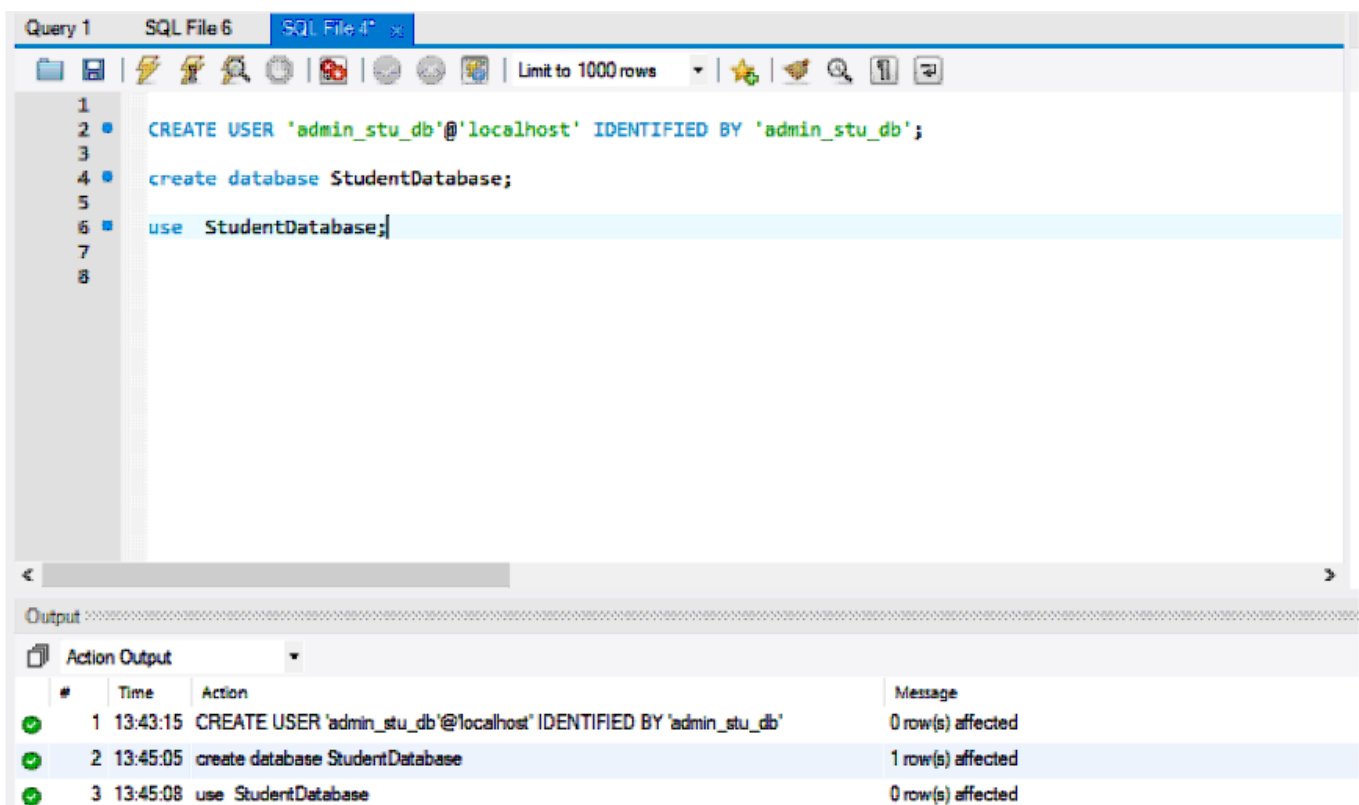


SQL QUERIES

1) Prepare database based on ER model and insert Sample data

Create database

```
create database StudentDatabase;  
  
use StudentDatabase;
```



Creating table course_management

```
create table course_management(  
  
    course_id INT NOT NULL auto_increment,  
    course_name varchar(100),  
    primary key(course_id)  
);
```

