Name	Sujal Sandeep Dingankar, Harsha Tanaji Surwase
UID	2024301005, 2024301033
Experiment No.	**7**
Aim	**TCL, DCL And Authentications.**
DCL Command	Created a User Sujal :

```
mysql> create user 'Sujal' identified by 'Sujal@2005';
Query OK, 0 rows affected (0.01 sec)
```

Grant and Revoke Access From User :

```
mysql> GRANT ALL privileges on Donne to 'Sujal';
Query OK, 0 rows affected (0.01 sec)

mysql> flush Privileges;
Query OK, 0 rows affected (0.01 sec)

mysql> grant insert, select on Donor to 'Sujal';
Query OK, 0 rows affected (0.01 sec)
```

Login:

```
C:\Users\Sujal Dingankar>mysql -u Sujal -p
Enter password: **********
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 16
Server version: 8.0.39 MySQL Community Server - GPL

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql>
```

Performing queries with created user:

```
mysql> Select * from Donor;
+-----+-----------+----------+------------+-----------------------------+------------+-----+--------------+
| id  | firstname | lastname | contact    | email                       | bloodgroup | Age | healthstatus |
+-----+-----------+----------+------------+-----------------------------+------------+-----+--------------+
| 101 | Sujal     | Dingankar| 7798802841 | sujal.dingankar@spit.ac.in  | O+         |  20 | Healthy      |
| 102 | Shreeya   | Nemade   | 7698231082 | shreeya.nemade@spit.ac.in   | A+         |  19 | Healthy      |
| 103 | Harsha    | Surwase  | 5612798561 | harsha.surwase@spit.ac.in   | B+         |  21 | Healthy      |
| 104 | Avi       | Patil    | 1234598745 | avinash.patil@spit.ac.in    | AB+        |  18 | Healthy      |
| 105 | Shruti    | Bhuvad   | 455612345  | shruti.bhuvad@spit.ac.in    | A+         |  22 | Healthy      |
| 106 | John      | Doe      | 7894561230 | john.doe@example.com        | O+         |  25 | Healthy      |
| 107 | Jane      | Smith    | 7894567890 | jane.smith@example.com      | O+         |  30 | Healthy      |
| 108 | Mark      | Taylor   | 7894563456 | mark.taylor@example.com     | O+         |  19 | Healthy      |
| 109 | Lucy      | Brown    | 7894569876 | lucy.brown@example.com      | A+         |  35 | Healthy      |
+-----+-----------+----------+------------+-----------------------------+------------+-----+--------------+
9 rows in set (0.00 sec)
```

```
mysql> Insert into Donor values(110,"Manu","Pandey","4561298742","manu.pandey@spit.ac.in","AB+",26,"Healthy");
Query OK, 1 row affected (0.01 sec)

mysql> Select * from Donor;
+-----+-----------+----------+------------+----------------------------+------------+------+--------------+
| id  | firstname | lastname | contact    | email                      | bloodgroup | Age  | healthstatus |
+-----+-----------+----------+------------+----------------------------+------------+------+--------------+
| 101 | Sujal     | Dingankar| 7798802841 | sujal.dingankar@spit.ac.in | O+         |   20 | Healthy      |
| 102 | Shreeya   | Nemade   | 7698231082 | shreeya.nemade@spit.ac.in  | A+         |   19 | Healthy      |
| 103 | Harsha    | Surwase  | 5612798561 | harsha.surwase@spit.ac.in  | B+         |   21 | Healthy      |
| 104 | Avi       | Patil    | 1234598745 | avinash.patil@spit.ac.in   | AB+        |   18 | Healthy      |
| 105 | Shruti    | Bhuvad   | 455612345  | shruti.bhuvad@spit.ac.in   | A+         |   22 | Healthy      |
| 106 | John      | Doe      | 7894561230 | john.doe@example.com       | O+         |   25 | Healthy      |
| 107 | Jane      | Smith    | 7894567890 | jane.smith@example.com     | O+         |   30 | Healthy      |
| 108 | Mark      | Taylor   | 7894563456 | mark.taylor@example.com    | O+         |   19 | Healthy      |
| 109 | Lucy      | Brown    | 7894569876 | lucy.brown@example.com     | A+         |   35 | Healthy      |
| 110 | Manu      | Pandey   | 4561298742 | manu.pandey@spit.ac.in     | AB+        |   26 | Healthy      |
+-----+-----------+----------+------------+----------------------------+------------+------+--------------+
10 rows in set (0.00 sec)
```

```
mysql> delete from Donor where id = 110;
ERROR 1142 (42000): DELETE command denied to user 'Sujal'@'localhost' for table 'donor'
```

