

1. Create a database “college”.

```
mysql> CREATE DATABASE college;
Query OK, 1 row affected (0.03 sec)
```

2. Create a table ‘student’ with columns (id, name, date of birth, gender, branch, section, year, address) under the “college” database.

```
mysql> use college;
database changed
mysql> CREATE TABLE student (
-> id INT PRIMARY KEY AUTO_INCREMENT,
-> name VARCHAR(255) NOT NULL,
-> date_of_birth DATE NOT NULL,
-> gender ENUM('Male', 'Female', 'Other') NOT NULL,
-> branch VARCHAR(255) NOT NULL,
-> section VARCHAR(255) NOT NULL,
-> year INT NOT NULL,
-> address VARCHAR(255) NOT NULL
-> );
Query OK, 0 rows affected (0.09 sec)

mysql> _
```

3. Insert 10 rows into the table.

```
mysql> INSERT INTO college.student (id, name, date_of_birth, gender, branch, section, year, address)
-> VALUES (4, 'Sunita', '1998-11-30', 'Female', 'Civil Engineering', 'B', 1, 'Udupi');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO college.student (id, name, date_of_birth, gender, branch, section, year, address)
-> VALUES (5, 'Vijay', '1995-05-20', 'Male', 'Computer Science', 'A', 3, 'Bangalore');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO college.student (id, name, date_of_birth, gender, branch, section, year, address)
-> VALUES (6, 'Deepika', '1996-09-05', 'Female', 'Electrical Engineering', 'B', 2, 'Mangalore');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO college.student (id, name, date_of_birth, gender, branch, section, year, address)
-> VALUES (7, 'Naveen', '1997-03-18', 'Male', 'Mechanical Engineering', 'A', 4, 'Ujire');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO college.student (id, name, date_of_birth, gender, branch, section, year, address)
-> VALUES (8, 'Anjali', '1998-12-05', 'Female', 'Civil Engineering', 'B', 1, 'Udupi');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO college.student (id, name, date_of_birth, gender, branch, section, year, address)
-> VALUES (9, 'Prashant', '1995-07-25', 'Male', 'Computer Science', 'A', 3, 'Bangalore');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO college.student (id, name, date_of_birth, gender, branch, section, year, address)
-> VALUES (10, 'Kavitha', '1996-10-10', 'Female', 'Electrical Engineering', 'B', 2, 'Mangalore');
Query OK, 1 row affected (0.00 sec)

mysql> _
```

4. Create a user with username: 'admin' and password: 'admin@123' with all the permissions like select, create, alter, drop, truncate, insert, update, and delete.

```
mysql> use college;
Database changed
mysql> CREATE USER 'admin'@'localhost' IDENTIFIED BY 'admin@123';
Query OK, 0 rows affected (0.02 sec)
mysql> GRANT ALL PRIVILEGES ON college.* TO 'admin'@'localhost';
```

```
mysql> GRANT SELECT, CREATE, ALTER, INSERT, UPDATE, DELETE ON college.* TO 'admin'@'localhost';
Query OK, 0 rows affected (0.02 sec)
```

5. Create user username: 'principal' and password 'principal@123' with select, insert, update, and delete permissions.

```
mysql> CREATE USER 'principal'@'localhost' IDENTIFIED BY 'principal@123';
Query OK, 0 rows affected (0.02 sec)
```

```
mysql>
mysql> GRANT SELECT, INSERT, UPDATE, DELETE ON college.* TO 'principal'@'localhost';
Query OK, 0 rows affected (0.01 sec)
```

6. Create user username: 'faculty' and password: 'faculty@123' with select, and update permissions.

```
mysql> CREATE USER 'faculty'@'localhost' IDENTIFIED BY 'faculty@123';
Query OK, 0 rows affected (0.03 sec)
```

```
mysql>
mysql> GRANT SELECT, UPDATE ON college.* TO 'faculty'@'localhost';
Query OK, 0 rows affected (0.01 sec)
```

7. Create user username: 'student' without a password and with select permission only.

```
mysql> CREATE USER student;
Query OK, 0 rows affected (0.01 sec)

mysql> GRANT SELECT ON college.* TO student;
Query OK, 0 rows affected (0.01 sec)
```

8. Login with the 'admin' user and add a new column phone number.

```
C:\Program Files\MySQL\MySQL Server 8.0\bin>mysql -u admin -p
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 31
Server version: 8.0.36 MySQL Community Server - GPL

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owners.

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

mysql> use college;
Database changed
mysql> alter table student add column phone_number varchar(20);
Query OK, 0 rows affected (0.26 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

9. Login with the 'principal' user and add 5 more new rows to the table with all column values including phone numbers.

