AP21110010253
Chaitanya Sai N

1) a) Insert the any three records in the employee table and use rollback and check the result

Code:

```
create database week0;
use week0

CREATE TABLE Employee (
  Empno INTEGER,
  Ename VARCHAR(200),
  Job VARCHAR(200),
  Mgr INTEGER,
  Sal INTEGER,
  Commission INTEGER
);

show databases
show tables
select * from employee

INSERT INTO
  Employee (Empno, Ename, Job, Mgr, Sal, Commission)
VALUES
  ("1", "Chaitanya", "Flutter", 33, 4200, 800),
  ("2", "Sai", "Dart", 56, 390, 1900),
  ("3", "Nutakki", "Full-Stack", 87, 35093, 5340);

  select * from employee
```

Output:

Result Grid | Filter Rows: | Export:

Empno	Ename	Job	Mgr	Sal	Commission
1	Chaitanya	Flutter	33	4200	800
2	Sai	Dart	56	390	1900
3	Nutakki	Full-Stack	87	35093	5340

b) Add primary key constraint and not null constraint to the employee table

Output:

Database
information_schema
mysql
performance_schema
sakila
sys
week0
week1
world

c) Insert null values to the employee table and verify the result

Output:

Result Grid | Filter Rows: | Export:

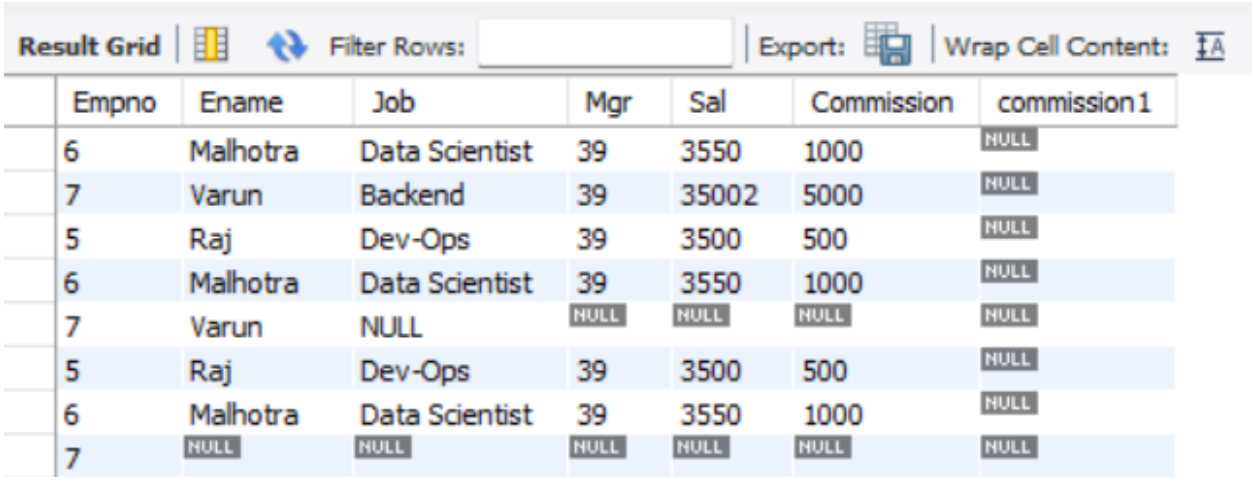
Empno	Ename	Job	Mgr	Sal	Commission
6	Malhotra	Data Scientist	39	3550	1000
7	Varun	Backend	39	35002	5000
5	Raj	Dev-Ops	39	3500	500
6	Malhotra	Data Scientist	39	3550	1000
7	Varun	NULL	NULL	NULL	NULL
5	Raj	Dev-Ops	39	3500	500
6	Malhotra	Data Scientist	39	3550	1000
7	NULL	NULL	NULL	NULL	NULL

d) Add a column commission with domain to the Employee table

Code:

```
ALTER TABLE employee
ADD commission1 INTEGER;
select * from employee
```

Output:



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Empno	Ename	Job	Mgr	Sal	Commission	commission1
6	Malhotra	Data Scientist	39	3550	1000	NULL
7	Varun	Backend	39	35002	5000	NULL
5	Raj	Dev-Ops	39	3500	500	NULL
6	Malhotra	Data Scientist	39	3550	1000	NULL
7	Varun	NULL	NULL	NULL	NULL	NULL
5	Raj	Dev-Ops	39	3500	500	NULL
6	Malhotra	Data Scientist	39	3550	1000	NULL
7	NULL	NULL	NULL	NULL	NULL	NULL

