

Assignment No 3

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Roll No: 89

Batch:B4

Title: Execute DDL statements which demonstrate the use of views. Try to update the base table using its corresponding view. Also consider restrictions on updatable views and perform view creation from multiple tables.

```
mysql> CREATE VIEW club_read_only AS
-> SELECT club_id, club_name, club_desc, total_members
-> FROM club;
Query OK, 0 rows affected (0.00 sec)

mysql> select * from club_read_only;
+-----+-----+-----+-----+
| club_id | club_name | club_desc | total_members |
+-----+-----+-----+-----+
| 1 | Ged IT Club | Club for coding competitions | 40 |
| 2 | YUJ Club | Club for Physical and Mental Wellness | 50 |
| 3 | game dev+ Club | Club for game development | 30 |
+-----+-----+-----+-----+
3 rows in set (0.01 sec)

mysql> CREATE VIEW club_updatable AS
-> SELECT club_id, club_name, club_desc
-> FROM club
-> WHERE total_members IS NOT NULL
-> WITH CHECK OPTION;
Query OK, 0 rows affected (0.01 sec)

mysql> SELECT * FROM club_updatable;
+-----+-----+-----+
| club_id | club_name | club_desc |
+-----+-----+-----+
| 1 | Ged IT Club | Club for coding competitions |
| 2 | YUJ Club | Club for Physical and Mental Wellness |
| 3 | game dev+ Club | Club for game development |
+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> UPDATE club_updatable
-> SET club_name = 'AI Club'
-> where club_id=3;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT * FROM club_updatable;
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mysql> UPDATE club_updatable
-> SET club_name = 'AI Club'
-> where club_id=3;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT * FROM club_updatable;
+-----+-----+-----+
| club_id | club_name | club_desc |
+-----+-----+-----+
| 1 | Ged IT Club | Club for coding competitions |
| 2 | YUJ Club | Club for Physical and Mental Wellness |
| 3 | AI Club | Club for game development |
+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> CREATE VIEW club_ordered AS
-> SELECT * FROM club
-> ORDER BY total_members DESC;
Query OK, 0 rows affected (0.02 sec)

mysql> SELECT * FROM club_ordered;
+-----+-----+-----+-----+-----+
| club_id | club_name | club_desc | total_members | admin_id |
+-----+-----+-----+-----+-----+
| 2 | YUJ Club | Club for Physical and Mental Wellness | 50 | 2 |
| 1 | Ged IT Club | Club for coding competitions | 40 | 1 |
| 3 | AI Club | Club for game development | 30 | 3 |
+-----+-----+-----+-----+-----+
3 rows in set (0.02 sec)

mysql> CREATE VIEW club_with_admin AS
-> SELECT c.club_id, c.club_name, c.total_members, m.admin_id, m.admin_name
-> FROM club c
-> JOIN member m ON c.admin_id = m.admin_id;
ERROR 1054 (42S22): Unknown column 'm.admin_id' in 'field list'

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+-----+-----+-----+-----+-----+
| 3 | AI Club | Club for game development | 30 | 3 |
+-----+-----+-----+-----+-----+
3 rows in set (0.02 sec)

mysql> CREATE VIEW club_with_admin AS
-> SELECT c.club_id, c.club_name, c.total_members, m.admin_id, m.admin_name
-> FROM club c
-> JOIN member m ON c.admin_id = m.admin_id;
ERROR 1054 (42S22): Unknown column 'm.admin_id' in 'field list'
mysql> desc member;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| member_id | int(11) | NO | PRI | NULL | |
| member_name | varchar(100) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.01 sec)

mysql> CREATE VIEW club_with_admin AS
-> SELECT c.club_id, c.club_name, c.total_members, m.member_id, m.member_name
-> FROM club c
-> JOIN member m ON c.admin_id = m.member_id;
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT * FROM club_with_admin;
+-----+-----+-----+-----+-----+
| club_id | club_name | total_members | member_id | member_name |
+-----+-----+-----+-----+-----+
| 1 | Ged IT Club | 40 | 1 | Shreya Phalke |
| 2 | YUJ Club | 50 | 2 | Sanika Mohite |
| 3 | AI Club | 30 | 3 | Sakshi Sonawane |
+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)