```
C:\Users\Woolya>cd C:\Program Files\MySQL\MySQL Server 8.0\bin
C:\Program Files\MySQL\MySQL Server 8.0\bin>mysql -u principall -p
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 40
Server version: 8.0.36 MySQL Community Server - GPL

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owners.

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

mysql> use college;
Database changed
mysql> INSERT INTO student (id, name, date_of_birth, gender, branch, section, year, address, phone_number)
-> VALUES (11, 'Rajesh Kumar', '1996-09-15', 'Male', 'Computer Science', 'A', 3, 'Bangalore', '9876543210'),
-> (12, 'Ananya Singh', '1997-05-20', 'Female', 'Electrical Engineering', 'B', 2, 'Mangalore', '8765432109'),
-> (13, 'Sanjay Gupta', '1998-02-25', 'Male', 'Mechanical Engineering', 'A', 4, 'Ujire', '7654321098'),
-> (14, 'Neha Patel', '1999-11-10', 'Female', 'Civil Engineering', 'B', 1, 'Udupi', '6543210987'),
-> (15, 'Priya Sharma', '1996-06-20', 'Female', 'Computer Science', 'A', 3, 'Bangalore', '5432109876');
Query OK, 5 rows affected (0.01 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

10. Login with the 'faculty' user and update all the 10 students' phone numbers.

```
Your MySQL connection id is 41
Server version: 8.0.36 MySQL Community Server - GPL

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owners.

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

mysql> use college;
Database changed
mysql> UPDATE student
-> SET phone_number = CASE
-> WHEN id = 1 THEN '1111111111'
-> WHEN id = 2 THEN '2222222222'
-> WHEN id = 3 THEN '3333333333'
-> WHEN id = 4 THEN '4444444444'
-> WHEN id = 5 THEN '5555555555'
-> WHEN id = 6 THEN '6666666666'
-> WHEN id = 7 THEN '7777777777'
-> WHEN id = 8 THEN '8888888888'
-> WHEN id = 9 THEN '9999999999'
-> WHEN id = 10 THEN '1010101010'
-> END;
Query OK, 15 rows affected (0.01 sec)
Rows matched: 15 Changed: 15 Warnings: 0

mysql>
```

11. Login with the 'student' user and display the following outputs:
 - a. Display all the student data records.

```

mysql> use college;
Database changed
mysql> select from student;
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 'from student' at line 1
mysql> select *from student;
+----+-----+-----+-----+-----+-----+-----+-----+
| id | name | date_of_birth | gender | branch | section | year | address | phone_number |
+----+-----+-----+-----+-----+-----+-----+-----+
| 1 | Arun | 1995-05-15 | Male | Computer Science | A | 3 | Bangalore | 1111011111 |
| 2 | Priya | 1996-08-25 | Female | Electrical Engineering | B | 2 | Bangalore | 2222222222 |
| 3 | Ramesh | 1997-02-10 | Male | Mechanical Engineering | A | 4 | Ujire | 3333333333 |
| 4 | Sunita | 1998-11-30 | Female | Civil Engineering | B | 1 | Udupi | 4444444444 |
| 5 | Vijay | 1995-06-20 | Male | Computer Science | A | 3 | Bangalore | 5555555555 |
| 6 | Deepika | 1996-09-05 | Female | Electrical Engineering | B | 2 | Mangalore | 6666666666 |
| 7 | Naveen | 1997-03-18 | Male | Mechanical Engineering | A | 4 | Ujire | 7777777777 |
| 8 | Anjali | 1998-12-05 | Female | Civil Engineering | B | 1 | Udupi | 8888888888 |
| 9 | Prashant | 1995-07-25 | Male | Computer Science | A | 3 | Bangalore | 9999999999 |
| 10 | Kavitha | 1996-10-10 | Female | Electrical Engineering | B | 2 | Mangalore | 1010101010 |
| 11 | Rajesh Kumar | 1996-09-15 | Male | Computer Science | A | 3 | Bangalore | 1111111111 |
| 12 | Ananya Singh | 1997-05-20 | Female | Electrical Engineering | B | 2 | Bangalore | 2222222222 |
| 13 | Sanjay Gupta | 1998-02-25 | Male | Mechanical Engineering | A | 4 | Ujire | 3333333333 |
| 14 | Neha Patel | 1995-11-10 | Female | Civil Engineering | B | 1 | Udupi | 4444444444 |
| 15 | Priya Sharma | 1996-06-20 | Female | Computer Science | A | 3 | Bangalore | 5555555555 |
+----+-----+-----+-----+-----+-----+-----+-----+
15 rows in set (0.00 sec)

mysql>

