

ASSIGNMENT-7

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ENROLLMENT NUMBER-2020CSB102

**SUBJECT -ASSIGNMENT 7 OF DBMS
LABORATORY**

G-SUITE ID-

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1.DEPTS TABLE-

```
mysql> SELECT *  
      -> FROM DEPTS;
```

deptcode	deptname
CE	Civil Engineering
CST	Computer Science & Technology
EE	Electrical Engineering
ME	Mechanical Engineering
PHY	Physics

```
5 rows in set (0.00 sec)
```

2.STUDENTS TABLE-

```
mysql> SELECT *  
-> FROM STUDENTS;
```

rollno	name	bdate	deptcode	hostel	parent_inc
121	SUBHAJIT	1995-12-21	CST	5	10000.0
122	ANUBHAV	1994-11-01	CST	7	20000.8
123	VICKY	1993-05-30	CST	5	60000.4
124	VIJAY	1995-03-15	ME	5	99999.0
125	SINGA	1992-08-28	CE	1	10000.7
126	MALAY	1996-12-30	ME	4	2000000.9
127	RAJESH	1995-05-17	PHY	2	500000.0
128	MOHIT	1996-09-21	CE	7	9900000.0
129	ROHIT	1994-02-22	EE	9	90000.5

```
9 rows in set (0.00 sec)
```

3.FACULTY TABLE-

```
mysql> SELECT *  
      -> FROM FACULTY;
```

fac_code	fac_name	fac_dept
F10	MALAY KULE	CST
F11	JAYA SIL	CST
F12	SKM	EE
F13	MANAS HIRA	PHY
F14	BKS	CE
F15	NIRNAY GHOSH	CST
F16	SURAJEET GHOSH	PHY
F17	ATANU SAMANTA	CE

```
8 rows in set (0.00 sec)
```

4.CRS_OFFRD TABLE-

```
mysql> SELECT *  
      -> FROM CRS_OFFRD;
```

crs_code	crs_name	crs_credits	crs_fac_cd
C1	TOC	4.2	F11
C2	COA	3.0	F10
C3	GRAPH ALGO	4.1	F13
C4	DBMS	3.6	F10
C5	C LANGUAGE	2.0	F17
C6	JAVA	3.9	F15

```
6 rows in set (0.00 sec)
```

5.CRS_REGD TABLE-

```
mysql> SELECT *  
      -> FROM CRS_REGD;
```

crs_rollno	crs_cd	marks
121	C1	95.30
121	C2	90.00
122	C1	99.00
123	C5	70.00
125	C4	60.00
128	C6	95.90

```
6 rows in set (0.00 sec)
```

TASK-1:-

- **Q1.** Create a view of all students in dept CSE.

Ans-

->CREATE VIEW CST_STUDENTS AS

->(SELECT *

->FROM STUDENTS

->WHERE DEPTCODE='CST');

```
mysql> CREATE VIEW CST_STUDENTS AS
-> (SELECT *
-> FROM STUDENTS
-> WHERE DEPTCODE='CST');
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> SELECT *
-> FROM CST_STUDENTS;
```

rollno	name	bdate	deptcode	hostel	parent_inc
121	SUBHAJIT	1995-12-21	CST	5	10000.0
122	ANUBHAV	1994-11-01	CST	7	20000.8
123	VICKY	1993-05-30	CST	5	60000.4

```
3 rows in set (0.00 sec)
```

Q2. Create a view named as cse_stud for 'CSE' dept students having attributes rollno, name, hostel.

Ans-

Query-

```
CREATE VIEW CSE_STUD AS  
(SELECT ROLLNO,NAME,HOSTEL  
FROM STUDENTS  
WHERE DEPTCODE='CST');
```

```
mysql> CREATE VIEW CSE_STUD AS  
-> (SELECT ROLLNO,NAME,HOSTEL  
-> FROM STUDENTS  
-> WHERE DEPTCODE='CST');  
Query OK, 0 rows affected (0.01 sec)
```

```
mysql>  
mysql> SELECT *  
-> FROM CSE_STUD;
```

ROLLNO	NAME	HOSTEL
121	SUBHAJIT	5
122	ANUBHAV	7
123	VICKY	5

3 rows in set (0.00 sec)

Q3. Insert a new student of CSE. Analyse the result.