Creating table student_management

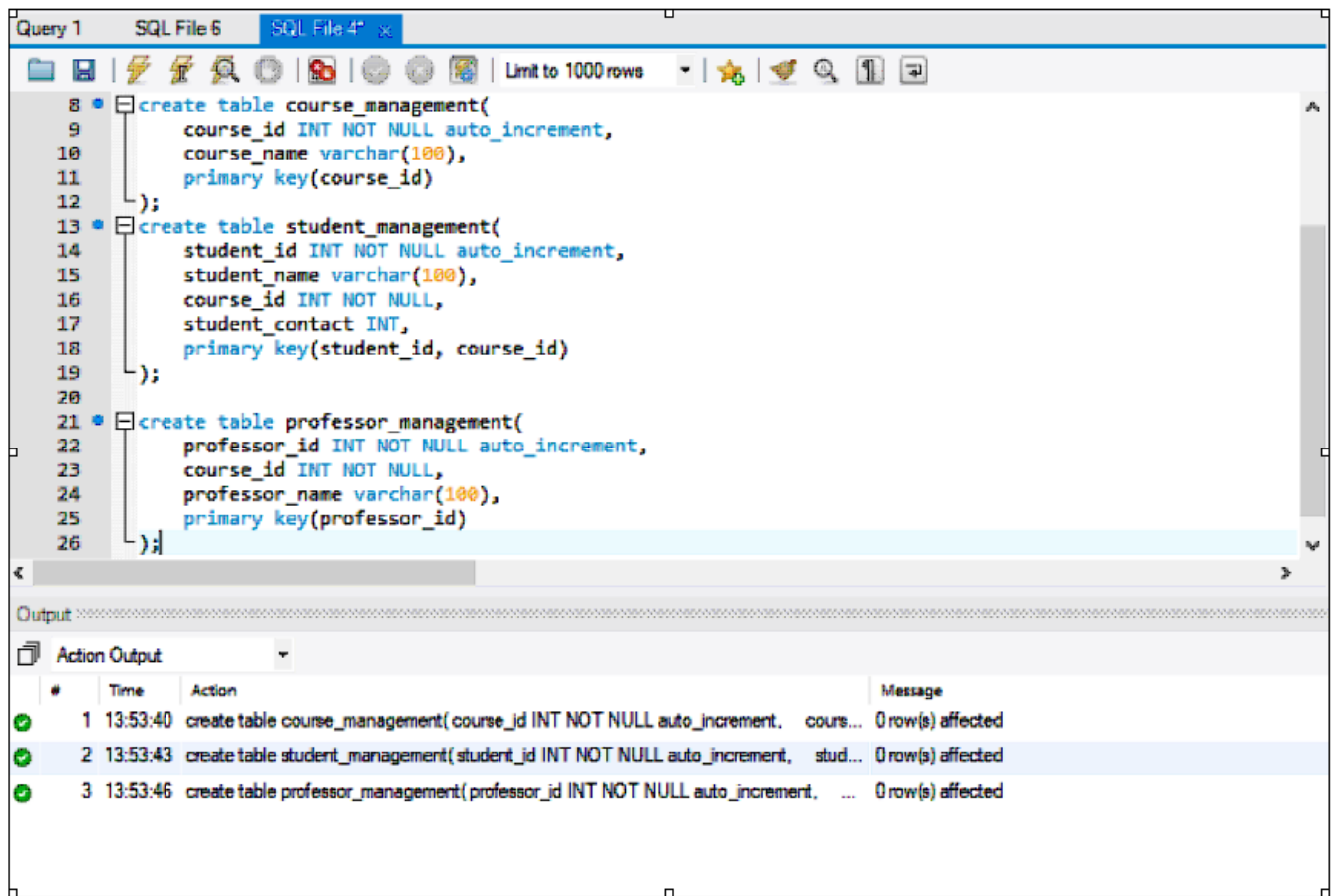
```
create table student_management(  

```

```
student_id INT NOT NULL auto_increment,  
student_name varchar(100),  
course_id INT NOT NULL,  
student_contact INT,  
primary key(student_id, course_id)  
);
```