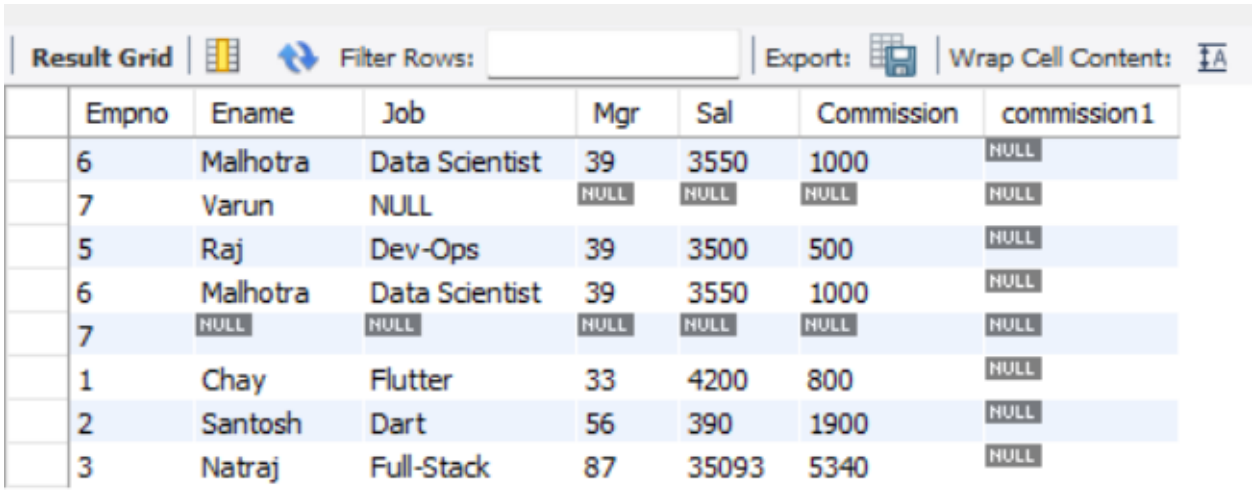
e) Insert any five records into the table.

Code:

```
INSERT INTO
  Employee (Empno, Ename, Job, Mgr, Sal, Commission)
VALUES
  ("1", "Chay", "Flutter", 33, 4200, 800),
  ("2", "Santosh", "Dart", 56, 390, 1900),
  ("3", "Natraj", "Full-Stack", 87, 35093, 5340);

  select * from employee
```

Output:



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Empno	Ename	Job	Mgr	Sal	Commission	commission1
6	Malhotra	Data Scientist	39	3550	1000	NULL
7	Varun	NULL	NULL	NULL	NULL	NULL
5	Raj	Dev-Ops	39	3500	500	NULL
6	Malhotra	Data Scientist	39	3550	1000	NULL
7	NULL	NULL	NULL	NULL	NULL	NULL
1	Chay	Flutter	33	4200	800	NULL
2	Santosh	Dart	56	390	1900	NULL
3	Natraj	Full-Stack	87	35093	5340	NULL