Revoke the given access from user:

```
mysql> revoke insert, select on Donor from 'Sujal';
Query OK, 0 rows affected (0.01 sec)
```

TCL Command:	Starting Transaction.
| | ```
mysql> Start Transaction;
Query OK, 0 rows affected (0.00 sec)

mysql> Select * from Donor;
+-----+-----------+-----------+------------+----------------------------+------------+------+--------------+
| id  | firstname | lastname  | contact    | email                      | bloodgroup | Age  | healthstatus |
+-----+-----------+-----------+------------+----------------------------+------------+------+--------------+
| 101 | Sujal     | Dingankar | 7798802841 | sujal.dingankar@spit.ac.in | O+         |   20 | Healthy      |
| 102 | Shreeya   | Nemade    | 7698231082 | shreeya.nemade@spit.ac.in  | A+         |   19 | Healthy      |
| 103 | Harsha    | Surwase   | 5612798561 | harsha.surwase@spit.ac.in  | B+         |   21 | Healthy      |
| 104 | Avi       | Patil     | 1234598745 | avinash.patil@spit.ac.in   | AB+        |   18 | Healthy      |
| 105 | Shruti    | Bhuvad    | 455612345  | shruti.bhuvad@spit.ac.in   | A+         |   22 | Healthy      |
| 106 | John      | Doe       | 7894561230 | john.doe@example.com       | O+         |   25 | Healthy      |
| 107 | Jane      | Smith     | 7894567890 | jane.smith@example.com     | O+         |   30 | Healthy      |
| 108 | Mark      | Taylor    | 7894563456 | mark.taylor@example.com    | O+         |   19 | Healthy      |
| 109 | Lucy      | Brown     | 7894569876 | lucy.brown@example.com     | A+         |   35 | Healthy      |
| 110 | Manu      | Pandey    | 4561298742 | manu.pandey@spit.ac.in     | AB+        |   26 | Healthy      |
+-----+-----------+-----------+------------+----------------------------+------------+------+--------------+
10 rows in set (0.00 sec)
``` |
| | Inserted data in the Donor table after transaction is started. |
| | ```
mysql> Insert into Donor values(111,'Rakesh','Ramane','4531022236','rakesh.ramane@spit.ac.in','B+',40,'Healthy');
Query OK, 1 row affected (0.00 sec)

mysql> Select * from Donor;
+-----+-----------+-----------+------------+----------------------------+------------+------+--------------+
| id  | firstname | lastname  | contact    | email                      | bloodgroup | Age  | healthstatus |
+-----+-----------+-----------+------------+----------------------------+------------+------+--------------+
| 101 | Sujal     | Dingankar | 7798802841 | sujal.dingankar@spit.ac.in | O+         |   20 | Healthy      |
| 102 | Shreeya   | Nemade    | 7698231082 | shreeya.nemade@spit.ac.in  | A+         |   19 | Healthy      |
| 103 | Harsha    | Surwase   | 5612798561 | harsha.surwase@spit.ac.in  | B+         |   21 | Healthy      |
| 104 | Avi       | Patil     | 1234598745 | avinash.patil@spit.ac.in   | AB+        |   18 | Healthy      |
| 105 | Shruti    | Bhuvad    | 455612345  | shruti.bhuvad@spit.ac.in   | A+         |   22 | Healthy      |
| 106 | John      | Doe       | 7894561230 | john.doe@example.com       | O+         |   25 | Healthy      |
| 107 | Jane      | Smith     | 7894567890 | jane.smith@example.com     | O+         |   30 | Healthy      |
| 108 | Mark      | Taylor    | 7894563456 | mark.taylor@example.com    | O+         |   19 | Healthy      |
| 109 | Lucy      | Brown     | 7894569876 | lucy.brown@example.com     | A+         |   35 | Healthy      |
| 110 | Manu      | Pandey    | 4561298742 | manu.pandey@spit.ac.in     | AB+        |   26 | Healthy      |
| 111 | Rakesh    | Ramane    | 4531022236 | rakesh.ramane@spit.ac.in   | B+         |   40 | Healthy      |
+-----+-----------+-----------+------------+----------------------------+------------+------+--------------+
11 rows in set (0.00 sec)
``` |

