

DBMS ASSIGNMENT-2

1. *Showcased a Many to Many Relationship Between Student and courses*

2. Composite Keys:

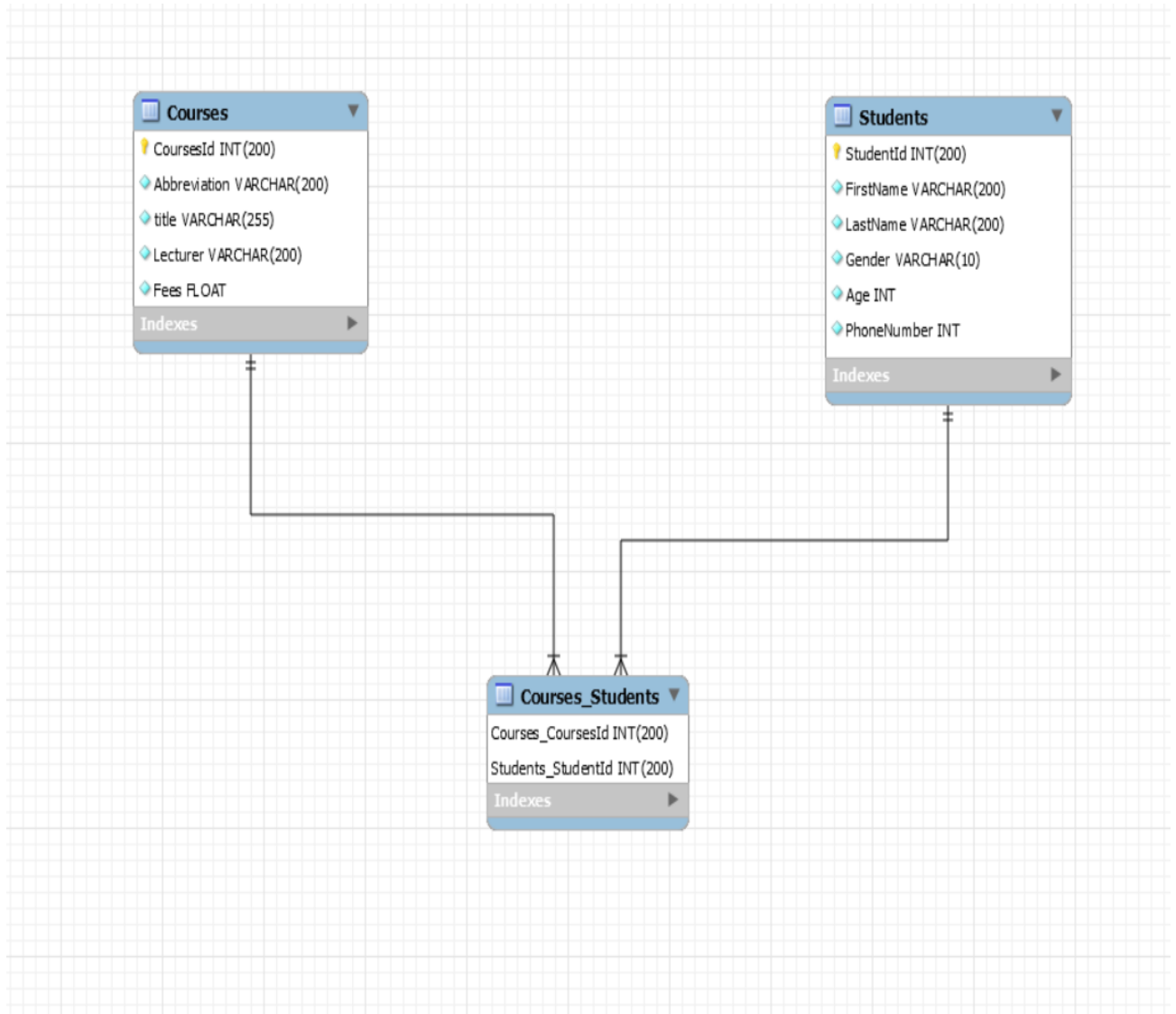
In Courses_Students entity:

Primary key (Student_ id, Courses_ id)

3. Weak Entity:

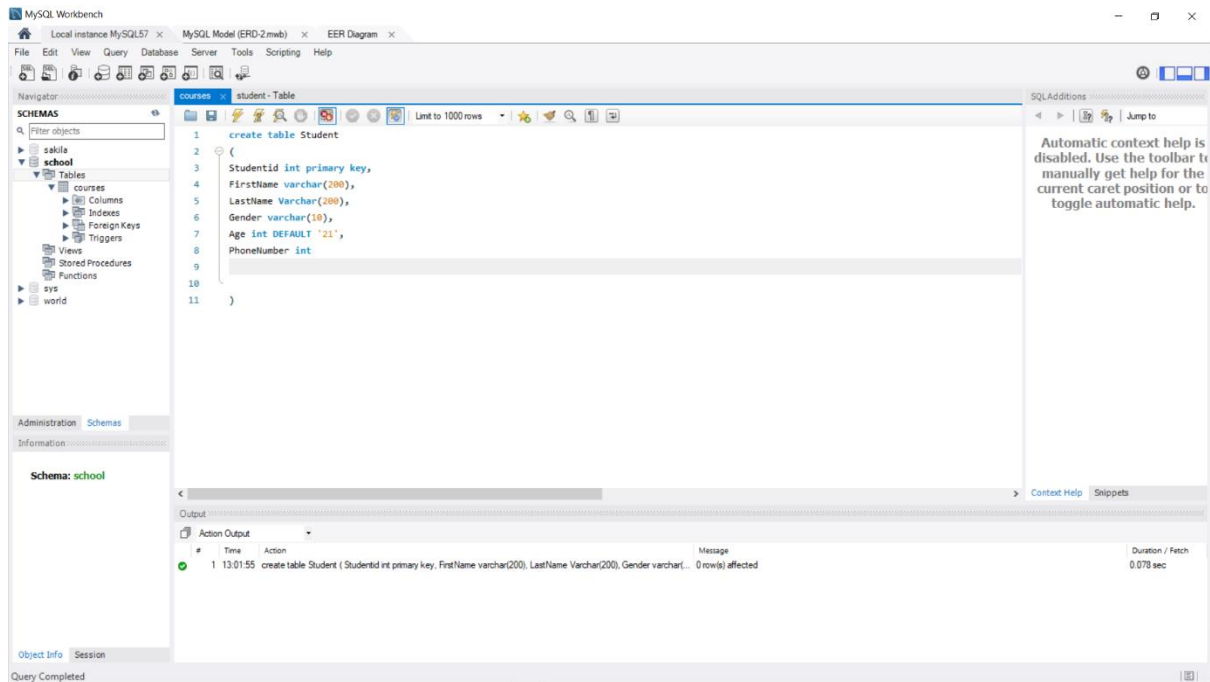
Courses_Students

ERD DIAGRAM



Create Table(STUDENT)

Create a table using Primary key and Unique constraint..



Insertion of Data into the Table:

Insert a data into the Table using the command

Insert into student(Studentid,FirstName, LastName, Gender,Age,PhoneNumber)
values();

The screenshot displays the MySQL Workbench interface. The top toolbar includes icons for file operations, database management, and query execution. The left sidebar shows the 'SCHEMAS' tree with 'sakila' and 'school' databases. The 'school' database is expanded, showing 'Tables' (courses, student), 'Views', 'Stored Procedures', and 'Functions'. The 'student' table is selected. The main editor shows a SQL query with two insert statements. The 'Result Grid' displays the data inserted into the 'student' table. The 'Information' tab shows the table structure for 'student'.