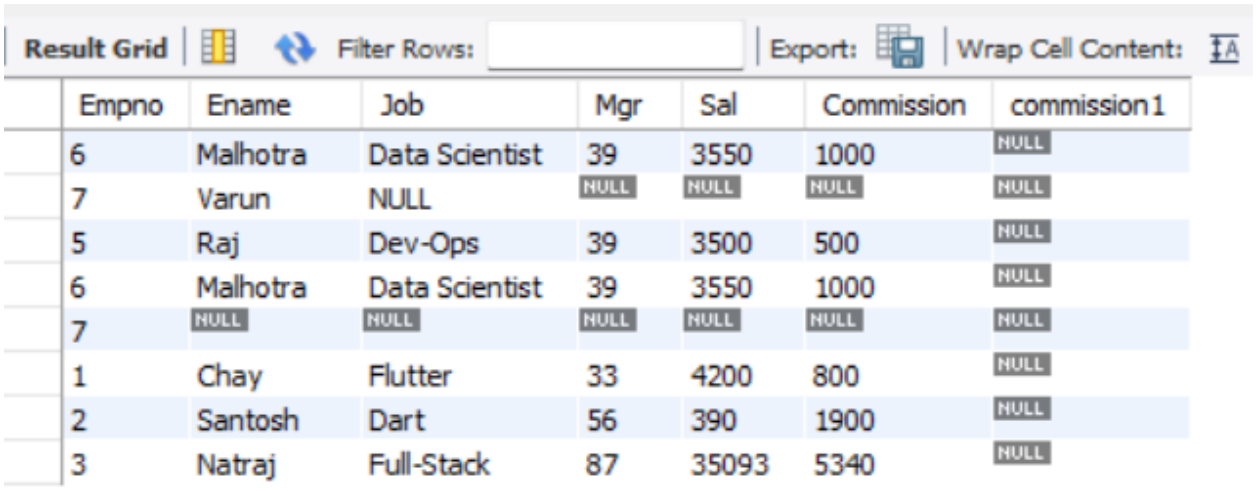
f) Update the column details of job

Code:

```
SET SQL_SAFE_UPDATES=0;
UPDATE
  employee
SET
  job = "SEO"
WHERE
  job = "data analyst";
SET SQL_SAFE_UPDATES=1;

select * from employee
```

Output:



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

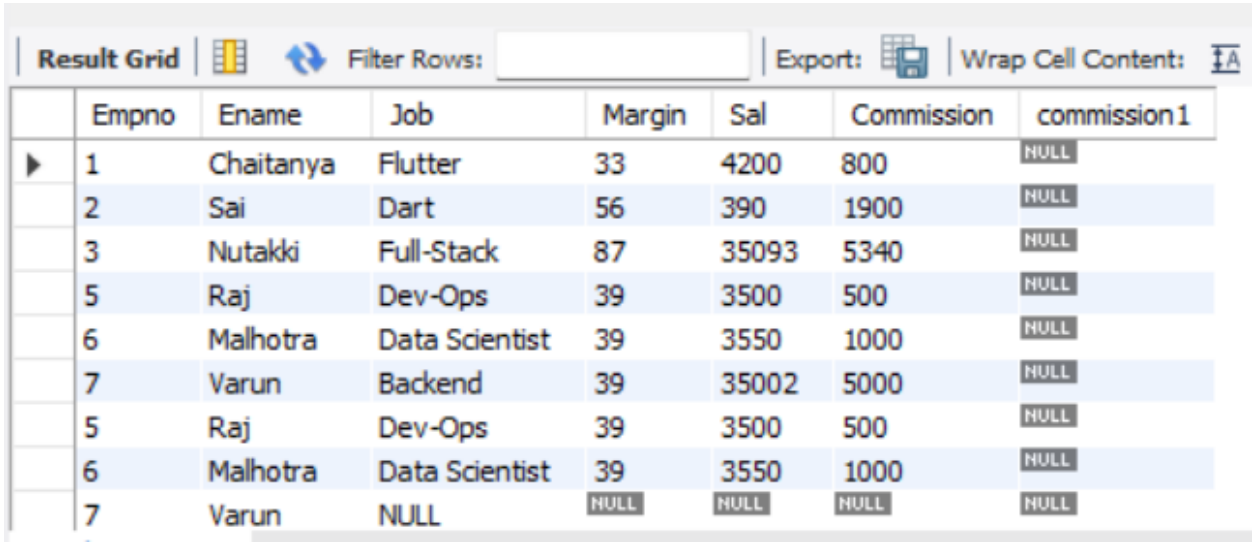
Empno	Ename	Job	Mgr	Sal	Commission	commission1
6	Malhotra	Data Scientist	39	3550	1000	NULL
7	Varun	NULL	NULL	NULL	NULL	NULL
5	Raj	Dev-Ops	39	3500	500	NULL
6	Malhotra	Data Scientist	39	3550	1000	NULL
7	NULL	NULL	NULL	NULL	NULL	NULL
1	Chay	Flutter	33	4200	800	NULL
2	Santosh	Dart	56	390	1900	NULL
3	Natraj	Full-Stack	87	35093	5340	NULL

g) Rename the column of Employ table using alter command

Code:

```
ALTER TABLE employee
RENAME COLUMN Mgr to Margin;
select * from employee;
```

Output:



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Empno	Ename	Job	Margin	Sal	Commission	commission1
1	Chaitanya	Flutter	33	4200	800	NULL
2	Sai	Dart	56	390	1900	NULL
3	Nutakki	Full-Stack	87	35093	5340	NULL
5	Raj	Dev-Ops	39	3500	500	NULL
6	Malhotra	Data Scientist	39	3550	1000	NULL
7	Varun	Backend	39	35002	5000	NULL
5	Raj	Dev-Ops	39	3500	500	NULL
6	Malhotra	Data Scientist	39	3550	1000	NULL
7	Varun	NULL	NULL	NULL	NULL	NULL