Ans-

Query-

INSERT INTO STUDENTS

VALUES

(130,'ATANU','1996-12-01','CST',8,90000.9);

```
mysql> INSERT INTO STUDENTS
-> VALUES
-> (130,'ATANU','1996-12-01','CST',8,90000.9);
Query OK, 1 row affected (0.00 sec)

mysql> SELECT *
-> FROM CST_STUDENTS;
+-----+-----+-----+-----+-----+-----+
| rollno | name      | bdate      | deptcode | hostel | parent_inc |
+-----+-----+-----+-----+-----+-----+
| 121    | SUBHAJIT  | 1995-12-21 | CST      | 5      | 10000.0    |
| 122    | ANUBHAV   | 1994-11-01 | CST      | 7      | 20000.8    |
| 123    | VICKY     | 1993-05-30 | CST      | 5      | 60000.4    |
| 130    | ATANU     | 1996-12-01 | CST      | 8      | 90000.9    |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> SELECT *
-> FROM CSE_STUD;
+-----+-----+-----+
| ROLLNO | NAME      | HOSTEL |
+-----+-----+-----+
| 121    | SUBHAJIT  | 5      |
| 122    | ANUBHAV   | 7      |
| 123    | VICKY     | 5      |
| 130    | ATANU     | 8      |
+-----+-----+-----+
4 rows in set (0.00 sec)
```

Remark-When I inserted a student's data in STUDENTS table the data is also gets updated in CST_STUDENTS and CSE_STUD views.


```
mysql> insert into CST_STUDENTS values  
-> (10,"JEEVA","1996-07-20","CST",1,900100.9);  
Query OK, 1 row affected (0.06 sec)
```

```
mysql> SELECT *  
-> FROM CSE_STUD;
```

ROLLNO	NAME	HOSTEL
10	JEEVA	1
121	SUBHAJIT	5
122	ANUBHAV	7
123	VICKY	5
130	ATANU	8

5 rows in set (0.04 sec)

```
mysql> SELECT *  
-> FROM STUDENTS;
```

rollno	name	bdate	deptcode	hostel	parent_inc
10	JEEVA	1996-07-20	CST	1	900100.9
121	SUBHAJIT	1995-12-21	CST	5	10000.0
122	ANUBHAV	1994-11-01	CST	7	20000.8
123	VICKY	1993-05-30	CST	5	60000.4
124	VIJAY	1995-03-15	ME	5	99999.0
125	SINGA	1992-08-28	CE	1	10000.7
126	MALAY	1996-12-30	ME	4	2000000.9
127	RAJESH	1995-05-17	PHY	2	500000.0
128	MOHIT	1996-09-21	CE	7	9900000.0
129	ROHIT	1994-02-22	EE	9	90000.5
130	ATANU	1996-12-01	CST	8	90000.9

11 rows in set (0.00 sec)

REMARK- When I inserted a student's data in CST_STUDENTS view the data is also gets updated in CSE_STUD view and STUDENTS table.

```
mysql> insert into cse_stud values
-> (11,"JAYANTH",2);
Query OK, 1 row affected (0.04 sec)
```

```
mysql> SELECT *
-> FROM CST_STUDENTS;
```

rollno	name	bdate	deptcode	hostel	parent_inc
10	JEEVA	1996-07-20	CST	1	900100.9
121	SUBHAJIT	1995-12-21	CST	5	10000.0
122	ANUBHAV	1994-11-01	CST	7	20000.8
123	VICKY	1993-05-30	CST	5	60000.4
130	ATANU	1996-12-01	CST	8	90000.9

5 rows in set (0.00 sec)

```
mysql> SELECT *
-> FROM STUDENTS;
```

rollno	name	bdate	deptcode	hostel	parent_inc
10	JEEVA	1996-07-20	CST	1	900100.9
11	JAYANTH	NULL	NULL	2	NULL
121	SUBHAJIT	1995-12-21	CST	5	10000.0
122	ANUBHAV	1994-11-01	CST	7	20000.8
123	VICKY	1993-05-30	CST	5	60000.4
124	VIJAY	1995-03-15	ME	5	99999.0
125	SINGA	1992-08-28	CE	1	10000.7
126	MALAY	1996-12-30	ME	4	2000000.9
127	RAJESH	1995-05-17	PHY	2	500000.0
128	MOHIT	1996-09-21	CE	7	9900000.0
129	ROHIT	1994-02-22	EE	9	90000.5
130	ATANU	1996-12-01	CST	8	90000.9

12 rows in set (0.00 sec)

REMARK- When I inserted a student's data in CSE_STUD view the data is gets updated in STUDENTS table but the data doesn't get updated in the CST_STUDENTS view because the foreign key (deptcode) of STUDENTS table is not an attribute of CSE_STUD view.

