1. Create a database "college".

```
mysql> CREATE DATABASE college;
Query OK, 1 row affected (0.01 sec)
```

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

```
mysql> CREATE TABLE student (id INT PRIMARY KEY,name VARCHAR(100),date_of_birth DATE,gender varchar(10),branch VARCHAR(50),section varchar(10),year INT,address VARCHAR(255));
Query OK, O rows affected (0.01 sec)
```

3. Insert 10 rows into the table.

```
mysql> INSERT INTO student (id,name, date_of_birth, gender, branch, section, year, address) VALUES (1,'Nilesh Gurav', '2 001-12-23', 'Male', 'Computer Science Engineering', 'A', 2, 'Belagavi'),(2,'Nikhil Gurav', '1999-09-20', 'Male', 'Computer Science Engineering', 'B', 1, 'Khanapur'),(3,'Neha Gurav', '2000-02-10', 'Female', 'Mechanical Engineering', 'C', 3, 'Kolhapur'),(4,'Yogesh Patil', '1997-11-25', 'Male', 'Civil Engineering', 'A', 4, 'Mysuru'),(5,'Sanika Gurav', '1999-04-30', 'Female', 'Chemical Engineering', 'B', 2, 'Mangalore'),(6,'Saikiran Junjwadkar', '1998-08-05', 'Male', 'Computer Science Engineering', 'C', 3, 'Dharwad'),(7,'Suhani Gurav', '2000-01-12', 'Female', 'Electronics Engineering', 'A', 1, 'Ba nglore'),(8,'Omkar Tavnoji','1997-06-28', 'Male', 'Information Technology', 'B', 4, 'Belagavi'),(9,'Reena Gurav', '1998-10-17', 'Female', 'Aerospace Engineering', 'C', 2, 'Dharwad'),(10,'Kundan Aknoji', '1999-03-22', 'Male', 'Mechanical Engineering', 'A', 3, 'Gokak'); Query OK, 10 rows affected (0.00 sec)

Records: 10 Duplicates: 0 Warnings: 0
  mysql> select * from student;
     id | name
                                                                         | date of birth | gender | branch
                                                                                                                                                                                                                              | section | year | address
                                                                                                                                               Computer Science Engineering Computer Science Engineering
                                                                             2001-12-23
1999-09-20
2000-02-10
                  Nilesh Gurav
Nikhil Gurav
                                                                                                                                                                                                                                                                               Belagavi
                                                                                                                        Male
                                                                                                                        Male
                                                                                                                                                                                                                                                                               Khanapur
                  Neha Gurav
                                                                                                                        Female
                                                                                                                                                Mechanical Engineering
                                                                                                                                                                                                                                                                               Kolhapur
                 Yogesh Patil
Sanika Gurav
                                                                             1997-11-25
                                                                                                                                              Civil Engineering
Chemical Engineering
Computer Science Engineering
                                                                                                                       Male
Female
                                                                                                                                                                                                                                  Α
                                                                                                                                                                                                                                                                              Mysuru
                                                                             1999-04-30
                                                                                                                                                                                                                                                                              Mangalore
                                                                                                                                                                                                                                  В
                   Saikiran Junjwadkar
                                                                              1998-08-05
                                                                                                                        Male
                                                                                                                                                                                                                                                                              Dharwad
                                                                                                                        Female
                  Suhani Gurav
Omkar Tavnoji
                                                                             2000-01-12
                                                                                                                                              Electronics Engineering
Information Technology
                                                                                                                                                                                                                                  Α
                                                                                                                                                                                                                                                                              Banglore
Belagavi
                                                                                                                        Male
                                                                              1997-06-28
                                                                             1998-10-17
1999-03-22
                   Reena Gurav
                                                                                                                                                Aerospace Engineering
                                                                                                                                                                                                                                  C
A
                                                                                                                                                                                                                                                                               Dharwad
                                                                                                                                                                                                                                                                     2
                                                                                                                                                Mechanical Engineering
             | Kundan Aknoji
                                                                                                                        Male
                                                                                                                                                                                                                                                                              Gokak
  10 rows in set (0.00 sec)
```