mysql> CREATE VIEW club_aggregate AS

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```
mysql> CREATE VIEW club_with_admin AS
-> SELECT c.club_id, c.club_name, c.total_members, m.member_id, m.member_name
-> FROM club c
-> JOIN member m ON c.admin_id = m.member_id;
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT * FROM club_with_admin;
+-----+-----+-----+-----+-----+
| club_id | club_name | total_members | member_id | member_name |
+-----+-----+-----+-----+-----+
| 1 | Ged IT Club | 40 | 1 | Shreya Phalke |
| 2 | YUJ Club | 50 | 2 | Sanika Mohite |
| 3 | AI Club | 30 | 3 | Sakshi Sonawane |
+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)

mysql> CREATE VIEW club_aggregate AS
-> SELECT COUNT(club_id) AS total_clubs, SUM(total_members) AS total_members_count
-> FROM club;
Query OK, 0 rows affected (0.02 sec)

mysql> CREATE VIEW club_aggregate AS
-> ;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '' at line 1
mysql> SELECT * FROM club_aggregate;
+-----+-----+
| total_clubs | total_members_count |
+-----+-----+
| 3 | 120 |
+-----+-----+
1 row in set (0.01 sec)

mysql> |
```

```
mysql> CREATE VIEW club_insertable AS
-> SELECT club_name, club_desc, total_members, admin_id
-> FROM club;
Query OK, 0 rows affected (0.02 sec)

mysql> INSERT INTO club_insertable (club_name, club_desc, total_members, admin_id)
-> VALUES ('EPEC Club', 'Club for Event organising', 80, 3);
ERROR 1423 (HY000): Field of view 'college.club_insertable' underlying table doesn't have a default value
mysql> DESC club;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| club_id | int(11) | NO | PRI | NULL | |
| club_name | varchar(100) | YES | | NULL | |
| club_desc | varchar(100) | YES | | NULL | |
| total_members | int(11) | YES | | NULL | |
| admin_id | int(11) | YES | MUL | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.02 sec)

mysql> ALTER TABLE club MODIFY club_id INT AUTO_INCREMENT;
Query OK, 3 rows affected (0.05 sec)
Records: 3 Duplicates: 0 Warnings: 0

mysql> INSERT INTO club_insertable (club_name, club_desc, total_members, admin_id)
-> VALUES ('EPEC Club', 'Club for Event organising', 80, 3);
Query OK, 1 row affected (0.00 sec)

mysql> select * from club_insertable;
+-----+-----+-----+-----+
| club_name | club_desc | total_members | admin_id |
+-----+-----+-----+-----+
| Ged IT Club | Club for coding competitions | 40 | 1 |
| YUJ Club | Club for Physical and Mental Wellness | 50 | 2 |
| AI Club | Club for game development | 30 | 3 |
| EPEC Club | Club for Event organising | 80 | 3 |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> |
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Command Prompt - mysql -u x + v
+-----+-----+-----+-----+
| EPEC Club | Club for Event organizing |      80 |      3 |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> CREATE VIEW club_deletable AS
-> SELECT * FROM club;
Query OK, 0 rows affected (0.01 sec)

mysql> DELETE FROM club_deletable WHERE club_id = 3;
Query OK, 1 row affected (0.01 sec)

mysql> select * from club_deletable;
+-----+-----+-----+-----+
| club_id | club_name | club_desc | total_members | admin_id |
+-----+-----+-----+-----+
| 1 | Ged IT Club | Club for coding competitions | 40 | 1 |
| 2 | YUJ Club | Club for Physical and Mental Wellness | 50 | 2 |
| 4 | EPEC Club | Club for Event organizing | 80 | 3 |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> DROP VIEW IF EXISTS club_read_only;
Query OK, 0 rows affected (0.01 sec)

mysql> CREATE OR REPLACE VIEW club_read_only AS
-> SELECT club_id, club_name, club_desc, total_members
-> FROM club;
Query OK, 0 rows affected (0.01 sec)

mysql> select * from club_read_only;
+-----+-----+-----+-----+
| club_id | club_name | club_desc | total_members |
+-----+-----+-----+-----+
| 1 | Ged IT Club | Club for coding competitions | 40 |
| 2 | YUJ Club | Club for Physical and Mental Wellness | 50 |
| 4 | EPEC Club | Club for Event organizing | 80 |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> |
```