

**Information System Management Lab
BCOM 307**

Assignment #29

Submitted by:

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Unit No:

Course/Subject Code: BCOM 307

Issue Date

Subject Title: Information System Management Lab

Last Date of Submission:

Instructions for Students:

1. **All Questions are Compulsory.**
2. The student should attach proper cover page for each assignment clearly mentioning the Assignment No.
3. Each assignment should be prepared by the student individually with proper explanation and screenshots.
4. A4 size ruled sheets should be used for the assignment.
5. Assignment pages should be serially numbered at the bottom of page.

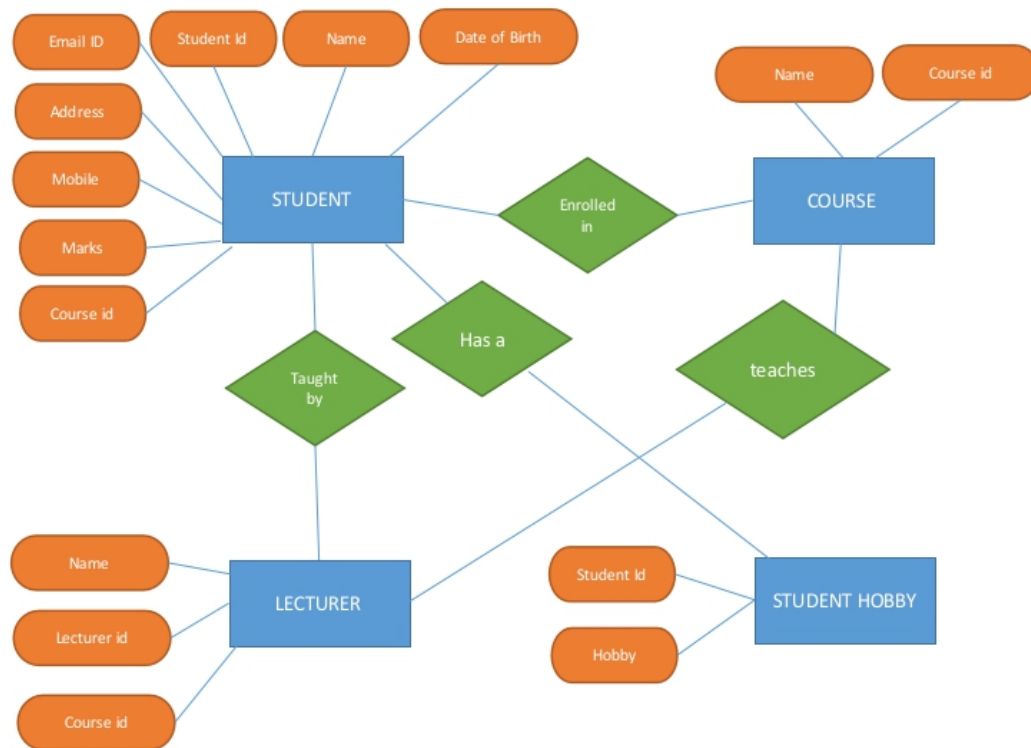
During online education mode, upload scanned copy of the complete assignment including cover page latest by due date.

Question No.	Question	CO No.
1	Draw an ER diagram for an Educational Institute and convert it into a relational table.	CO1, CO2, CO6

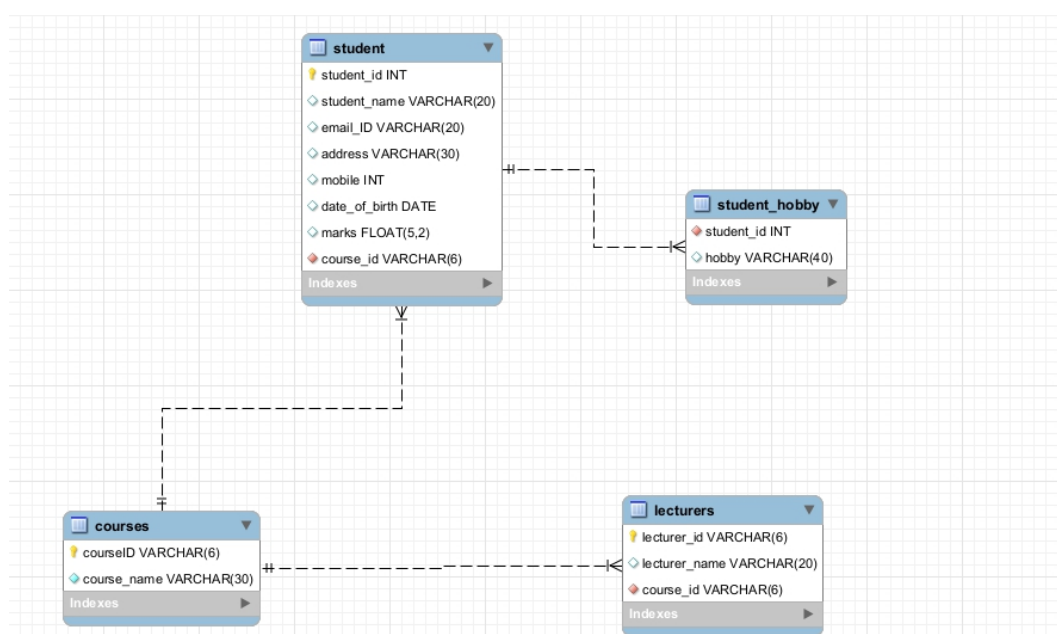
ASSIGNMENT 29 - ER Diagram to Relational Model

Task 1 : Draw an ER diagram for an Educational Institute and convert it into a relational table.