Rollback:

```
mysql> Rollback;
Query OK, 0 rows affected (0.01 sec)

mysql> Select * from Donor;
+-----+-----------+-----------+------------+----------------------------+------------+------+--------------+
| id  | firstname | lastname  | contact    | email                      | bloodgroup | Age  | healthstatus |
+-----+-----------+-----------+------------+----------------------------+------------+------+--------------+
| 101 | Sujal     | Dingankar | 7798802841 | sujal.dingankar@spit.ac.in | O+         |   20 | Healthy      |
| 102 | Shreeya   | Nemade    | 7698231082 | shreeya.nemade@spit.ac.in  | A+         |   19 | Healthy      |
| 103 | Harsha    | Surwase   | 5612798561 | harsha.surwase@spit.ac.in  | B+         |   21 | Healthy      |
| 104 | Avi       | Patil     | 1234598745 | avinash.patil@spit.ac.in   | AB+        |   18 | Healthy      |
| 105 | Shruti    | Bhuvad    | 455612345  | shruti.bhuvad@spit.ac.in   | A+         |   22 | Healthy      |
| 106 | John      | Doe       | 7894561230 | john.doe@example.com       | O+         |   25 | Healthy      |
| 107 | Jane      | Smith     | 7894567890 | jane.smith@example.com     | O+         |   30 | Healthy      |
| 108 | Mark      | Taylor    | 7894563456 | mark.taylor@example.com    | O+         |   19 | Healthy      |
| 109 | Lucy      | Brown     | 7894569876 | lucy.brown@example.com     | A+         |   35 | Healthy      |
| 110 | Manu      | Pandey    | 4561298742 | manu.pandey@spit.ac.in     | AB+        |   26 | Healthy      |
+-----+-----------+-----------+------------+----------------------------+------------+------+--------------+
10 rows in set (0.00 sec)
```

Commit:

```
mysql> Insert into Donor values(111,'Rakesh','Ramane','4531022236','rakesh.ramane@spit.ac.in','B+',40,'Healthy');
Query OK, 1 row affected (0.01 sec)

mysql> commit;
Query OK, 0 rows affected (0.00 sec)

mysql> Select * from Donor;
+-----+-----------+-----------+------------+----------------------------+------------+------+--------------+
| id  | firstname | lastname  | contact    | email                      | bloodgroup | Age  | healthstatus |
+-----+-----------+-----------+------------+----------------------------+------------+------+--------------+
| 101 | Sujal     | Dingankar | 7798802841 | sujal.dingankar@spit.ac.in | O+         |   20 | Healthy      |
| 102 | Shreeya   | Nemade    | 7698231082 | shreeya.nemade@spit.ac.in  | A+         |   19 | Healthy      |
| 103 | Harsha    | Surwase   | 5612798561 | harsha.surwase@spit.ac.in  | B+         |   21 | Healthy      |
| 104 | Avi       | Patil     | 1234598745 | avinash.patil@spit.ac.in   | AB+        |   18 | Healthy      |
| 105 | Shruti    | Bhuvad    | 455612345  | shruti.bhuvad@spit.ac.in   | A+         |   22 | Healthy      |
| 106 | John      | Doe       | 7894561230 | john.doe@example.com       | O+         |   25 | Healthy      |
| 107 | Jane      | Smith     | 7894567890 | jane.smith@example.com     | O+         |   30 | Healthy      |
| 108 | Mark      | Taylor    | 7894563456 | mark.taylor@example.com    | O+         |   19 | Healthy      |
| 109 | Lucy      | Brown     | 7894569876 | lucy.brown@example.com     | A+         |   35 | Healthy      |
| 110 | Manu      | Pandey    | 4561298742 | manu.pandey@spit.ac.in     | AB+        |   26 | Healthy      |
| 111 | Rakesh    | Ramane    | 4531022236 | rakesh.ramane@spit.ac.in   | B+         |   40 | Healthy      |
+-----+-----------+-----------+------------+----------------------------+------------+------+--------------+
11 rows in set (0.00 sec)
```