Creating table professor_management

```
create table professor_management(  
    professor_id INT NOT NULL auto_increment,  
    course_id INT NOT NULL,  
    professor_name varchar(100),  
    primary key(professor_id)  
);
```



Inserting data in course_management

```
insert into course_management values(1, "IT");  
insert into course_management values(2, "ECE");  
insert into course_management values(3, "EEE");  
insert into course_management values(4, "CSE");
```

Query 1 SQL File 4

Limit to 1000 rows

```

16      course_id INT NOT NULL,
17      student_contact INT,
18      primary key(student_id, course_id)
19  );
20
21  create table professor_management(
22      professor_id INT NOT NULL auto_increment,
23      course_id INT NOT NULL,
24      professor_name varchar(100),
25      primary key(professor_id)
26  );
27
28  select * from course_management;
29
30  insert into course_management values(1, "IT");
31  insert into course_management values(2, "ECE");
32  insert into course_management values(3, "EEE");
33  insert into course_management values(4, "CSE");
34

```

Output

Action Output

#	Time	Action	Message
1	14:01:33	insert into course_management values(1, "IT")	1 row(s) affected
2	14:02:06	insert into course_management values(2, "ECE")	1 row(s) affected
3	14:02:09	insert into course_management values(3, "EEE")	1 row(s) affected
4	14:02:12	insert into course_management values(4, "CSE")	1 row(s) affected

Inserting data into professor_management

```

insert into professor_management values(1,1, "ITProfessor");
insert into professor_management values(2,2, "ECEProfessor");
insert into professor_management values(3,3, "EEEPProfessor");
insert into professor_management values(4,4, "CSEProfessor");

```

Query 1 SQL File: 47 x

Limit to 1000 rows

```

22     professor_id INT NOT NULL auto_increment,
23     course_id INT NOT NULL,
24     professor_name varchar(100),
25     primary key(professor_id)
26 );
27
28 • select * from course_management;
29
30 • insert into course_management values(1, "IT");
31 • insert into course_management values(2, "ECE");
32 • insert into course_management values(3, "EEE");
33 • insert into course_management values(4, "CSE");
34
35
36 • insert into professor_management values(1,1, "ITProfessor");
37 • insert into professor_management values(2,2, "ECEProfessor");
38 • insert into professor_management values(3,3, "EEEProfessor");
39 • insert into professor_management values(4,4, "CSEProfessor");
40

```

Output:

Action Output

#	Time	Action	Message
✓ 1	14:12:47	insert into professor_management values(1,1, "ITProfessor")	1 row(s) affected
✓ 2	14:12:51	insert into professor_management values(2,2, "ECEProfessor")	1 row(s) affected
✓ 3	14:12:53	insert into professor_management values(3,3, "EEEProfessor")	1 row(s) affected
✓ 4	14:12:55	insert into professor_management values(4,4, "CSEProfessor")	1 row(s) affected

Inserting data into student_management

```

insert into student_management values(1,'student1', 1, 2042103485);
insert into student_management values(4,'student1', 1, 2042103485);
insert into student_management values(4,'student2', 2, 0421034851);
insert into student_management values(2,'student3', 3, 0463473476);
insert into student_management values(3,'student3', 4, 0674564784);

```

Query 1 SQL File 4*

```

31 * insert into course_management values(2, "ECE");
32 * insert into course_management values(3, "EEE");
33 * insert into course_management values(4, "CSE");
34
35
36 * insert into professor_management values(1,1, "ITProfessor");
37 * insert into professor_management values(2,2, "ECEProfessor");
38 * insert into professor_management values(3,3, "EEEProfessor");
39 * insert into professor_management values(4,4, "CSEProfessor");
40
41 * select * from student_management;
42 * insert into student_management values(1,'student1', 1, 2042103485);
43 * insert into student_management values(4,'student1', 1, 2042103485);
44 * insert into student_management values(4,'student2', 2, 0421034851);
45 * insert into student_management values(2,'student3', 3, 0463473476);
46 * insert into student_management values(3,'student3', 4, 0674564784);
47
48
49

