Name: Abdurrahman Qureshi

Roll No: 242466

Practical No: 1

1) Create a SQL query to define two tables: emp and dept, with the following conditions:

The emp table should have the columns: id, name, dept_no, job, and hire_date.

- id should be the Primary Key and must not allow null values.
- job should only contain uppercase entries.
- hire_date should default to the current date.
- All other columns should not allow null values.

The dept table should have the columns: dept_no, dname, and loc.

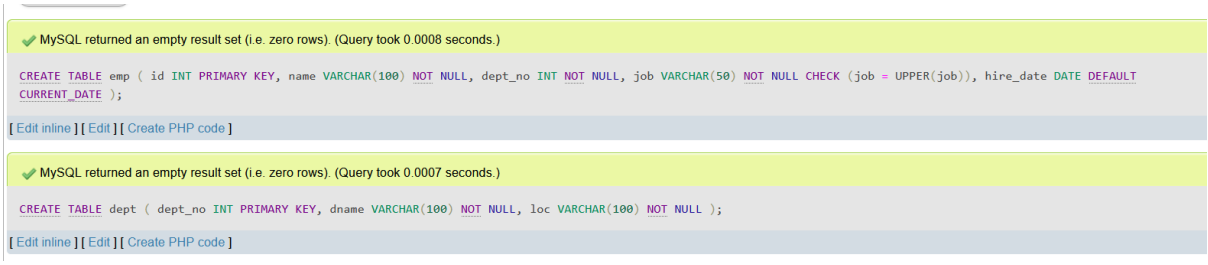
- dept_no should be the Primary Key.
- The dname and loc columns should not allow null values.

QUERY:

```
CREATE TABLE emp (
    id INT PRIMARY KEY,
    name VARCHAR(100) NOT NULL,
    dept_no INT NOT NULL,
    job VARCHAR(50) NOT NULL CHECK (job = UPPER(job)),
    hire_date DATE DEFAULT CURRENT_DATE
);

CREATE TABLE dept (
    dept_no INT PRIMARY KEY,
    dname VARCHAR(100) NOT NULL,
    loc VARCHAR(100) NOT NULL
);
```

OUTPUT:

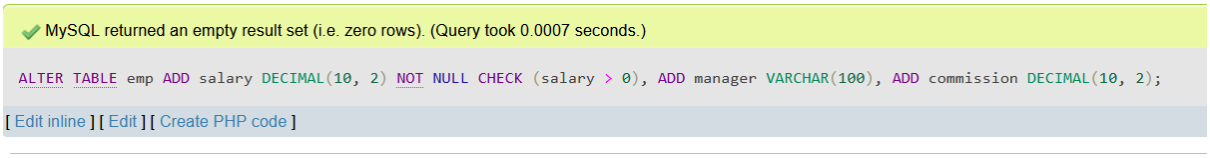


2) Modify the emp table to add three new columns: salary, manager, and commission, and to add a constraint on salary to ensure it is greater than 0

QUERY:

```
ALTER TABLE emp
ADD salary DECIMAL(10, 2) NOT NULL CHECK (salary > 0),
ADD manager VARCHAR(100),
ADD commission DECIMAL(10, 2);
```

OUTPUT:



3) Insert data into the table

QUERY:

```
INSERT INTO emp (id, name, dept_no, job, hire_date, salary, manager, commission) VALUES
(101, 'Alice Johnson', 1, 'MANAGER', '2024-09-01', 80000, 'Michael Scott', 5000),
(102, 'Bob Smith', 2, 'SALESMAN', '2024-09-15', 95000, 'John Smith', 7000),
(103, 'Carol Davis', 3, 'CLERK', '2024-09-20', 60000, 'Emma Clark', 3000),
(104, 'David Wilson', 4, 'ANALYST', '2024-09-25', 85000, 'Sarah Connor', 4000),
(105, 'Eva Green', 5, 'SALESMAN', '2024-09-26', 55000, 'Paul Wright', 2000),
```

(106, 'Franklin Miller', 6, 'CLERK', '2024-09-30', 50000, 'Nina Adams', 1500),

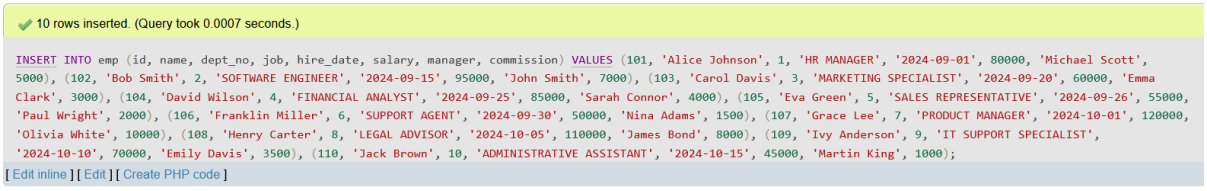
(107, 'Grace Lee', 7, 'PRESIDENT', '2024-10-01', 120000, 'Olivia White', 10000),