Savepoint:

```
mysql> Savepoint SP1;
Query OK, 0 rows affected (0.00 sec)

mysql> Insert into Donor values(112,'Rohit','Ramane','4531011112','rohit.ramane@spit.ac.in','B+',30,'Healthy');
Query OK, 1 row affected (0.00 sec)

mysql> Savepoint SP2;
Query OK, 0 rows affected (0.00 sec)

mysql> Insert into Donor values(113,'Rahul','Jha','2154611112','rahul.jha@spit.ac.in','AB+',28,'Healthy');
Query OK, 1 row affected (0.00 sec)

mysql> Select * from Donor;
+-----+-----------+-----------+------------+----------------------------+------------+------+--------------+
| id  | firstname | lastname  | contact    | email                      | bloodgroup | Age  | healthstatus |
+-----+-----------+-----------+------------+----------------------------+------------+------+--------------+
| 101 | Sujal     | Dingankar | 7798802841 | sujal.dingankar@spit.ac.in | O+         |   20 | Healthy      |
| 102 | Shreeya   | Nemade    | 7698231082 | shreeya.nemade@spit.ac.in  | A+         |   19 | Healthy      |
| 103 | Harsha    | Surwase   | 5612798561 | harsha.surwase@spit.ac.in  | B+         |   21 | Healthy      |
| 104 | Avi       | Patil     | 1234598745 | avinash.patil@spit.ac.in   | AB+        |   18 | Healthy      |
| 105 | Shruti    | Bhuvad    | 455612345  | shruti.bhuvad@spit.ac.in   | A+         |   22 | Healthy      |
| 106 | John      | Doe       | 7894561230 | john.doe@example.com       | O+         |   25 | Healthy      |
| 107 | Jane      | Smith     | 7894567890 | jane.smith@example.com     | O+         |   30 | Healthy      |
| 108 | Mark      | Taylor    | 7894563456 | mark.taylor@example.com    | O+         |   19 | Healthy      |
| 109 | Lucy      | Brown     | 7894569876 | lucy.brown@example.com     | A+         |   35 | Healthy      |
| 110 | Manu      | Pandey    | 4561298742 | manu.pandey@spit.ac.in     | AB+        |   26 | Healthy      |
| 111 | Rakesh    | Ramane    | 4531022236 | rakesh.ramane@spit.ac.in   | B+         |   40 | Healthy      |
| 112 | Rohit     | Ramane    | 4531011112 | rohit.ramane@spit.ac.in    | B+         |   30 | Healthy      |
| 113 | Rahul     | Jha       | 2154611112 | rahul.jha@spit.ac.in       | AB+        |   28 | Healthy      |
+-----+-----------+-----------+------------+----------------------------+------------+------+--------------+
13 rows in set (0.00 sec)
```