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> CREATE USER 'admin' IDENTIFIED BY 'admin@123';
Query OK, 0 rows affected (0.00 sec)
mysql> GRANT SELECT, CREATE, ALTER, DROP, INSERT, UPDATE, DELETE ON student TO 'admin';
Query OK, 0 rows affected (0.00 sec)
```

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

```
mysql> CREATE USER 'principal' IDENTIFIED BY 'principal@123';
Query OK, 0 rows affected (0.00 sec)
mysql> GRANT SELECT, INSERT, UPDATE, DELETE ON student TO 'principal';
Query OK, 0 rows affected (0.00 sec)
```

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

```
mysql> CREATE USER 'faculty' IDENTIFIED BY 'faculty@123';
Query OK, 0 rows affected (0.00 sec)
mysql> GRANT SELECT, UPDATE ON student TO 'faculty';
Query OK, 0 rows affected (0.00 sec)
```

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

```
mysql> CREATE USER 'student';
Query OK, 0 rows affected (0.00 sec)
mysql> GRANT SELECT ON student TO 'student';
Query OK, 0 rows affected (0.00 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 12
Server version: 5.5.5-10.4.28-MariaDB mariadb.org binary distribution

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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(10);
Query OK, 0 rows affected (0.01 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.

```
mysql, use cottege;
Database changed
mysql> INSERT INTO student (id,name, date_of_birth, gender, branch, section, year, address, phone_number) VALUES (11,'Yuvraj Jadhav', '2000-02-1
0', 'Male', 'Mechanical Engineering', 'C', 3, 'Kolhapur', '9876543210'),(12,'Viren Patil', '1997-11-25', 'Male', 'Civil Engineering', 'A', 4, 'M
ysuru', '9876543211'),(13,'Nagraj Ankalgi', '1999-04-30', 'Male', 'Computer Science Engineering', 'B', 2, 'Mangalore', '9876543212'),(14,'Pratee
k Shelke', '1997-06-28', 'Male', 'Information Technology', 'B', 4, 'Belagavi', '9876543213'),(15,'Prateek Patil', '1999-09-20', 'Male', 'Electri
cal Engineering', 'B', 1, 'Khanapur', '9876543214');
Query OK, 5 rows affected (0.00 sec)
Records: 5 Duplicates: 0 Warnings: 0
                                                                                                                    | date_of_birth | gender | branch
    id | name
                                                                                                                                                                                                                                                                                                                                                                      | section | year | address
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              phone_number
                                                                                                                                                                                                                                      Computer Science Engineering
Computer Science Engineering
Mechanical Engineering
Civil Engineering
Chemical Engineering
Computer Science Engineering
Electronics Engineering
Information Technology
Aerospace Engineering
Mechanical Engineering
Mechanical Engineering
Civil Engineering
Civil Engineering
Information Technology
Electrical Engineering
                            Nilesh Gurav
Nikhil Gurav
Neha Gurav
Yogesh Patil
Sanika Gurav
Saikiran Junjwadkar
Suhani Gurav
Owkar Taynoji
                                                                                                                           2001-12-23
1999-09-20
2000-02-10
1997-11-25
1999-04-30
1998-08-05
2000-01-12
1997-06-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Belagavi
Khanapur
Kolhapur
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NULL
NULL
NULL
                                                                                                                                                                                                A B C A B C A C A B B B
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kolhapur
Mysuru
Mangalore
Dharwad
Banglore
Belagavi
Dharwad
Gokak
Kolhapur
Mysuru
Mangalore
Belagavi
Khanapur
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NULL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NULL
NULL
NULL
                           Suhani Gurav
Omkar Tavnoji
Reena Gurav
Kundan Aknoji
Yuvraj Jadhav
Vieren Patil
Nagraj Ankalgi
Prateek Shelke
Prateek Patil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NULL
                                                                                                                            1997-00-28
1998-10-17
1999-03-22
2000-02-10
1997-11-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NULL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NULL
9876543210
9876543211
9876543212
         12
13
14
15
                                                                                                                             1997-06-28
1999-09-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9876543213
9876543214
  15 rows in set (0.00 sec)
```