(108, 'Henry Carter', 8, 'ANALYST', '2024-10-05', 110000, 'James Bond', 8000),

(109, 'Ivy Anderson', 9, 'SALESMAN', '2024-10-10', 70000, 'Emily Davis', 3500),

(110, 'Jack Brown', 10, 'CLERK', '2024-10-15', 45000, 'Martin King', 1000);

OUTPUT:

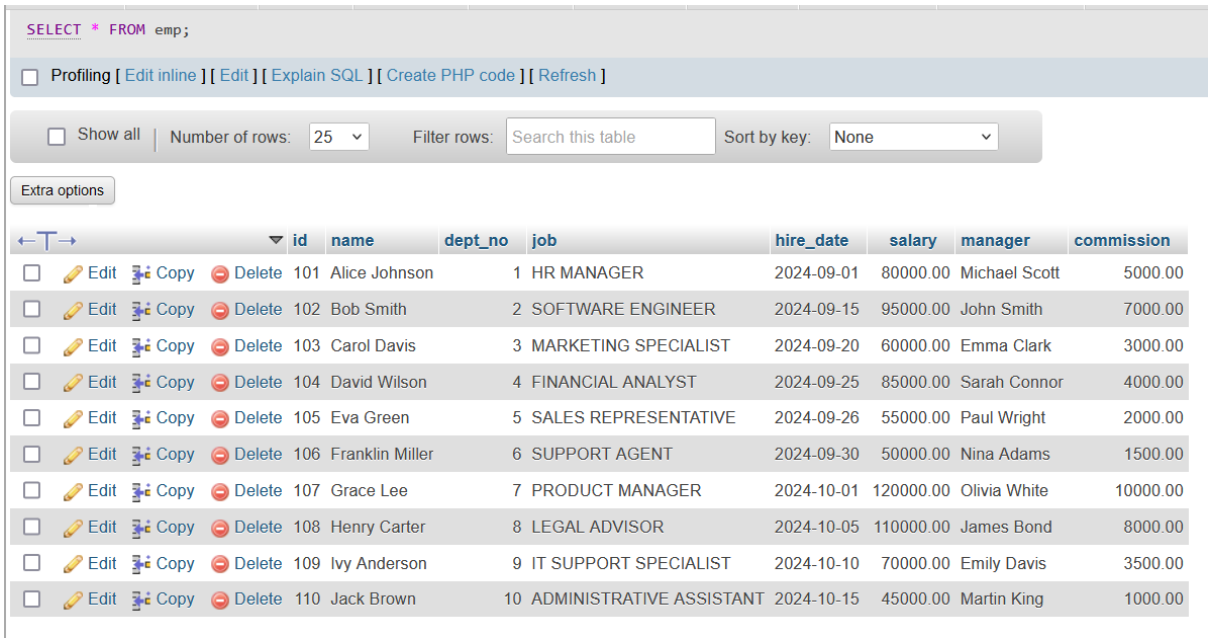


4) Retrieve all the table data

QUERY:

SELECT * FROM emp;

OUTPUT:



	id	name	dept_no	job	hire_date	salary	manager	commission
Edit Copy Delete	101	Alice Johnson	1	HR MANAGER	2024-09-01	80000.00	Michael Scott	5000.00
Edit Copy Delete	102	Bob Smith	2	SOFTWARE ENGINEER	2024-09-15	95000.00	John Smith	7000.00
Edit Copy Delete	103	Carol Davis	3	MARKETING SPECIALIST	2024-09-20	60000.00	Emma Clark	3000.00
Edit Copy Delete	104	David Wilson	4	FINANCIAL ANALYST	2024-09-25	85000.00	Sarah Connor	4000.00
Edit Copy Delete	105	Eva Green	5	SALES REPRESENTATIVE	2024-09-26	55000.00	Paul Wright	2000.00
Edit Copy Delete	106	Franklin Miller	6	SUPPORT AGENT	2024-09-30	50000.00	Nina Adams	1500.00
Edit Copy Delete	107	Grace Lee	7	PRODUCT MANAGER	2024-10-01	120000.00	Olivia White	10000.00
Edit Copy Delete	108	Henry Carter	8	LEGAL ADVISOR	2024-10-05	110000.00	James Bond	8000.00
Edit Copy Delete	109	Ivy Anderson	9	IT SUPPORT SPECIALIST	2024-10-10	70000.00	Emily Davis	3500.00
Edit Copy Delete	110	Jack Brown	10	ADMINISTRATIVE ASSISTANT	2024-10-15	45000.00	Martin King	1000.00

4) Delete row where id is 105

QUERY:

DELETE FROM emp WHERE id = 105;