Q4. Increment parental income by Rs. 5000 (HRA).

Ans-

Query-

update students

set parent_inc=parent_inc+5000;

```
mysql> update students
      -> set parent_inc=parent_inc+5000;
Query OK, 11 rows affected (0.04 sec)
Rows matched: 12  Changed: 11  Warnings: 0
```

```
mysql> SELECT *
      -> FROM CST_STUDENTS;
```

rollno	name	bdate	deptcode	hostel	parent_inc
10	JEEVA	1996-07-20	CST	1	905100.9
121	SUBHAJIT	1995-12-21	CST	5	15000.0
122	ANUBHAV	1994-11-01	CST	7	25000.8
123	VICKY	1993-05-30	CST	5	65000.4
130	ATANU	1996-12-01	CST	8	95000.9

5 rows in set (0.00 sec)

REMARK- When I update the parent income (parent_inc) in STUDENTS table the parent_inc also gets updated in CST_STUDENTS view but CST_STUD view does not get updated as there is no attribute parent_inc in CSE_STUD view.

- Delete the view.

```
mysql> DROP VIEW CSE_STUD;  
Query OK, 0 rows affected (0.04 sec)  
  
mysql> SELECT *  
      -> FROM CSE_STUD;  
ERROR 1146 (42S02): Table 'assignment_7.cse_stud' doesn't exist
```

TASK-2:-

- **Q1.** Create another view of all students in dept Mechanical Engineering (department Name). The view will contain attributes namely Roll-No, Name, Department Name, Age.

Ans-

Query-

```
create view me_students as
```

```
(select s.rollno as "Roll-No",s.name as
```

```
"Name",d.deptname as
```

```
"Department_Name",
```

```
TIMESTAMPDIFF(YEAR, s.bdate, CURDATE())
```

```
as Age
```

```
from depts d,students s
```

```
where d.deptcode=s.deptcode and
```

```
d.deptname="MECHANICAL ENGINEERING");
```

```
mysql> create view me_students as
  -> (select s.rollno as "Roll-No",s.name as "Name",d.deptname as "Department Name",
  -> TIMESTAMPDIFF(YEAR, s.bdate, CURDATE()) as Age
  -> from depts d,students s
  -> where d.deptcode=s.deptcode and d.deptname="MECHANICAL ENGINEERING");
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> SELECT *
  -> FROM ME_STUDENTS;
```

Roll-No	Name	Department Name	Age
124	VIJAY	Mechanical Engineering	27
126	MALAY	Mechanical Engineering	25

```
2 rows in set (0.00 sec)
```

Attempt the following questions-

Q1. Insert a new student of Mechanical Engineering Department

Ans-

Query-

```
insert into me_students values  
(12,"RAHUL","MECHANICAL  
ENGINEERING",25);
```

```
mysql> insert into me_students values  
-> (12,"RAHUL","MECHANICAL ENGINEERING",25);  
ERROR 1394 (HY000): Can not insert into join view 'assignment_7.me_students' without fields list  
mysql> |
```

REMARK- I tried to insert a new student data into the view(me_students) but its showing error because this view is created by taking cartesian product of two tables, so the insertion is not possible. Hence this is a non-updatable view. The view should be created from a single table. If the view is created using multiple tables, then we will not be allowed to insert the data in the view.

Q2. Delete a student (for a given Name) of the same department.

Ans-

Query-

delete from me_students

where Name="VIJAY";

```
mysql> delete from me_students  
      -> where Name="VIJAY";  
ERROR 1395 (HY000): Can not delete from join view 'assignment_7.me_students'  
mysql> |
```

REMARK-

We cannot delete a student data(row) from the view(me_students) because this view is created by using two tables i.e, students and depts table. The view should be created from a single table. If the view is created using multiple tables, then we will not be allowed to delete the data(row) from the view.

Q3 Shift a student (for a given Name) from Mechanical to Computer Science.

Ans-

REMARK-

We cannot change a student from mechanical to Computer Science because It causes anomalies in data.