```

Output

Action Output

#	Time	Action	Message
1	14:18:07	insert into student_management values(4,'student1', 1, 2042103485)	1 row(s) affected
2	14:18:09	insert into student_management values(4,'student2', 2, 0421034851)	1 row(s) affected
3	14:18:11	insert into student_management values(2,'student3', 3, 5463473476)	Error Code: 1264. Out of range value for column 'student_cont
4	14:19:09	insert into student_management values(2,'student3', 3, 0463473476)	1 row(s) affected
5	14:19:10	insert into student_management values(3,'student3', 4, 0674564784)	1 row(s) affected

Display tables

show tables;

Query 1 SQL File 4*

```

35
36 * insert into professor_management values(1,1, "ITProfessor");
37 * insert into professor_management values(2,2, "ECEProfessor");
38 * insert into professor_management values(3,3, "EEEProfessor");
39 * insert into professor_management values(4,4, "CSEProfessor");
40
41 * select * from student_management;
42 * insert into student_management values(1,'student1', 1, 2042103485);
43 * insert into student_management values(4,'student1', 1, 2042103485);
44 * insert into student_management values(4,'student2', 2, 0421034851);
45 * insert into student_management values(2,'student3', 3, 0463473476);
46 * insert into student_management values(3,'student3', 4, 0674564784);
47
48 * show tables;
49
50
51

```

Result Grid

Filter Rows:

Export: Wrap Cell Content:

Tables_in_studentdatabase
course_management
professor_management
student_management

Display table course_management

```
select * from course_management;
```

```
43 insert into student_management values(4,'student1', 1, 2042103485);
44 insert into student_management values(4,'student2', 2, 0421034851);
45 insert into student_management values(2,'student3', 3, 0463473476);
46 insert into student_management values(3,'student3', 4, 0674564784);
47
48 show tables;
49
50 select * from course_management;
51 select * from professor_management;
52 select * from student_management;
53
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

	course_id	course_name
1	IT	
2	ECE	
3	EEE	
4	CSE	
+	NULL	NULL

Display table professor_management

```
select * from professor_management;
```

Query 1 SQL File 4

Limit to 1000 rows

```

32 insert into course_management values(3, "EEE");
33 insert into course_management values(4, "CSE");
34
35
36 insert into professor_management values(1,1, "ITProfessor");
37 insert into professor_management values(2,2, "ECEProfessor");
38 insert into professor_management values(3,3, "EEEProfessor");
39 insert into professor_management values(4,4, "CSEProfessor");
40
41 select * from student_management;
42 insert into student_management values(1,'student1', 1, 2042103485);
43 insert into student_management values(4,'student1', 1, 2042103485);
44 insert into student_management values(4,'student2', 2, 0421034851);
45 insert into student_management values(2,'student3', 3, 0463473476);
46 insert into student_management values(3,'student3', 4, 0674564784);
47
48 show tables;
49
50 select * from course_management;
51 select * from professor_management;

```

Result Grid

	professor_id	course_id	professor_name
▶	1	1	ITProfessor
	2	2	ECEProfessor
	3	3	EEEProfessor
	4	4	CSEProfessor
•	NULL	NULL	NULL

Display table student_management

```
select * from student_management;
```


Query 1 SQL File 4

Limit to 1000 rows