OUTPUT:

	id	name	dept_no	job	hire_date	salary	manager	commission
Edit Copy Delete	101	Alice Johnson	1	HR MANAGER	2024-09-01	80000.00	Michael Scott	5000.00
Edit Copy Delete	102	Bob Smith	2	SOFTWARE ENGINEER	2024-09-15	95000.00	John Smith	7000.00
Edit Copy Delete	103	Carol Davis	3	MARKETING SPECIALIST	2024-09-20	60000.00	Emma Clark	3000.00
Edit Copy Delete	104	David Wilson	4	FINANCIAL ANALYST	2024-09-25	85000.00	Sarah Connor	4000.00
Edit Copy Delete	106	Franklin Miller	6	SUPPORT AGENT	2024-09-30	50000.00	Nina Adams	1500.00
Edit Copy Delete	107	Grace Lee	7	PRODUCT MANAGER	2024-10-01	120000.00	Olivia White	10000.00
Edit Copy Delete	108	Henry Carter	8	LEGAL ADVISOR	2024-10-05	110000.00	James Bond	8000.00
Edit Copy Delete	109	Ivy Anderson	9	IT SUPPORT SPECIALIST	2024-10-10	70000.00	Emily Davis	3500.00
Edit Copy Delete	110	Jack Brown	10	ADMINISTRATIVE ASSISTANT	2024-10-15	45000.00	Martin King	1000.00

4) Delete or Drop table emp

QUERY:

TRUNCATE TABLE emp; [OR] DROP TABLE emp;

OUTPUT:

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0008 seconds.)

```
DROP TABLE emp;
```

[Edit inline] [Edit] [Create PHP code]

Name: Abdurrahman Qureshi

Roll No: 242466

Practical No: 2

1) Select all rows

QUERY:

```
SELECT * FROM emp;
```

OUTPUT:

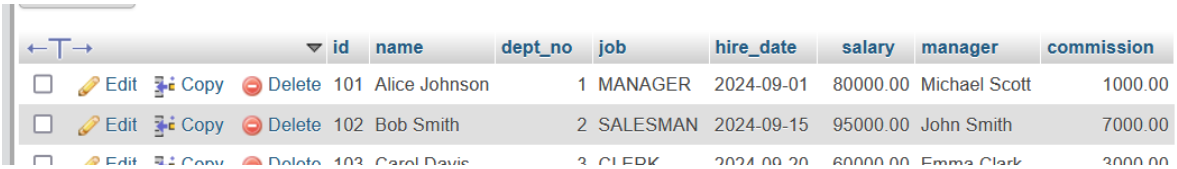
	id	name	dept_no	job	hire_date	salary	manager	commission
Edit Copy Delete	101	Alice Johnson	1	MANAGER	2024-09-01	80000.00	Michael Scott	5000.00
Edit Copy Delete	102	Bob Smith	2	SALESMAN	2024-09-15	95000.00	John Smith	7000.00
Edit Copy Delete	103	Carol Davis	3	CLERK	2024-09-20	60000.00	Emma Clark	3000.00
Edit Copy Delete	104	David Wilson	4	ANALYST	2024-09-25	85000.00	Sarah Connor	4000.00
Edit Copy Delete	105	Eva Green	5	SALESMAN	2024-09-26	55000.00	Paul Wright	2000.00
Edit Copy Delete	106	Franklin Miller	6	CLERK	2024-09-30	50000.00	Nina Adams	1500.00
Edit Copy Delete	107	Grace Lee	7	PRESIDENT	2024-10-01	120000.00	Olivia White	10000.00
Edit Copy Delete	108	Henry Carter	8	ANALYST	2024-10-05	110000.00	James Bond	8000.00
Edit Copy Delete	109	Ivy Anderson	9	SALESMAN	2024-10-10	70000.00	Emily Davis	3500.00
Edit Copy Delete	110	Jack Brown	10	CLERK	2024-10-15	45000.00	Martin King	1000.00

2) Update commission of Alice to 1000

QUERY:

```
UPDATE emp
SET commission = 1000
WHERE name = 'Alice Johnson';
```

OUTPUT:



	id	name	dept_no	job	hire_date	salary	manager	commission
Edit Copy Delete	101	Alice Johnson	1	MANAGER	2024-09-01	80000.00	Michael Scott	1000.00
Edit Copy Delete	102	Bob Smith	2	SALESMAN	2024-09-15	95000.00	John Smith	7000.00

3) Show details of Carol

QUERY:

```
SELECT * FROM emp WHERE name = "Carol Davis";
```

OUTPUT:

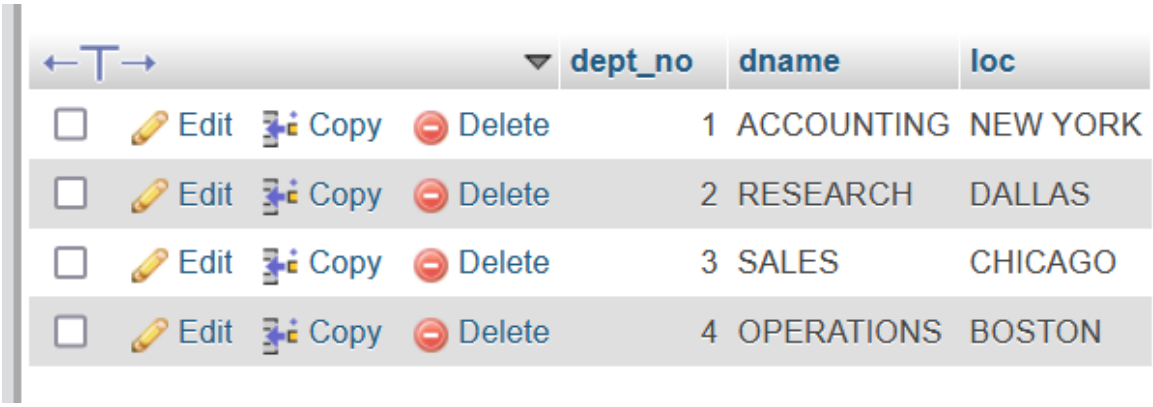
	id	name	dept_no	job	hire_date	salary	manager	commission
Edit Copy Delete	103	Carol Davis	3	CLERK	2024-09-20	60000.00	Emma Clark	3000.00