Rollback to Savepoint:

```
mysql> Rollback to savepoint SP2;
Query OK, 0 rows affected (0.00 sec)

mysql> Select * from Donor;
+-----+-----------+-----------+------------+-----------------------------+------------+------+--------------+
| id  | firstname | lastname  | contact    | email                       | bloodgroup | Age  | healthstatus |
+-----+-----------+-----------+------------+-----------------------------+------------+------+--------------+
| 101 | Sujal     | Dingankar | 7798802841 | sujal.dingankar@spit.ac.in  | O+         |   20 | Healthy      |
| 102 | Shreeya   | Nemade    | 7698231082 | shreeya.nemade@spit.ac.in   | A+         |   19 | Healthy      |
| 103 | Harsha    | Surwase   | 5612798561 | harsha.surwase@spit.ac.in   | B+         |   21 | Healthy      |
| 104 | Avi       | Patil     | 1234598745 | avinash.patil@spit.ac.in    | AB+        |   18 | Healthy      |
| 105 | Shruti    | Bhuvad    | 455612345  | shruti.bhuvad@spit.ac.in    | A+         |   22 | Healthy      |
| 106 | John      | Doe       | 7894561230 | john.doe@example.com        | O+         |   25 | Healthy      |
| 107 | Jane      | Smith     | 7894567890 | jane.smith@example.com      | O+         |   30 | Healthy      |
| 108 | Mark      | Taylor    | 7894563456 | mark.taylor@example.com     | O+         |   19 | Healthy      |
| 109 | Lucy      | Brown     | 7894569876 | lucy.brown@example.com      | A+         |   35 | Healthy      |
| 110 | Manu      | Pandey    | 4561298742 | manu.pandey@spit.ac.in      | AB+        |   26 | Healthy      |
| 111 | Rakesh    | Ramane    | 4531022236 | rakesh.ramane@spit.ac.in    | B+         |   40 | Healthy      |
| 112 | Rohit     | Ramane    | 4531011112 | rohit.ramane@spit.ac.in     | B+         |   30 | Healthy      |
+-----+-----------+-----------+------------+-----------------------------+------------+------+--------------+
12 rows in set (0.00 sec)
```

```
mysql> Rollback to savepoint SP1;
Query OK, 0 rows affected (0.00 sec)

mysql> Select * from Donor;
+-----+-----------+-----------+------------+-----------------------------+------------+------+--------------+
| id  | firstname | lastname  | contact    | email                       | bloodgroup | Age  | healthstatus |
+-----+-----------+-----------+------------+-----------------------------+------------+------+--------------+
| 101 | Sujal     | Dingankar | 7798802841 | sujal.dingankar@spit.ac.in  | O+         |   20 | Healthy      |
| 102 | Shreeya   | Nemade    | 7698231082 | shreeya.nemade@spit.ac.in   | A+         |   19 | Healthy      |
| 103 | Harsha    | Surwase   | 5612798561 | harsha.surwase@spit.ac.in   | B+         |   21 | Healthy      |
| 104 | Avi       | Patil     | 1234598745 | avinash.patil@spit.ac.in    | AB+        |   18 | Healthy      |
| 105 | Shruti    | Bhuvad    | 455612345  | shruti.bhuvad@spit.ac.in    | A+         |   22 | Healthy      |
| 106 | John      | Doe       | 7894561230 | john.doe@example.com        | O+         |   25 | Healthy      |
| 107 | Jane      | Smith     | 7894567890 | jane.smith@example.com      | O+         |   30 | Healthy      |
| 108 | Mark      | Taylor    | 7894563456 | mark.taylor@example.com     | O+         |   19 | Healthy      |
| 109 | Lucy      | Brown     | 7894569876 | lucy.brown@example.com      | A+         |   35 | Healthy      |
| 110 | Manu      | Pandey    | 4561298742 | manu.pandey@spit.ac.in      | AB+        |   26 | Healthy      |
| 111 | Rakesh    | Ramane    | 4531022236 | rakesh.ramane@spit.ac.in    | B+         |   40 | Healthy      |
+-----+-----------+-----------+------------+-----------------------------+------------+------+--------------+
11 rows in set (0.00 sec)
```

| **Conclusion** | From this experiment, I learnt different DCL & TCL commands in MySQL & also implemented them. |