```

34
35
36 insert into professor_management values(1,1, "ITProfessor");
37 insert into professor_management values(2,2, "ECEProfessor");
38 insert into professor_management values(3,3, "EEEProfessor");
39 insert into professor_management values(4,4, "CSEProfessor");
40
41 select * from student_management;
42 insert into student_management values(1,'student1', 1, 2042103485);
43 insert into student_management values(4,'student1', 1, 2042103485);
44 insert into student_management values(4,'student2', 2, 0421034851);
45 insert into student_management values(2,'student3', 3, 0463473476);
46 insert into student_management values(3,'student3', 4, 0674564784);
47

```

Result Grid

	student_id	student_name	course_id	student_contact
▶	1	student1	1	2042103485
	2	student3	3	463473476
	3	student3	4	674564784
	4	student1	1	2042103485
	4	student2	2	421034851
*	NULL	NULL	NULL	NULL

2) SQL queries:

1) provide student details with which courses he/she enrolled for.

Display the course which maximum students enrolled for and which professor is taking the course

```

select course_management.course_name , student_management.student_name,
student_management.student_id from student_management INNER
Join course_management on course_management.course_id =
student_management.course_id;

```


Query 1 SQL File 4*

```

44 insert into student_management values(4,'student2', 2, 0421034851);
45 insert into student_management values(2,'student3', 3, 0463473476);
46 insert into student_management values(3,'student3', 4, 0674564784);
47
48 show tables;
49
50 select * from course_management;
51 select * from professor_management;
52 select * from student_management;
53
54
55 select course_management.course_name , student_management.student_name, student_management.student_id
56 JOIN course_management on course_management.course_id = student_management.course_id;

```

Result Grid

	course_name	student_name	student_id
▶	IT	student1	1
	EEE	student3	2
	CSE	student3	3
	IT	student1	4
	ECE	student2	4

Result 8 x Read Only

Output

Action Output

#	Time	Action	Message
1	14:29:39	select course_management.course_name , student_management.student_name from...	5 row(s) returned
2	14:30:39	select course_management.course_name , student_management.student_name, stu...	5 row(s) returned

2) to get the course which maximum student enrolled for and which professor is taking up that course.

Display the course with highest number of enrolled students

```

select COUNT(*) AS Count_students, c.course_name, p.professor_name
FROM student_management e
JOIN( course_management c, professor_management p)
ON e.course_id = c.course_id
GROUP BY c.course_name order by count_students desc limit 1;

```

```

61
62
63
64 select COUNT(*) AS Count_students, c.course_name, p.professor_name
65 FROM student_management e
66 JOIN( course_management c, professor_management p)
67 ON e.course_id = c.course_id
68 GROUP BY c.course_name order by count_students desc limit 1;
69

```

Count_students	course_name	professor_name
8	IT	ITProfessor

Result 18 x

Output:

Action Output

#	Time	Action	Message
1	17:59:01	select COUNT(*) AS Count_students, c.course_name, p.professor_name FROM stud...	1 row(s) returned

3) Write a procedure which accepts Student id as input and output would be the professor details for the courses he enrolled for.

Procedure which accepts Student id as input and outputs the professor details for the courses he enrolled for

```

DELIMITER //
CREATE PROCEDURE GetProfessorDetails(stu_id int)
BEGIN
    select student_id, p.professor_name, p.professor_id, e.course_id
FROM student_management e
JOIN( professor_management p)
ON e.course_id = p.course_id where e.student_id = stu_id;
END //
DELIMITER ;

```

calling the procedure

```
call GetProfessorDetails(4);
```

Query 1 SQL File 4'

```

73 DELIMITER //
74 CREATE PROCEDURE GetProfessorDetails(stu_id int)
75 BEGIN
76     select student_id, p.professor_name, p.professor_id, e.course_id
77 FROM student_management e
78 JOIN( professor_management p)
79 ON e.course_id = p.course_id where e.student_id = stu_id;
80 END //
81 DELIMITER ;
82
83
84 call GetProfessorDetails(4);

```

Result Grid

	student_id	professor_name	professor_id	course_id
▶	4	ITProfessor	1	1
	4	ECEProfessor	2	2

Result 37 x Read On

Output

Action Output

#	Time	Action	Message
✓ 1	06:38:14	CREATE PROCEDURE GetProfessorDetails(stu_id int) BEGIN select student_id, p....	0 row(s) affected
✓ 2	06:38:20	call GetProfessorDetails(4)	2 row(s) returned