SQL query:

```
1 Insert into student(Studentid,FirstName,LastName,Gender,PhoneNumber)
2 values(1,'Raghu','Bharadwaj','Male',123456789);
3 Insert into student(Studentid,FirstName,LastName,Gender,PhoneNumber)
4 values(2,'Tina','Malhotra','Female',456123789);
5
```

Result Grid:

Studentid	FirstName	LastName	Gender	Age	PhoneNumber
1	Raghu	Bharadwaj	Male	21	123456789
2	Tina	Malhotra	Female	21	456123789
NULL	NULL	NULL	NULL	NULL	NULL

Table: student

Columns:

- Studentid: int PK
- FirstName: varchar(200)
- LastName: varchar(200)
- Gender: varchar(10)
- Age: int
- PhoneNumber: int

student 4 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
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MySQL Workbench

Local instance MySQL57 x MySQL Model (ERD-2.mwb) x EER Diagram x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

sakila
 school
 Tables
 courses
 student
 Views
 Stored Procedures
 Functions
 sys
 world

Administration Schemas

Information

Table: student

Columns:

Studentid	int PK
FirstName	varchar(200)
LastName	varchar(200)
Gender	varchar(10)
Age	int
PhoneNumber	int

courses

Limit to 1000 rows

```
1 Insert into student(Studentid,FirstName,LastName,Gender,PhoneNumber)
2 values(3,'Naveen','Devang','Male',321456987);
3 Insert into student(Studentid,FirstName,LastName,Gender,PhoneNumber)
4 values(4,'Dhanush','Kumar','Male',289651235);
5 Insert into student(Studentid,FirstName,LastName,Gender,PhoneNumber)
6 values(5,'Anjali','sharma','Female',789321456);
7 Insert into student(Studentid,FirstName,LastName,Gender,PhoneNumber)
8 values(6,'Vivek','suresh','Male',852741963);
9 Insert into student(Studentid,FirstName,LastName,Gender,PhoneNumber)
10 values(7,'Nisheer','V','Male',159357456);
11
```