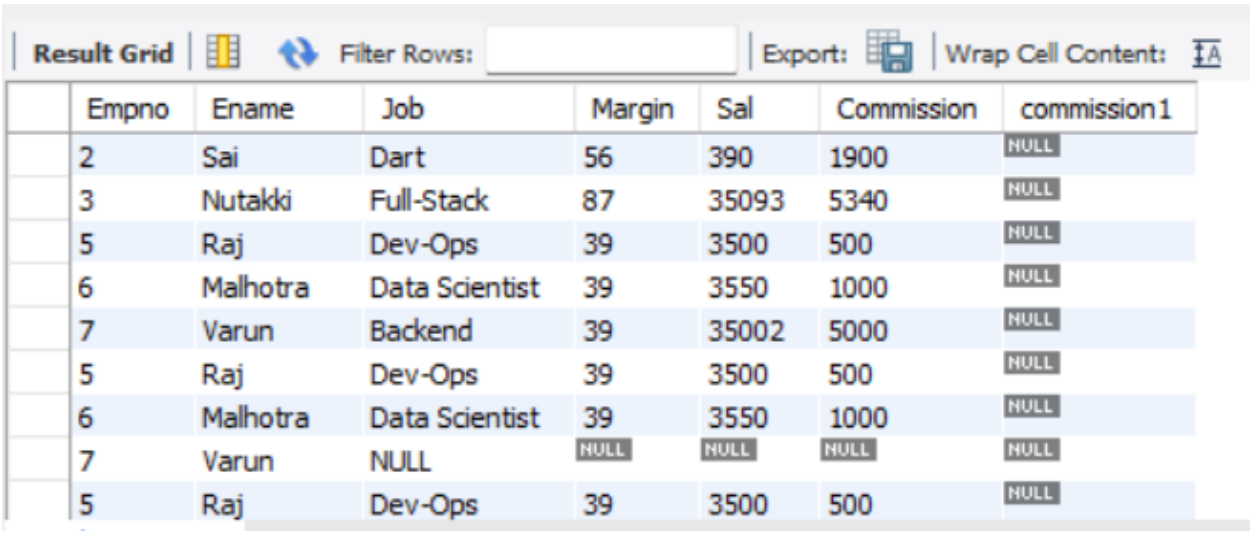
h) Delete the employee whose empno is 1

Code:

```
DELETE FROM
  employee
WHERE
  Empno = 1;

select * from employee;
```

Output:



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Empno	Ename	Job	Margin	Sal	Commission	commission1
2	Sai	Dart	56	390	1900	NULL
3	Nutakki	Full-Stack	87	35093	5340	NULL
5	Raj	Dev-Ops	39	3500	500	NULL
6	Malhotra	Data Scientist	39	3550	1000	NULL
7	Varun	Backend	39	35002	5000	NULL
5	Raj	Dev-Ops	39	3500	500	NULL
6	Malhotra	Data Scientist	39	3550	1000	NULL
7	Varun	NULL	NULL	NULL	NULL	NULL
5	Raj	Dev-Ops	39	3500	500	NULL

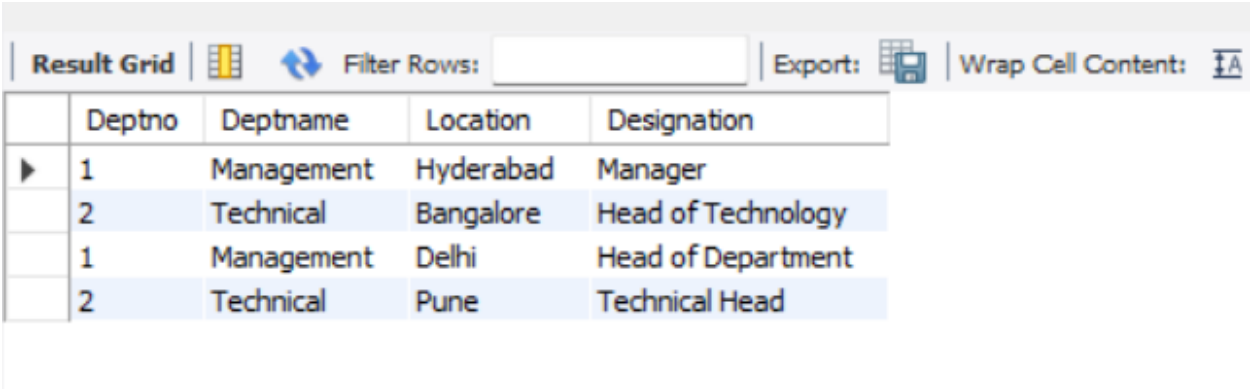
2)
a) Insert values in the department table and use commit.