4) Show records of dept

QUERY:

```
SELECT * FROM dept;
```

OUTPUT:



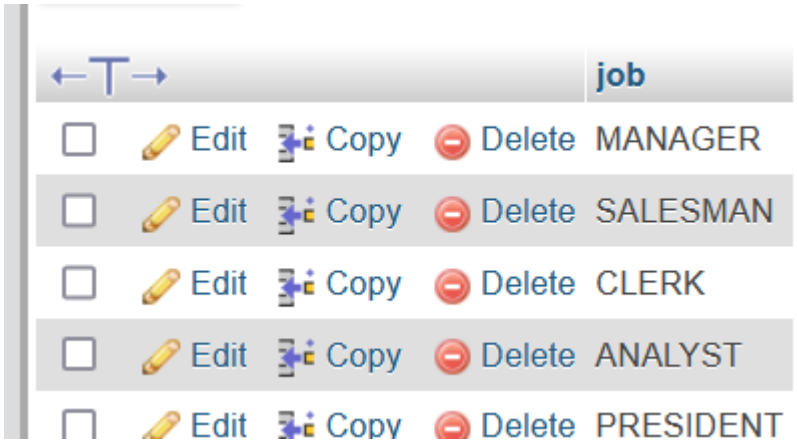
	dept_no	dname	loc
Edit Copy Delete	1	ACCOUNTING	NEW YORK
Edit Copy Delete	2	RESEARCH	DALLAS
Edit Copy Delete	3	SALES	CHICAGO
Edit Copy Delete	4	OPERATIONS	BOSTON

4) Show all job types

QUERY:

```
SELECT DISTINCT job from emp;
```

OUTPUT:



	job
Edit Copy Delete	MANAGER
Edit Copy Delete	SALESMAN
Edit Copy Delete	CLERK
Edit Copy Delete	ANALYST
Edit Copy Delete	PRESIDENT

5) Show all emp of dept 3

QUERY:

```
SELECT * FROM `emp` WHERE dept_no = 3;
```

OUTPUT:

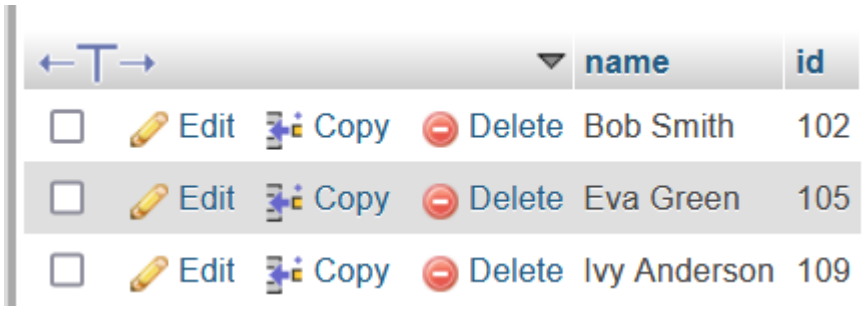
	id	name	dept_no	job	hire_date	salary	manager	commission
Edit Copy Delete	102	Bob Smith	3	SALESMAN	2024-09-15	95000.00	John Smith	7000.00
Edit Copy Delete	103	Carol Davis	3	CLERK	2024-09-20	60000.00	Emma Clark	3000.00
Edit Copy Delete	105	Eva Green	3	SALESMAN	2024-09-26	55000.00	Paul Wright	2000.00
Edit Copy Delete	109	Ivy Anderson	3	SALESMAN	2024-10-10	70000.00	Emily Davis	3500.00
Edit Copy Delete	110	Jack Brown	3	CLERK	2024-10-15	45000.00	Martin King	1000.00

5) Show all salesman

QUERY:

```
SELECT name,id FROM `emp` WHERE job = "SALESMAN";
```

OUTPUT:



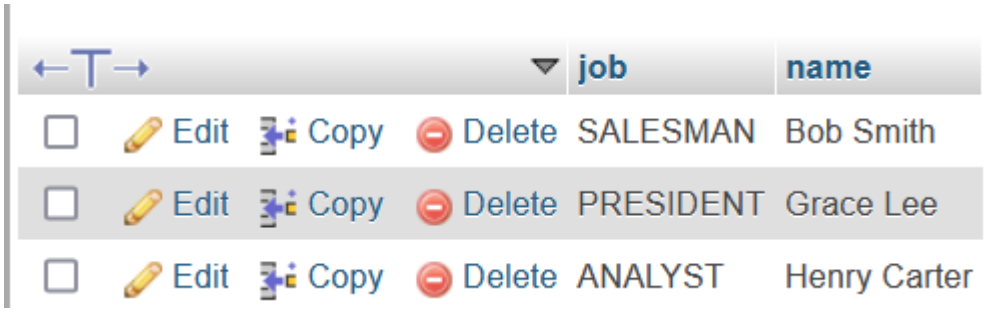
	name	id
Edit Copy Delete	Bob Smith	102
Edit Copy Delete	Eva Green	105
Edit Copy Delete	Ivy Anderson	109

6) Show name and job whose salary is greater 85k

QUERY:

```
SELECT job,name FROM `emp` WHERE salary > 85000;
```

OUTPUT:



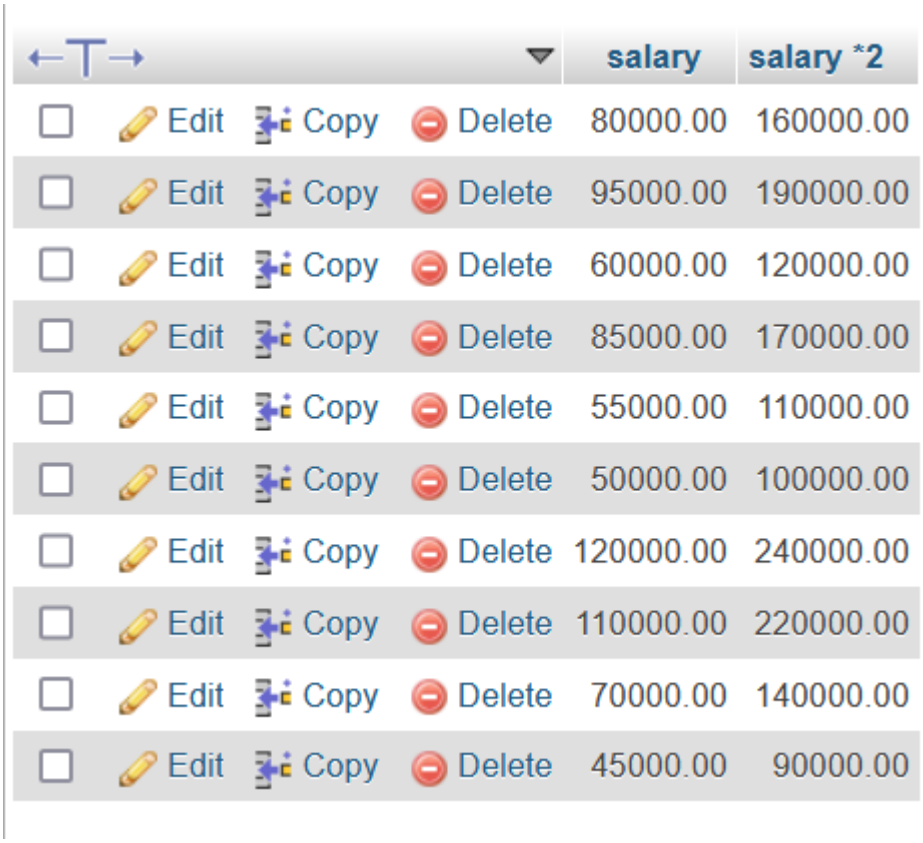
	job	name
Edit Copy Delete	SALESMAN	Bob Smith
Edit Copy Delete	PRESIDENT	Grace Lee
Edit Copy Delete	ANALYST	Henry Carter

7) Show monthly and annual salary of all

QUERY:

```
SELECT salary, salary *2 from emp;
```

OUTPUT:



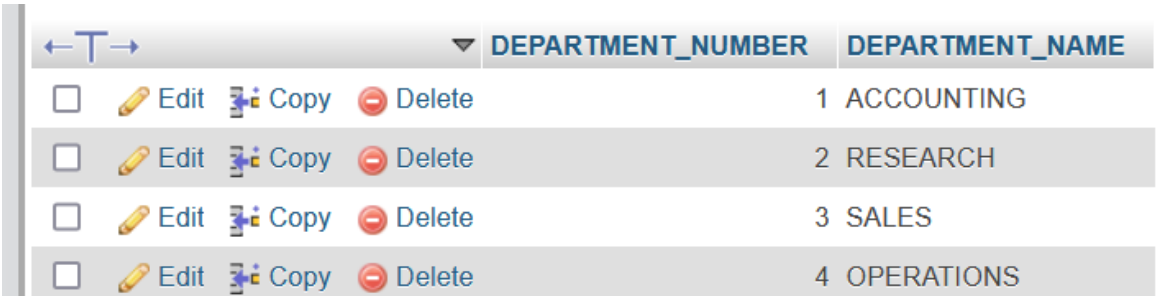
			salary	salary *2
Edit	Copy	Delete	80000.00	160000.00
Edit	Copy	Delete	95000.00	190000.00
Edit	Copy	Delete	60000.00	120000.00
Edit	Copy	Delete	85000.00	170000.00
Edit	Copy	Delete	55000.00	110000.00
Edit	Copy	Delete	50000.00	100000.00
Edit	Copy	Delete	120000.00	240000.00
Edit	Copy	Delete	110000.00	220000.00
Edit	Copy	Delete	70000.00	140000.00
Edit	Copy	Delete	45000.00	90000.00