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Context Help Snippets

Output

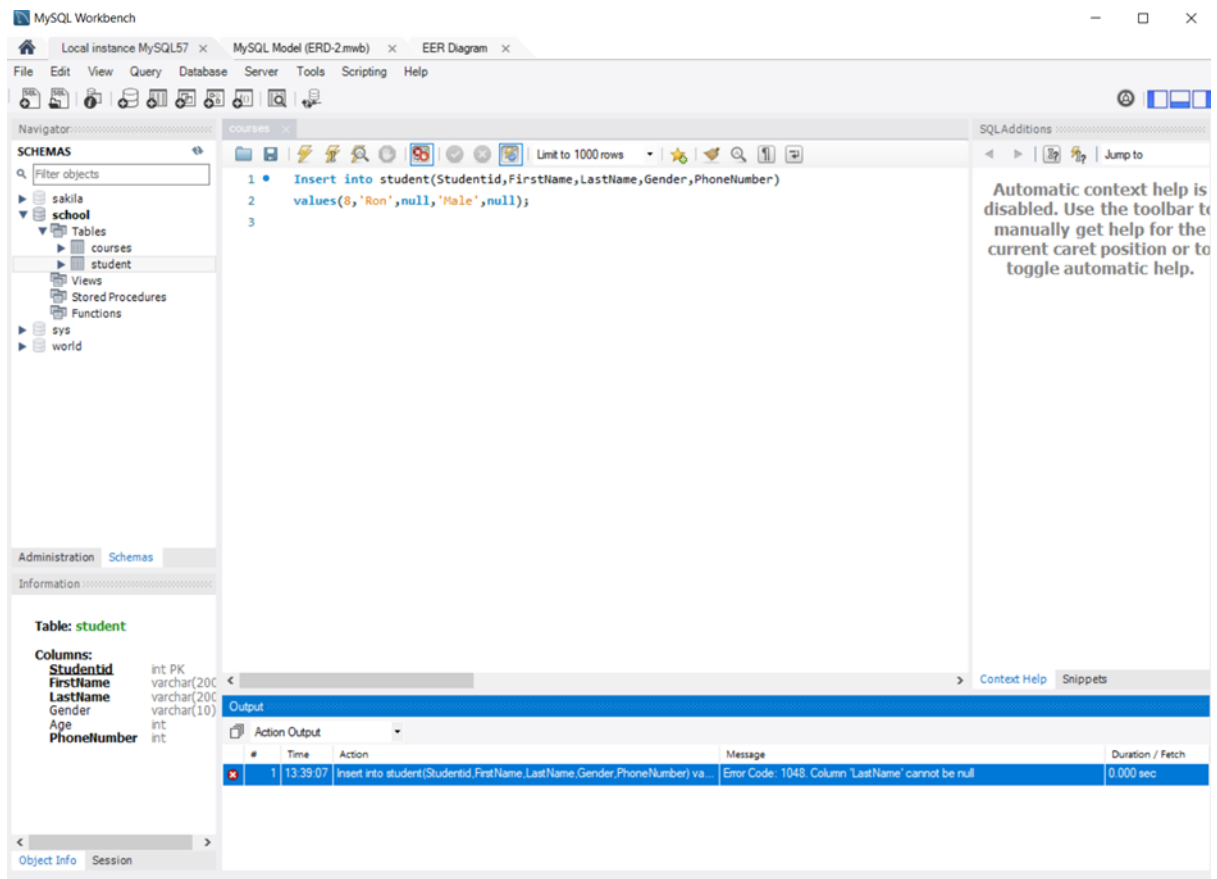
Action Output

#	Time	Action	Message	Duration / Fetch
2	13:34:12	Insert into student(Studentid,FirstName,LastName,Gender,PhoneNumber) ...	Error Code: 1062. Duplicate entry '4' for key 'student.PRIMARY'	0.015 sec
3	13:34:12	Insert into student(Studentid,FirstName,LastName,Gender,PhoneNumber) ...	1 row(s) affected	0.016 sec
4	13:34:12	Insert into student(Studentid,FirstName,LastName,Gender,PhoneNumber) ...	1 row(s) affected	0.015 sec
5	13:34:12	Insert into student(Studentid,FirstName,LastName,Gender,PhoneNumber) ...	1 row(s) affected	0.016 sec

Object Info Session

Checking for Not Null value:

When we trying to insert a Null value into the attribute Student _ Id of Student table which is specified as Not Null Then ..



The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with 'sakila' and 'school' databases. The 'school' database is expanded, showing 'Tables' including 'courses' and 'student'. The 'student' table is selected, and its columns are listed: 'Studentid' (int PK), 'FirstName' (varchar(20)), 'LastName' (varchar(20)), 'Gender' (varchar(10)), 'Age' (int), and 'PhoneNumber' (int). The main editor shows an SQL query:

```
1 Insert into student(Studentid,FirstName,LastName,Gender,PhoneNumber)
2 values(8,'Ron',null,'Male',null);
3
```

 The 'Output' pane at the bottom displays an error message:

#	Time	Action	Message	Duration / Fetch
1	13:39:07	Insert into student(Studentid,FirstName,LastName,Gender,PhoneNumber) va...	Error Code: 1048. Column 'LastName' cannot be null	0.000 sec

Checking For Default key:

We are taken Age is 21 as DEFAULT .So we didn't mentioned Age while inserting the values into tables, But still the Age has been entered in the Student Table as 21.