This task can be completed using the **CREATE TABLE** Command. First, we need to make the ER Diagram.

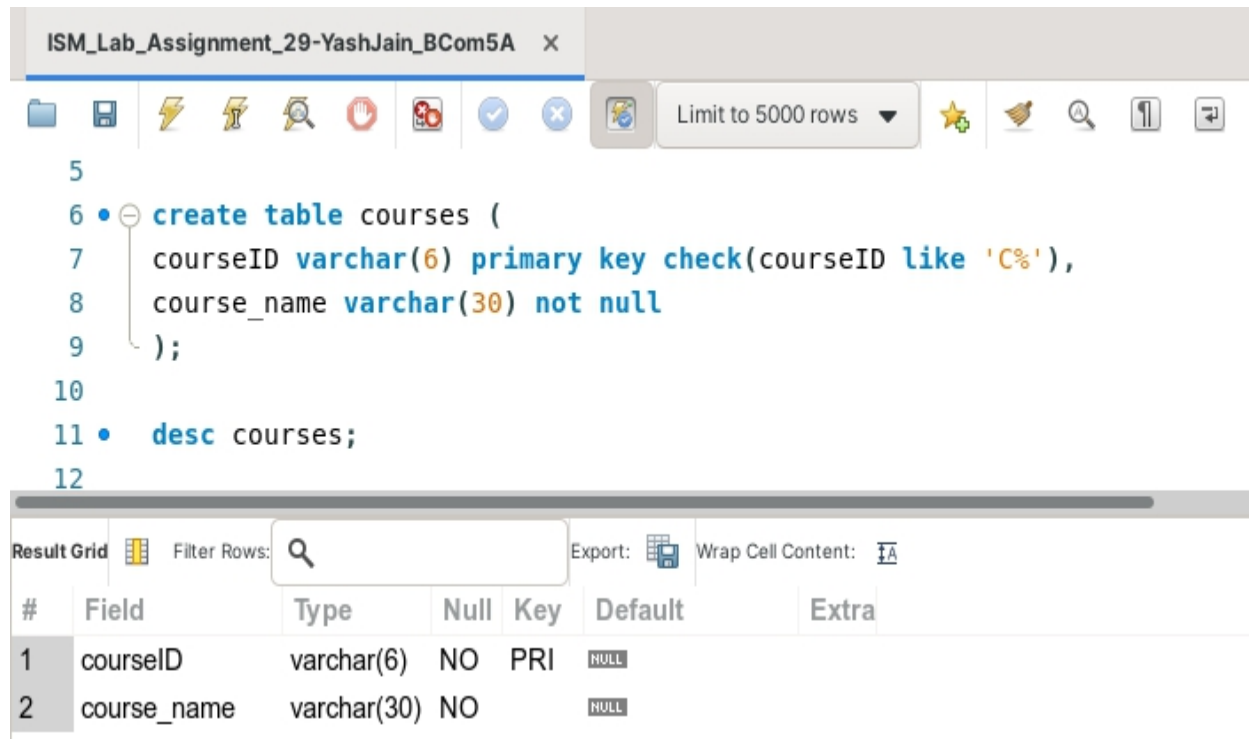


This diagram would enable us to make a relational model of the database, which looks like the one below :



Now, the final step is to create the tables in MySQL as per the given relational model. This is where the **CREATE TABLE** Command is used.

Since there are multiple foreign key constraints to be applied to multiple tables, we first create all the foreign tables, and then the primary tables.