Code:

```
create table department(
    Deptno INTEGER,
    Deptname varchar(20),
    Location varchar(20),
```

```
    Designation varchar(20)
);
insert into department(Deptno,Deptname,Location,Designation)
Values(1,"Management","Delhi","Head of Department");
insert into department(Deptno,Deptname,Location,Designation)
Values(2,"Technical","Pune","Technical Head");
COMMIT;
select * from department;
```

Output:



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	Deptno	Deptname	Location	Designation
▶	1	Management	Hyderabad	Manager
	2	Technical	Bangalore	Head of Technology
	1	Management	Delhi	Head of Department
	2	Technical	Pune	Technical Head

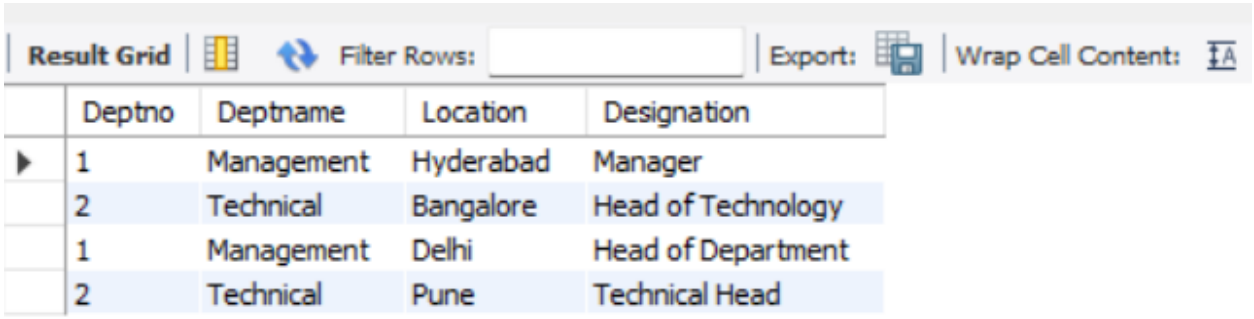
b)Add constraints like unique and not null to the department table

Code:

```
ALTER TABLE department
ADD constraint Deptno UNIQUE (Deptno);
ALTER TABLE department
MODIFY Deptname varchar(20) NOT NULL;
ALTER TABLE department
MODIFY Location varchar(20) NOT NULL;
ALTER TABLE department
MODIFY Designation varchar(20) NOT NULL;


select * from department;
```

Output:



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	Deptno	Deptname	Location	Designation
▶	1	Management	Hyderabad	Manager
	2	Technical	Bangalore	Head of Technology
	1	Management	Delhi	Head of Department
	2	Technical	Pune	Technical Head

c) Insert repeated values and null values into the table.

Code:

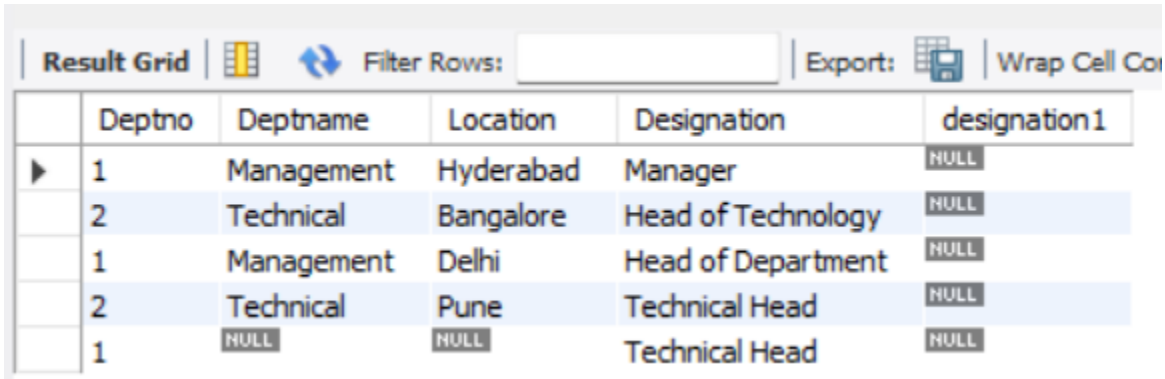
```
insert into department(Deptno,Deptname,Location,Designation)
value(1,null,null,"Technical Head");

Output:
Error as output


d) Add column designation to the department table.


ALTER TABLE department
ADD COLUMN designation1 varchar(20);
select * from department;
```