The screenshot displays the MySQL Workbench interface. The 'Navigator' pane on the left shows the 'school' database with tables 'courses' and 'student'. The 'SQL Editor' pane contains the following SQL query:

```
1 Insert into student(StudentId,FirstName,LastName,Gender,PhoneNumber)
2 values(10,'Rock','D','Male',147896523);
3
```

The 'Result Grid' pane shows the data inserted into the 'student' table:

StudentId	FirstName	LastName	Gender	Age	PhoneNumber
1	Raghu	Bharadwaj	Male	21	123456789
2	Dhanush	Kumar	Male	21	289651235
3	Naveen	Devang	Male	21	321456987
4	Tina	Mahotra	Female	21	456123789
5	Anjali	sharma	Female	21	789321456
6	Vivek	suresh	Male	21	852741063
7	Nisheer	V	Male	21	159357456
9	Kevin	roy	Male	20	789458213
10	Rock	D	Male	21	147896523

The 'Output' pane shows the execution results of the query:

#	Time	Action	Message	Duration / Fetch
4	13:44:38	Insert into student(StudentId,FirstName,LastName,Gender,PhoneNumber) values(9,'Rock','D','Male',789458213)	Error Code: 1062. Duplicate entry '9' for key 'student.PRIMARY'	0.000 sec
5	13:45:04	Insert into student(StudentId,FirstName,LastName,Gender,PhoneNumber) values(10,'Rock','D','Male',789458213)	Error Code: 1062. Duplicate entry '789458213' for key 'student.PhoneNumber_UNIQUE'	0.016 sec
6	13:45:19	Insert into student(StudentId,FirstName,LastName,Gender,PhoneNumber) values(10,'Rock','D','Male',147896523)	1 row(s) affected	0.016 sec
7	13:45:41	select * from student LIMIT 0, 1000	9 row(s) returned	0.000 sec / 0.000 sec

When we insert a DUPLICATE value into the attribute Student_id of Student table which is a Primary Key

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with 'sakila' selected, showing 'Tables' (courses, student) and 'Views'. The main editor shows an SQL query in the 'courses' tab:

```
1 Insert into student(Studentid,FirstName,LastName,Gender,PhoneNumber)
2 values(2,'Dhanush','Kumar','Male',289651235);
3
```

The right sidebar shows a message: "Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help."

Below the editor, the 'Table: student' structure is shown:

Columns:

- Studentid: int PK
- FirstName: varchar(200)
- LastName: varchar(200)
- Gender: varchar(10)
- Age: int
- PhoneNumber: int

The 'Output' tab at the bottom shows the execution results:

#	Time	Action	Message	Duration / Fetch
1	13:35:41	select * from student LIMIT 0, 1000	6 row(s) returned	0.000 sec / 0.000 sec
2	13:37:00	Insert into student(Studentid,FirstName,LastName,Gender,PhoneNumber) v...	Error Code: 1062. Duplicate entry '4' for key 'student.PRIMARY'	0.015 sec
3	13:37:09	Insert into student(Studentid,FirstName,LastName,Gender,PhoneNumber) v...	1 row(s) affected	0.016 sec

Inserting data into the COURSES Table

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with 'school' expanded, showing tables 'student' and 'courses'. The 'courses' table structure is visible: CourseId (int PK), Title (varchar(10)), Abbreviation (varchar(15)), lecturer (varchar(20)), and fees (float). The central query editor contains five INSERT statements for the 'courses' table. The bottom output pane shows the execution results, with the fourth statement failing due to a duplicate entry for the primary key '105'.

```
1 insert into courses values(105,'SS','Social Studies','Charles',15000);
2 insert into courses values(104,'Mat','Mathematics','Clara',12000);
3 insert into courses values(103,'PE','Professional ethics','kim',18000);
4 insert into courses values(106,'PE','physical education','chris',null);
5 insert into courses values(102,'CS','Computer science','chris',18000);
6
7
```

