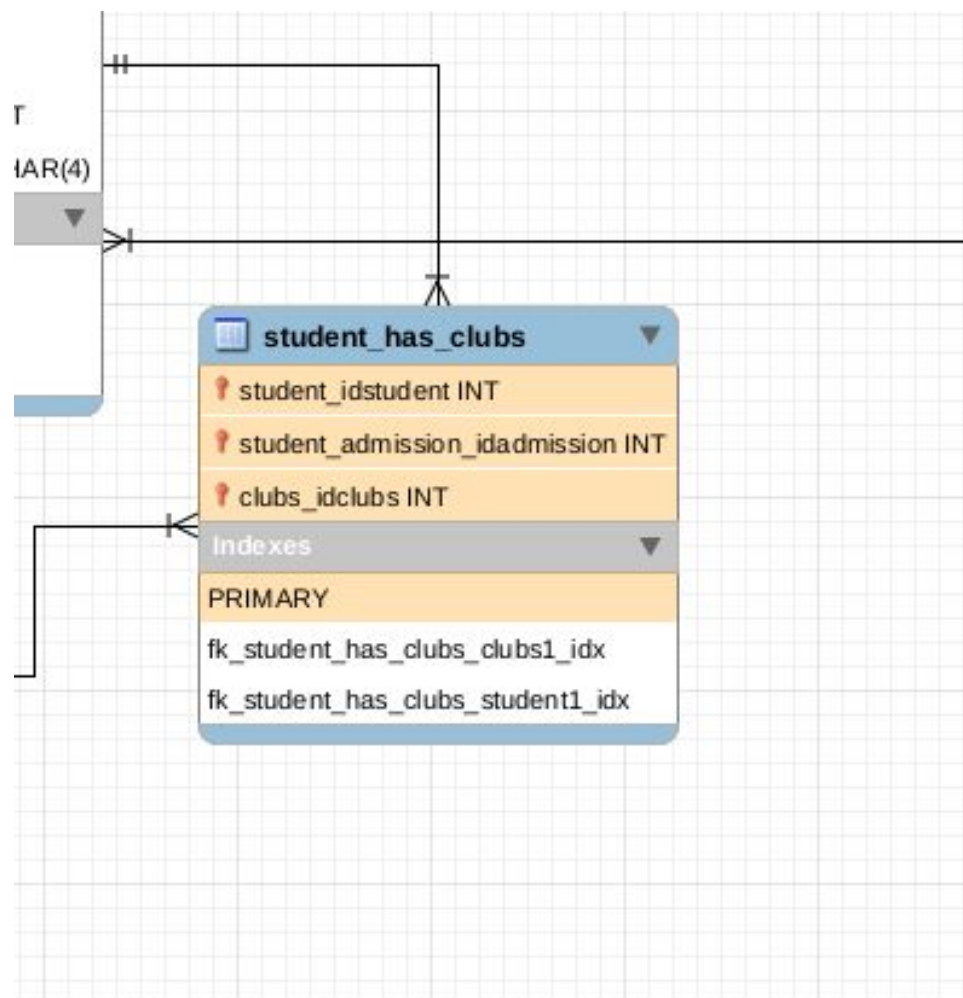


Student\_has\_clubs → students  
Student\_has\_clubs → clubs

2. Represent Composite key and Weak Entity in your Database.

Composite keys in student {idstudent, admission\_idadmission, courses\_idcourses}





## Composite keys list-

Table names	Attributes
student	{idstudent, admission_idadmission, courses_idcourses}
admission	{idadmission, hostel_hostelwing}
student_has_clubs	{student_idstudent, student_admission_idadmission, clubs_idclubs}
faculty	{idfaculty, courses_idcourses}

3.Violation of Primary Key, Unique Not Null and default key constraints through Insertion.

**PRIMARY KEY**-a key which uniquely identifies a row in a given table.It must have unique values and cannot contain nulls.

**UNIQUE NOT NULL**-all unique elements are present in that column and no duplicate values allowed and the value cannot be null.