```

b. Display only one student data record with any given phone number.

```
mysql> select *from student where phone_number='1116111111';
```

id	name	date_of_birth	gender	branch	section	year	address	phone_number
1	Arun	1995-05-15	Male	Computer Science	A	3	Bangalore	1116111111

```
1 row in set (0.00 sec)
```

```
mysql>
```

c. Display students from any one branch

```
mysql> use college;
Database changed
mysql> select *from student where branch='computer Science';
```

id	name	date_of_birth	gender	branch	section	year	address	phone_number
1	Arun	1995-05-15	Male	Computer Science	A	3	Bangalore	1111611111
5	Vijay	1995-06-20	Male	Computer Science	A	3	Bangalore	5555545555
9	Prashant	1995-07-25	Male	Computer Science	A	3	Bangalore	9999999999
11	Rajesh Kumar	1996-09-15	Male	Computer Science	A	3	Bangalore	1111111116
15	Priya Sharma	1996-06-20	Female	Computer Science	A	3	Bangalore	5555355532

```
5 rows in set (0.01 sec)
```

d. Display students from any specific branch and specific section.

```
mysql> select *from student where branch='civil Engineering'and sections='B';
```

id	name	date_of_birth	gender	branch	section	year	address	phone_number
4	Sunita	1998-11-30	Female	Civil Engineering	B	1	Udupi	4444544444
8	Anjali	1998-12-05	Female	Civil Engineering	B	1	Udupi	8888888888
14	Neha Patel	1995-11-10	Female	Civil Engineering	B	1	Udupi	4444444434

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

e. Display girl students from the table

```
mysql> select *from student where gender='Female';
```

id	name	date_of_birth	gender	branch	section	year	address	phone_number
2	Priya	1996-08-25	Female	Electrical Engineering	B	2	Mangalore	2272222222
4	Sunita	1998-11-30	Female	Civil Engineering	B	1	Udupi	4444544444
6	Deepika	1996-09-05	Female	Electrical Engineering	B	2	Mangalore	6666668666
8	Anjali	1998-12-05	Female	Civil Engineering	B	1	Udupi	8888888888
10	Kavitha	1996-10-10	Female	Electrical Engineering	B	2	Mangalore	1010101010
12	Ananya Singh	1997-05-20	Female	Electrical Engineering	B	2	Mangalore	2222227222
14	Neha Patel	1995-11-10	Female	Civil Engineering	B	1	Udupi	4444444434
15	Priya Sharma	1996-06-20	Female	Computer Science	A	3	Bangalore	5555555552

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

12. Revoke all the permissions from the user 'admin'

```
mysql> REVOKE ALL PRIVILEGES ON *.* FROM 'admin'@'localhost';
Query OK, 0 rows affected (0.01 sec)
```

13. Revoke only insert permission from the user 'principal'.

```
mysql> REVOKE INSERT ON college.* FROM 'principal'@'localhost';
Query OK, 0 rows affected (0.01 sec)
```

14. Revoke update permission from the user 'faculty'.

```
mysql> REVOKE UPDATE ON college.* FROM 'faculty'@'localhost';  
Query OK, 0 rows affected (0.01 sec)
```

15. Revoke all the permissions from the user 'student'.

```
mysql> REVOKE ALL PRIVILEGES ON college.* FROM 'student';  
Query OK, 0 rows affected (0.01 sec)
```