Output:



Result Grid | Filter Rows: | Export: | Wrap Cell Co

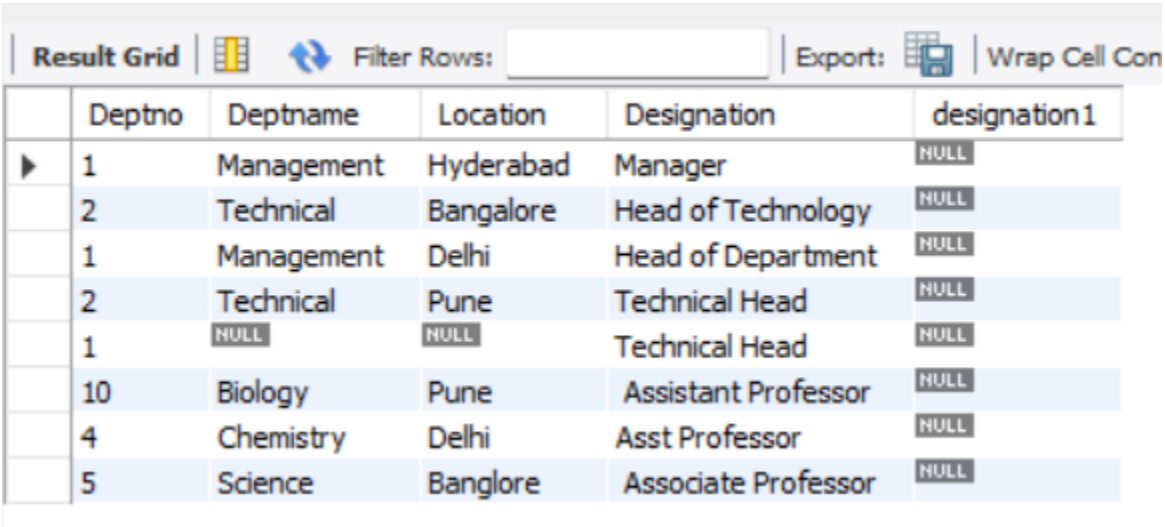
	Deptno	Deptname	Location	Designation	designation1
▶	1	Management	Hyderabad	Manager	NULL
	2	Technical	Bangalore	Head of Technology	NULL
	1	Management	Delhi	Head of Department	NULL
	2	Technical	Pune	Technical Head	NULL
	1	NULL	NULL	Technical Head	NULL

e) Insert values into the table.

Code:

```
insert into
      department(Deptno,Deptname,Location,Designation)
      values
    (10,"Biology","Pune"," Assistant Professor "),
    (4,"Chemistry","Delhi","Asst Professor"),
    (5,"Science","Banglore"," Associate Professor");
select * from department;
```

Output:



Result Grid | Filter Rows: | Export: | Wrap Cell Con

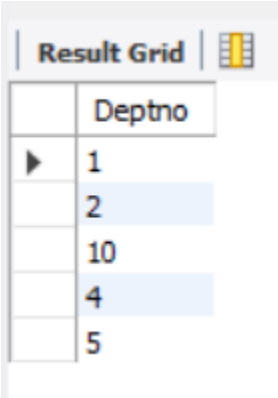
Deptno	Deptname	Location	Designation	designation1
1	Management	Hyderabad	Manager	NULL
2	Technical	Bangalore	Head of Technology	NULL
1	Management	Delhi	Head of Department	NULL
2	Technical	Pune	Technical Head	NULL
1	NULL	NULL	Technical Head	NULL
10	Biology	Pune	Assistant Professor	NULL
4	Chemistry	Delhi	Asst Professor	NULL
5	Science	Banglore	Associate Professor	NULL

f) List the records of emp table grouped by deptno. Code:

Code:

```
select
      Deptno
from
      department
group by
      Deptno;
```

Output:



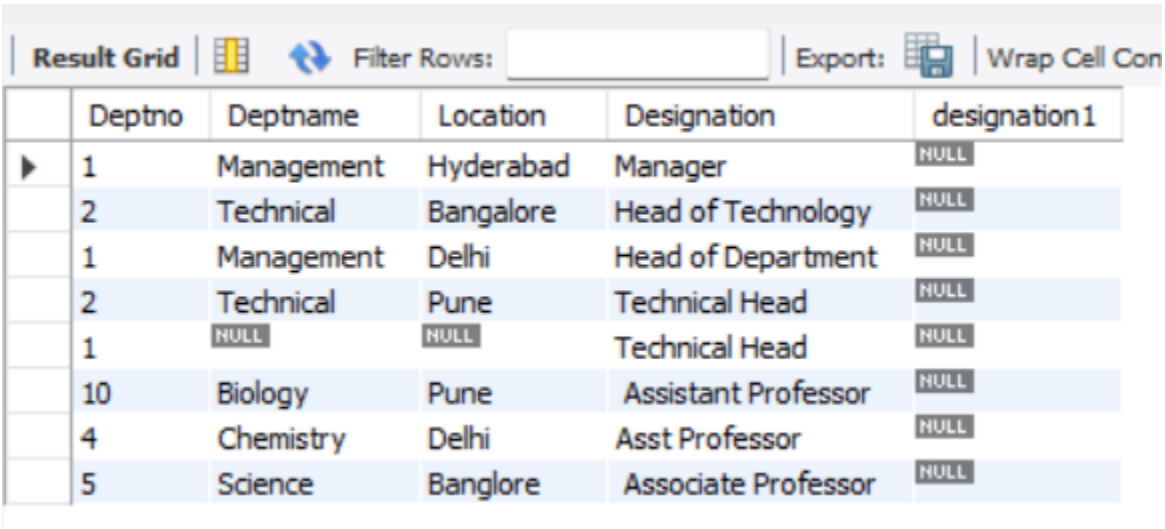
	Deptno
▶	1
	2
	10
	4
	5

g) Update the record where deptno is 9.

Code:

```
select
      Deptno
from
      department
group by
      Deptno;
update
      department
SET
      Deptname = 'Electrical', location= 'Mangalagiri'
WHERE
      Deptno = 10;
select * from department;
```

Output:



	Deptno	Deptname	Location	Designation	designation1
▶	1	Management	Hyderabad	Manager	NULL
	2	Technical	Bangalore	Head of Technology	NULL
	1	Management	Delhi	Head of Department	NULL
	2	Technical	Pune	Technical Head	NULL
	1	NULL	NULL	Technical Head	NULL
	10	Biology	Pune	Assistant Professor	NULL
	4	Chemistry	Delhi	Asst Professor	NULL
	5	Science	Banglore	Associate Professor	NULL

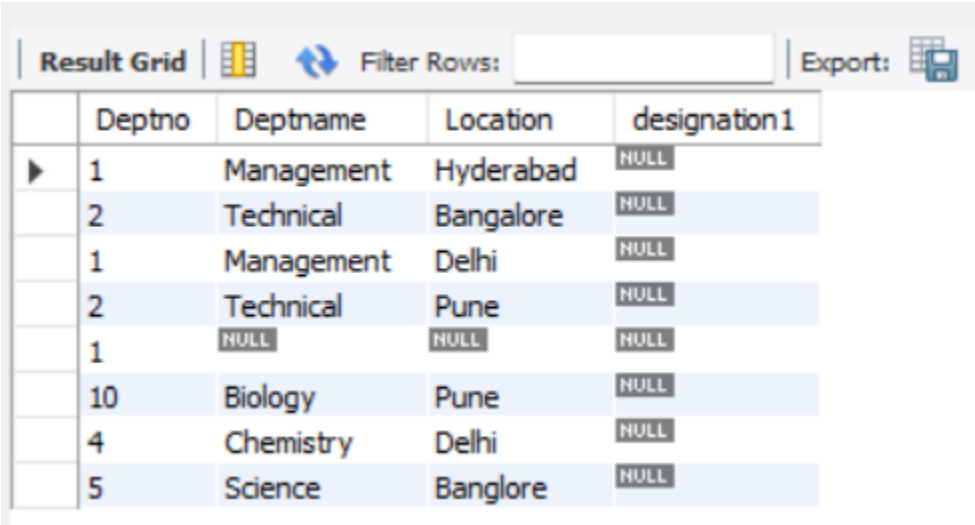
h) Delete any column data from the table

Code:

```
alter table
      department
drop column
      Designation;

select * from department;
```

Output:



Result Grid | Filter Rows: | Export:

	Deptno	Deptname	Location	designation1
▶	1	Management	Hyderabad	NULL
	2	Technical	Bangalore	NULL
	1	Management	Delhi	NULL
	2	Technical	Pune	NULL
	1	NULL	NULL	NULL
	10	Biology	Pune	NULL
	4	Chemistry	Delhi	NULL
	5	Science	Banglore	NULL