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

```
Database changed
mysql> UPDATE student
           ql> UPDATE student
-> SET phone_number = CASE
-> WHEN id = 1 THEN '9876543210'
-> WHEN id = 2 THEN '8976543210'
-> WHEN id = 3 THEN '7986543210'
-> WHEN id = 4 THEN '6987543210'
-> WHEN id = 5 THEN '5987643210'
-> WHEN id = 6 THEN '4987653210'
-> WHEN id = 7 THEN '4987653210'
-> WHEN id = 7 THEN '4987654210'
-> WHEN id = 8 THEN '2987654310'
-> WHEN id = 9 THEN '1987654320'
-> WHEN id = 10 THEN '9087654321'
-> END
-> WHERE phone_number IS NULL;
Query OK, 10 rows affected (0.01 sec)
Rows matched: 10 Changed: 10 Warnings: 0
mysql> select * from student:
     id | name
                                                                                          date_of_birth | gender
                                                                                                                                                                           branch
                                                                                                                                                                                                                                                                          | section | year |
                                                                                                                                                                                                                                                                                                                                     address
                                                                                                                                                                                                                                                                                                                                                                      | phone_number
                     Nilesh Gurav
Nikhil Gurav
Neha Gurav
                                                                                                                                                                            Computer Science Engineering
Computer Science Engineering
Mechanical Engineering
                                                                                           2001-12-23
                                                                                                                                                                                                                                                                                                                                                                             9876543210
                                                                                                                                                                                                                                                                                                                                     Belagavi
                                                                                          2001-12-23
1999-09-20
2000-02-10
1997-11-25
1999-04-30
1998-08-05
2000-01-12
1997-06-28
1998-10-17
1999-03-22
2000-02-10
                                                                                                                                                                                                                                                                                                                                     Khanapur
Kolhapur
                                                                                                                                                                                                                                                                                                                                                                            8976543210
7986543210
                                                                                                                                               Male
                                                                                                                                               Female
                                                                                                                                                                         Mechanical Engineering
Civil Engineering
Chemical Engineering
Computer Science Engineering
Electronics Engineering
Information Technology
Aerospace Engineering
Mechanical Engineering
Mechanical Engineering
Civil Engineering
Computer Science Engineering
Information Technology
Electrical Engineering
                     Yogesh Patil
Sanika Gurav
                                                                                                                                                                                                                                                                                                                                   Mysuru
Mangalore
Dharwad
                                                                                                                                             Male
Female
Male
Female
Male
Female
Male
Male
Male
Male
Male
                                                                                                                                                                                                                                                                                                                                                                            6987543210
     5
6
7
8
9
                                                                                                                                                                                                                                                                                                                                                                            5987643210
4987653210
                   Sanika Gurav
Saikiran Junjwadkar
Suhani Gurav
Omkar Tavnoji
Reena Gurav
Kundan Aknoji
Yuvraj Jadhav
Viren Patil
                                                                                                                                                                                                                                                                                                                                    Banglore
Belagavi
                                                                                                                                                                                                                                                                                                                                                                            3987654210
2987654310
                                                                                                                                                                                                                                                                               A B C A C
                                                                                                                                                                                                                                                                                                                                     Dharwad
Gokak
                                                                                                                                                                                                                                                                                                                                                                            1987654320
9087654321
                                                                                           2000-02-10
1997-11-25
                                                                                                                                                                                                                                                                                                                                                                           9876543210
9876543211
9876543212
     11
12
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                                                                                                                                                                                                                                                                                                                                     Kolhapur
                                                                                                                                                                                                                                                                                                                                     Mysuru
Mangalore
                                                                                                                                                                                                                                                                              A
B
B
                    Nagraj Ankalgi
Prateek Shelke
Prateek Patil
                                                                                           1999-04-30
1997-06-28
1999-09-20
                                                                                                                                                                                                                                                                                                                                     Belagavi
Khanapur
                                                                                                                                                                                                                                                                                                                                                                            9876543214
15 rows in set (0.00 sec)
```