**DEFAULT**:The DEFAULT constraint provides a default value to a column when there is no value provided while inserting a record into a table.

```

1 • USE collegedatabase;
2 • insert into Department values (59,'ECE','jay");
3 • insert into Faculty values(190,'Mahesh',9875464734,'mahi@gmail.com','PG','Hayathn
4 • select * From Faculty;

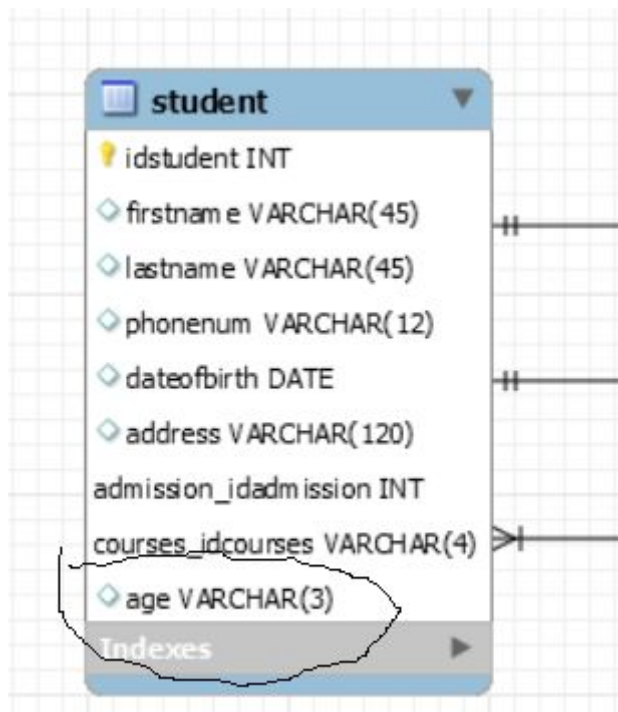
```

The screenshot shows a database management tool interface. At the top, there is a SQL editor with four commands: 1. USE collegedatabase; 2. insert into Department values (59,'ECE','jay"); 3. insert into Faculty values(190,'Mahesh',9875464734,'mahi@gmail.com','PG','Hayathn; 4. select \* From Faculty;. Below the editor, the 'Result Grid' displays the output of the SELECT command. It shows a table with 8 columns: #, FacultyId, FacultyName, MobileNumber, EmailId, Qualification, Address, and DepartmentId. The table contains 4 rows of data, all with FacultyId 190 and FacultyName 'Mahesh'. The DepartmentId values are 24, 25, 29, and 59. Below the result grid, there is a section labeled 'Faculty 1' with a dropdown menu showing 'Faculty 1'. At the bottom, there is an 'Action Output' section.

#	FacultyId	FacultyName	MobileNumber	EmailId	Qualification	Address	DepartmentId
1	100	Mahesh	9875464734	mahi@gmail.com	PG	Hayathnagar	24
2	120	Mahesh	9875464734	mahi@gmail.com	PG	Hayathnagar	25
3	150	Mahesh	9875464734	mahi@gmail.com	PG	Hayathnagar	29
4	190	Mahesh	9875464734	mahi@gmail.com	PG	Hayathnagar	59

Inserting duplicate key into column AdmissionID which is a primary key.

4.show a derived attribute in database design?



Age can be derived from the date of birth so there exists a derived attribute in the database.

5. Inserting Tuples into dependant tables first:

```

1 •
2 • |,Qualification,Address,DepartmentId) values(100,'Mahesh',9875464734,'mahi@gmail.com','PG','Hayathnagar',23);

```

#	Time	Action	Message	Duration / Fetch
1	16:13:32	USE collegedatabase	0 row(s) affected	0.00047 sec
2	16:13:32	insert into Faculty (FacultyId, FacultyName, MobileNumbe...	Error Code: 1452. Cannot add or update a child ro...	0.027 sec

In entity Faculty, departmentId is the foreign key referenced from Department entity. Inserting tuples into faculty without inserting into Department.

```

1 • USE collegedatabase;
2 • insert into Department values (59,'ECE','jay");
3 • insert into Faculty values(190,'Mahesh',9875464734,'mahi@gmail.com','PG','Hayathnagar',59);
4 • select * From Faculty;

```

Result Grid

Filter Rows

Q

Edit

Export/Import

Wrap Cell Content

#	FacultyId	FacultyName	MobileNumber	EmailId	Qualification	Address	DepartmentId
1	100	Mahesh	9875464734	mahi@gmail.com	PG	Hayathnagar	24
2	120	Mahesh	9875464734	mahi@gmail.com	PG	Hayathnagar	25
3	150	Mahesh	9875464734	mahi@gmail.com	PG	Hayathnagar	29
4	190	Mahesh	9875464734	mahi@gmail.com	PG	Hayathnagar	59
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Faculty 1

Action Output

#	Time	Action	Message	Duration
10	16:19:22	USE collegedatabase	0 row(s) affected	0.000451
11	16:19:22	insert into Department values (59,'ECE','jay")	1 row(s) affected	0.019 sec
12	16:19:22	insert into Faculty values(190,'Mahesh',9875464734,'mah...	1 row(s) affected	0.067 sec
13	16:19:50	select * From Faculty LIMIT 0, 400	4 row(s) returned	0.000771

Inserting tuples into faculty after inserting into Department entity