3)

Code:

a) Add Constraint primary key and foreign key to the table

```
ALTER TABLE customer
ADD CONSTRAINT custdept FOREIGN KEY (Cust_name)
REFERENCES employee (Ename);

ALTER TABLE customer
ADD CONSTRAINT Cust_name PRIMARY KEY (Cust_name);
```

b) Insert records into the table4

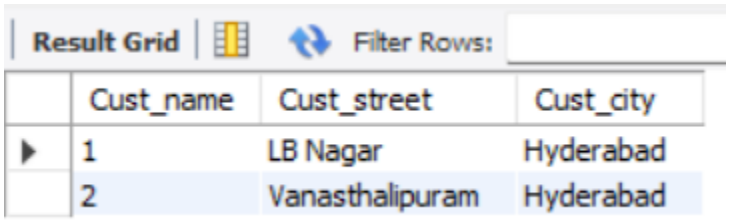
Code:

```
INSERT INTO
  customer (Cust_name,Cust_street,Cust_city)
```

```
VALUES
  ("1","LB Nagar","Hyderabad"),
  ("2","Vanasthalipuram","Hyderabad");


select * from customer;
```

Output:



Result Grid | Filter Rows:

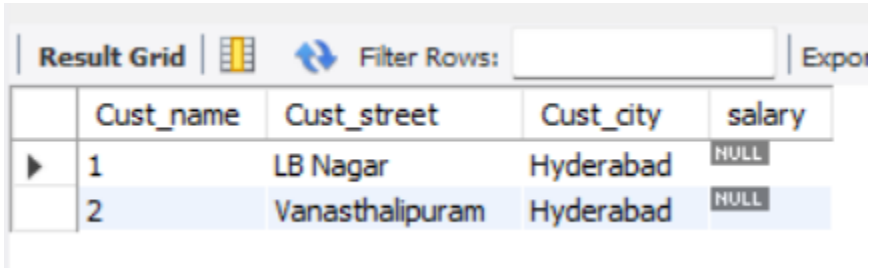
	Cust_name	Cust_street	Cust_city
▶	1	LB Nagar	Hyderabad
	2	Vanasthalipuram	Hyderabad

c) Add salary column to the table

Code:

```
ALTER TABLE customer
ADD column salary bigint;
select * from customer
```

Output:



Result Grid | Filter Rows: | Expo

	Cust_name	Cust_street	Cust_city	salary
▶	1	LB Nagar	Hyderabad	NULL
	2	Vanasthalipuram	Hyderabad	NULL

d) Alter the table column domain

Code:

```
ALTER TABLE customer
```

```
ADD new_custcity varchar(50);

update customer
set new_custcity = Cust_city;

alter table customer
drop column Cust_city;

alter table customer
RENAME column new_custcity TO Cust_city

select * from customer
```

Output:

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Cust_name	Cust_street	Cust_city	salary	new_custcity
1	LB Nagar	Hyderabad	NULL	NULL
2	Vanasthalipuram	Hyderabad	NULL	NULL

e) Drop salary column of the customer table

Code:

```
ALTER TABLE customer
DROP COLUMN salary;
SELECT * FROM customer;
```

Output:

Result Grid | Filter Rows: | Export:

Cust_name	Cust_street	Cust_city	new_custcity
1	LB Nagar	Hyderabad	NULL
2	Vanasthalipuram	Hyderabad	NULL

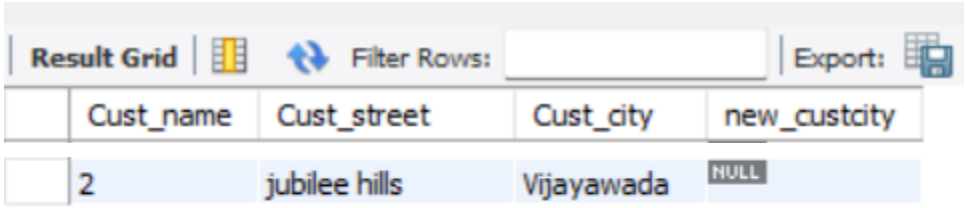
f) Delete the rows of customer table whose cust_city is “hyd”

Code:

```
DELETE FROM customer WHERE Cust_city="Hyderabad";

SELECT * FROM customer;
```

Output:



Cust_name	Cust_street	Cust_city	new_custcity
2	jubilee hills	Vijayawada	NULL