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

4 L/	SELECT * FROM student	٠, +			·	+	+	+
d	name	date_of_birth	gender	branch	section	year	address	phone_number
1	Nilesh Gurav	   2001–12–23	Male	Computer Science Engineering	Α	2	Belagavi	9876543210
2	Nikhil Gurav	1999-09-20	Male	Computer Science Engineering	В	1	Khanapur	8976543210
3	Neha Gurav	2000-02-10	Female	Mechanical Engineering	C	3	Kolhapur	7986543210
4	Yogesh Patil	1997-11-25	Male	Civil Engineering	A	4	Mysuru	6987543210
5	Sanika Gurav	1999-04-30	Female	Chemical Engineering	В	2	Mangalore	5987643210
6	Saikiran Junjwadkar	1998-08-05	Male	Computer Science Engineering	C	3	Dharwad	4987653210
7	Suhani Gurav	2000-01-12	Female	Electronics Engineering	A	1	Banglore	3987654210
8	Omkar Tavnoji	1997-06-28	Male	Information Technology	В	4	Belagavi	2987654310
9	Reena Gurav	1998-10-17	Female	Aerospace Engineering	C	2	Dharwad	1987654320
0	Kundan Aknoji	1999-03-22	Male	Mechanical Engineering	A	3	Gokak	9876540123
1	Yuvraj Jadhav	2000-02-10	Male	Mechanical Engineering	С	3	Kolhapur	9876540321
2	Viren Patil	1997-11-25	Male	Civil Engineering	Α	4	Mysuru	9876543211
3	Nagraj Ankalgi	1999-04-30	Male	Computer Science Engineering	В	2	Mangalore	9876543212
4	Prateek Shelke	1997-06-28	Male	Information Technology	В	4	Belagavi	9876543213
5	Prateek Patil	1999-09-20	Male	Electrical Engineering	В	1	Khanapur	9876543214

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

mysql> SELECT * FROM	nysql> SELECT * FROM student WHERE phone_number = '9876543210';							
id   name	date_of_birth	gender	branch	section	year	address	phone_number	
1   Nilesh Gurav	2001-12-23	Male	Computer Science Engineering	A	2	Belagavi	9876543210	
1 row in set (0.00 s	ec)						· · · · · · · · · · · · · · · · · · ·	

c. Display students from any one branch

id	name	date_of_birth	gender	branch	section	year	address	phone_number
1	Nilesh Gurav Nikhil Gurav	2001-12-23 1999-09-20	Male	Computer Science Engineering Computer Science Engineering		2   1	Belagavi   Khanapur	9876543210 8976543210
6	Saikiran Junjwadkar   Nagraj Ankalgi	1998-08-05 1999-04-30	Male	Computer Science Engineering Computer Science Engineering	С	3	Dharwad   Mangalore	4987653210 9876543212

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

mysql> SELECT * FROM s	student WHERE bra	anch = 'Me	echanical Engineering' ANI	) section :	= 'A';		
id   name	date_of_birth	gender	branch	section	year	address	phone_number
10   Kundan Aknoji	1999-03-22	Male	Mechanical Engineering	A	3	Gokak	9876540123
1 row in set (0.00 sec	· · · · · · · · · · · · · · · · · · ·						

e. Display girl students from the table.

id	name	date_of_birth	gender	branch	section	year	address	phone_number
	Neha Gurav Sanika Gurav Suhani Gurav Reena Gurav		Female Female Female Female	Electronics Engineering	C   B   A   C	3 2 1 2	Kolhapur Mangalore Banglore Dharwad	7986543210 5987643210 3987654210 1987654320

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

```
mysql> REVOKE SELECT, CREATE, ALTER, DROP, INSERT, UPDATE, DELETE ON student FROM 'admin';
Query OK, 0 rows affected (0.00 sec)
```

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

```
mysql> REVOKE INSERT ON student FROM 'principal';
Query OK, 0 rows affected (0.00 sec)
```

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

```
mysql> REVOKE UPDATE ON student FROM 'faculty';
Query OK, 0 rows affected (0.00 sec)
```

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

```
mysql> REVOKE SELECT, CREATE, ALTER, DROP, INSERT, UPDATE, DELETE ON student FROM 'student';
Query OK, 0 rows affected (0.00 sec)
```