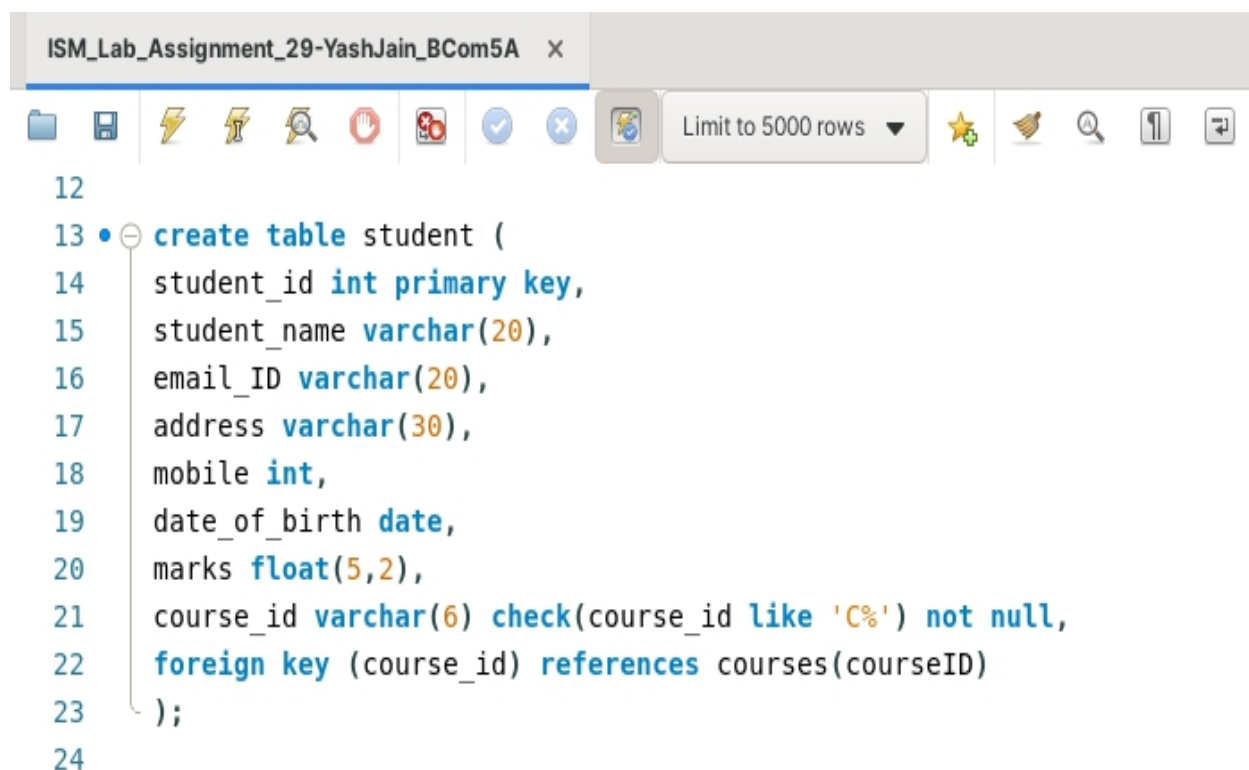


The screenshot shows a MySQL IDE window titled "ISM_Lab_Assignment_29-YashJain_BCom5A". The SQL editor contains the following code:

```
5  
6 • create table courses (  
7   courseID varchar(6) primary key check(courseID like 'C%'),  
8   course_name varchar(30) not null  
9 );  
10  
11 • desc courses;  
12
```

Below the editor, the "Result Grid" shows the output of the DESCRIBE command:

#	Field	Type	Null	Key	Default	Extra
1	courseID	varchar(6)	NO	PRI	NULL	
2	course_name	varchar(30)	NO		NULL	



The screenshot shows the same MySQL IDE window. The SQL editor contains the following code:

```
12  
13 • create table student (  
14   student_id int primary key,  
15   student_name varchar(20),  
16   email_ID varchar(20),  
17   address varchar(30),  
18   mobile int,  
19   date_of_birth date,  
20   marks float(5,2),  
21   course_id varchar(6) check(course_id like 'C%') not null,  
22   foreign key (course_id) references courses(courseID)  
23 );  
24
```

25 • desc student;

#	Field	Type	Null	Key	Default	Extra
1	student_id	int	NO	PRI	NULL	
2	student_name	varchar(20)	YES		NULL	
3	email_ID	varchar(20)	YES		NULL	
4	address	varchar(30)	YES		NULL	
5	mobile	int	YES		NULL	
6	date_of_birth	date	YES		NULL	
7	marks	float(5,2)	YES		NULL	
8	course_id	varchar(6)	NO	MUL	NULL	

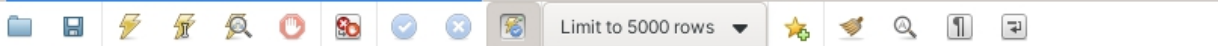
ISM_Lab_Assignment_29-YashJain_BCom5A x



```
26
27 • create table lecturers (
28     lecturer_id varchar(6) primary key check( lecturer_id like 'L%'),
29     lecturer_name varchar(20),
30     course_id varchar(6) check(course_id like 'C%') not null,
31     foreign key (course_id) references courses(courseID)
32 );
33
34 • desc lecturers;
35
```

#	Field	Type	Null	Key	Default	Extra
1	lecturer_id	varchar(6)	NO	PRI	NULL	
2	lecturer_name	varchar(20)	YES		NULL	
3	course_id	varchar(6)	NO	MUL	NULL	

ISM_Lab_Assignment_29-YashJain_BCom5A x



```
35
36 • create table student_hobby (
37     student_id int not null, foreign key (student_id) references student(student_id),
38     hobby varchar(40)
39 );
40
41 • desc student_hobby;
```

#	Field	Type	Null	Key	Default	Extra
1	student_id	int	NO	MUL	NULL	
2	hobby	varchar(40)	YES		NULL	