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

#	Time	Action	Message	Duration / Fetch
1	01:44:30	insert into courses values(105,'SS','Social Studies','Charles',15000)	1 row(s) affected	0.000 sec
2	01:44:30	insert into courses values(104,'Mat','Mathematics','Clara',12000)	1 row(s) affected	0.016 sec
3	01:44:30	insert into courses values(103,'PE','Professional ethics','kim',18000)	Error Code: 1406. Data too long for column 'Title' at row 1	0.000 sec
4	01:45:13	insert into courses values(105,'SS','Social Studies','Charles',15000)	Error Code: 1062. Duplicate entry '105' for key 'courses.PRIMARY'	0.000 sec

Query interrupted

RESULT:

We Can View the table Using the Command

*Select *from TABLE_NAME*

The screenshot displays the MySQL Workbench interface. The 'Navigator' pane on the left shows the 'school' database with tables 'courses' and 'student'. The 'SQL Editor' pane contains the query: `select *from student`. The 'Result Grid' pane shows the following data:

Studentid	FirstName	LastName	Gender	Age	PhoneNumber
1	Raghu	Bharadwaj	Male	21	123456789
2	Dhanush	Kumar	Male	21	289651235
3	Naveen	Devang	Male	21	321456987
4	Tina	Malhotra	Female	21	456123789
5	Anjali	sharma	Female	21	789321456
6	Vivek	suresh	Male	21	852741963
7	Nisheer	V	Male	21	159357456

The 'Administration' pane on the left shows the 'Table: student' with columns: **Studentid** (int PK), **FirstName** (varchar(200)), **LastName** (varchar(200)), **Gender** (varchar(10)), **Age** (int), and **PhoneNumber** (int).

The 'Output' pane at the bottom shows the execution log:

#	Time	Action	Message	Duration / Fetch
1	13:35:41	select *from student LIMIT 0, 1000	6 row(s) returned	0.000 sec / 0.000 sec
2	13:37:00	Insert into student(Studentid,FirstName,LastName,Gender,PhoneNumber) v...	Error Code: 1062. Duplicate entry '4' for key 'student.PRIMARY'	0.015 sec
3	13:37:09	Insert into student(Studentid,FirstName,LastName,Gender,PhoneNumber) v...	1 row(s) affected	0.016 sec
4	13:37:43	select *from student LIMIT 0, 1000	7 row(s) returned	0.000 sec / 0.000 sec

MySQL Workbench

Local instance MySQL57 x MySQL Model* (ERD-2.mwb) x EER Diagram x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

sakila
 school
 Tables
 courses
 Columns
 Indexes
 PRIMARY
 Abbreviation
 Title_UNIQUE
 fees_UNIQUE
 Foreign Keys
 Triggers
 student
 Columns
 StudentId
 FirstName
 LastName
 Gender
 Age
 PhoneNo
 Indexes

Administration Schemas

Information

Table: courses

Columns:

CourseId int PK
Abbreviation varchar(10)
Title varchar(25)
lecturer varchar(20)
fees float

Object Info Session

Query1 x courses student - Table courses - Table courses - Table

Limit to 1000 rows

1 select * from courses

2
3
4
5
6

Result Grid

CourseId	Abbreviation	Title	lecturer	fees
101	MS	MySQL	Robbert	20000
102	CS	Computer Science	Sam	25000
103	PE	Physical Education	Chris	12000
104	Mat	Mathematics	Clara	12000
105	SS	Social Studies	Charles	15000
106	E	Ethics	vin	19000

courses 6 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
15	01:56:24	Insert into courses values(106,'E','Ethics','vin',19000)	1 row(s) affected	0.016 sec
16	01:56:47	select * from courses LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec
17	01:57:22	SELECT * FROM school.courses LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec
18	01:57:40	Apply changes to courses	Changes applied	
19	01:58:38	Insert into courses values(102,'CS','Computer Science','Sam',25000)	1 row(s) affected	0.000 sec
20	01:59:00	select * from courses LIMIT 0, 1000	6 row(s) returned	0.000 sec / 0.000 sec

Query Completed

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.