8) Show dept using aliases

QUERY:

```
SELECT dept_no as DEPARTMENT_NUMBER , dname as DEPARTMENT_NAME from dept;
```

OUTPUT:



			DEPARTMENT_NUMBER	DEPARTMENT_NAME
Edit	Copy	Delete	1	ACCOUNTING
Edit	Copy	Delete	2	RESEARCH
Edit	Copy	Delete	3	SALES
Edit	Copy	Delete	4	OPERATIONS

Name: Abdurrahman Qureshi

Roll No: 242466

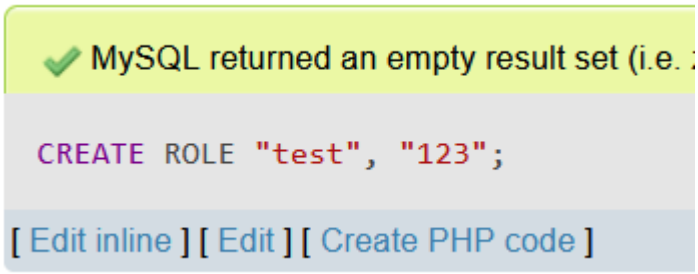
Practical No: 3

1) Create a role name with test and password 123

QUERY:

```
CREATE ROLE "test", "123";
```

OUTPUT:

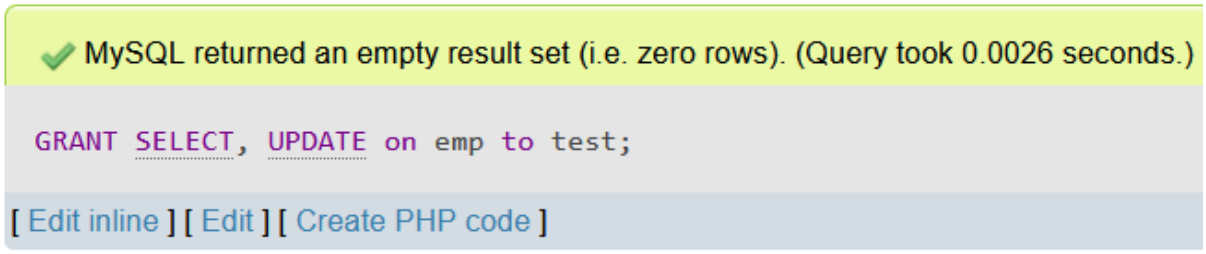


2) Grant select, update to test on emp table

QUERY:

```
GRANT SELECT, UPDATE on emp to test;
```

OUTPUT:

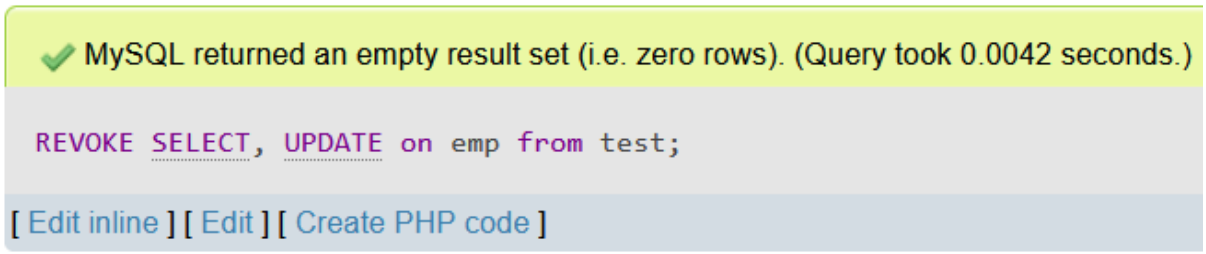


3) Revoke select, update to test on emp table

QUERY:

REVOKE SELECT, UPDATE on emp from test;

OUTPUT:

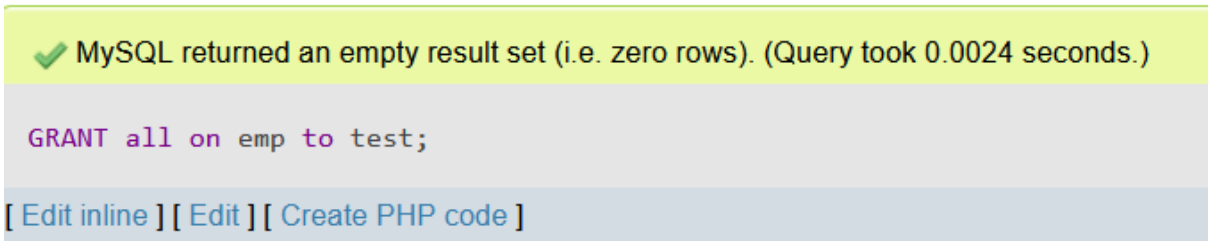


4) Grant all on emp to test

QUERY:

GRANT all on emp to test;

OUTPUT:

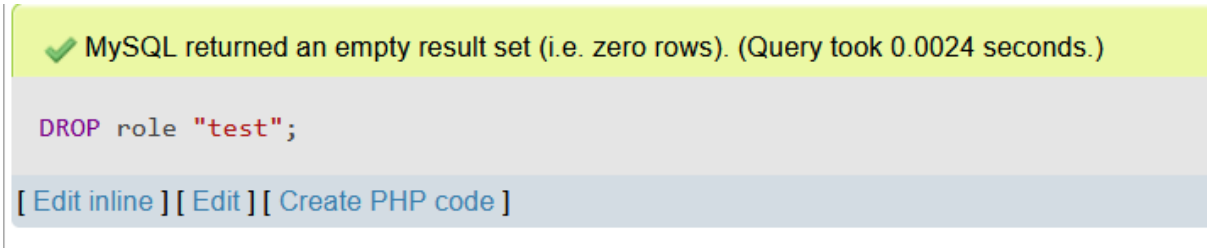


4) Drop the role

QUERY:

```
DROP role "test";
```

OUTPUT:



Name: Abdurrahman Qureshi

Roll No: 242466

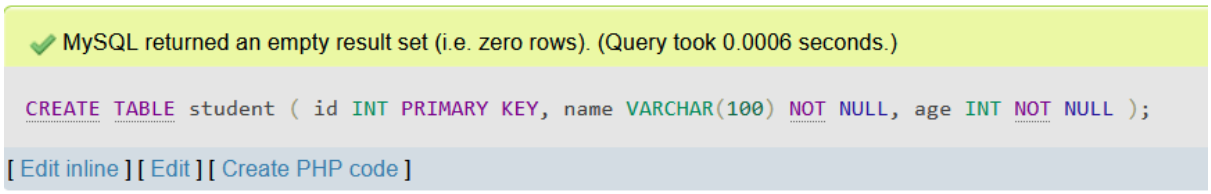
Practical No: 4

1) Create a table student with 3 columns with NOT NULL constraint

QUERY:

```
CREATE TABLE student (
    id INT PRIMARY KEY,
    name VARCHAR(100) NOT NULL,
    age INT NOT NULL,
);
```

OUTPUT:

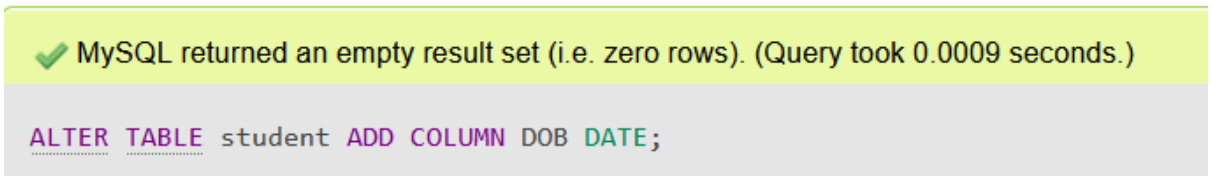


2) Alter and column DOB

QUERY:

```
ALTER TABLE student ADD COLUMN DOB DATE;
```

OUTPUT:

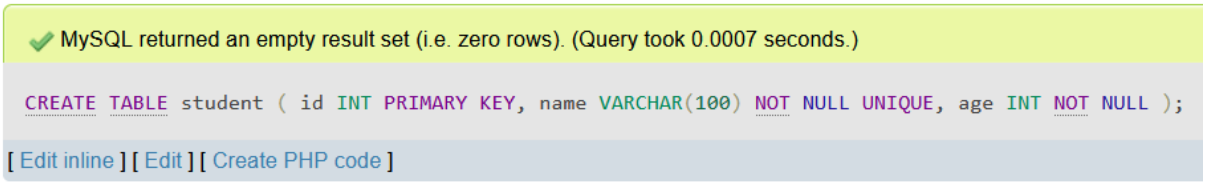


3) Create a table student with 3 columns with Unique constraint

QUERY:

```
CREATE TABLE student (
    id INT PRIMARY KEY,
    name VARCHAR(100) NOT NULL UNIQUE,
    age INT NOT NULL
);
```

OUTPUT:

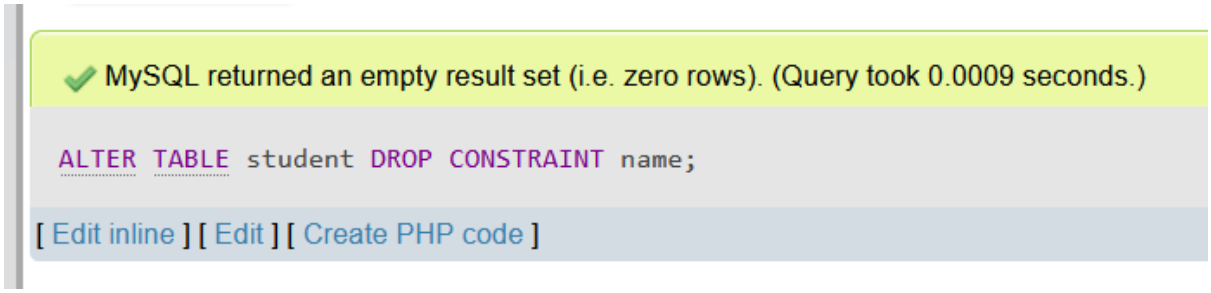


4) Drop the unique constraint

QUERY:

```
ALTER TABLE student DROP CONSTRAINT name;
```

OUTPUT:

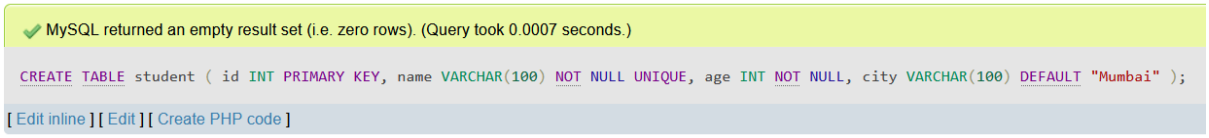


5) Add a default value of "Mumbai" to the city column

QUERY:

```
CREATE TABLE student (
    id INT PRIMARY KEY,
    name VARCHAR(100) NOT NULL UNIQUE,
    age INT NOT NULL,
    city VARCHAR(100) DEFAULT "Mumbai",
);
```

OUTPUT:

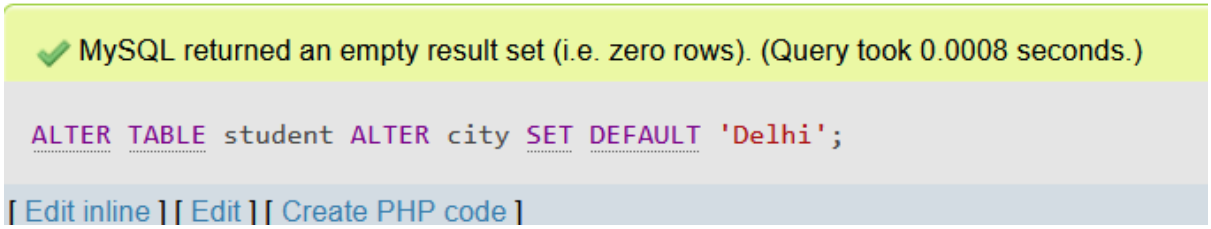


6) Modify the default value to "Dehli" of the city column

QUERY:

```
ALTER TABLE student
ALTER city SET DEFAULT 'Delhi';
```

OUTPUT:



Name: Abdurrahman Qureshi

Roll No: 242466

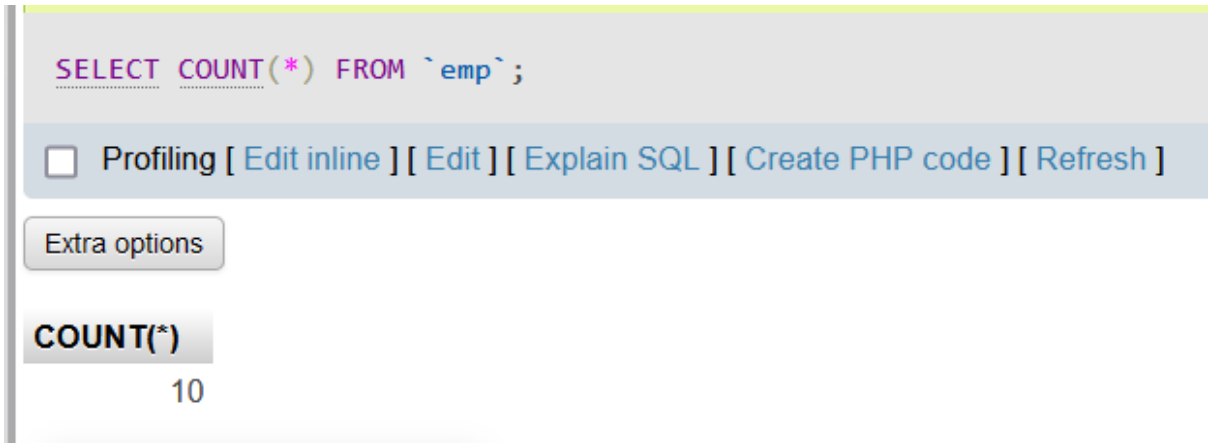
Practical No: 5

1) Get total number of rows of emp table

QUERY:

```
SELECT COUNT(*) FROM `emp` ;
```

OUTPUT:



2) Get number of clerks

QUERY:

```
SELECT COUNT(*) FROM emp WHERE job = "CLERK";
```

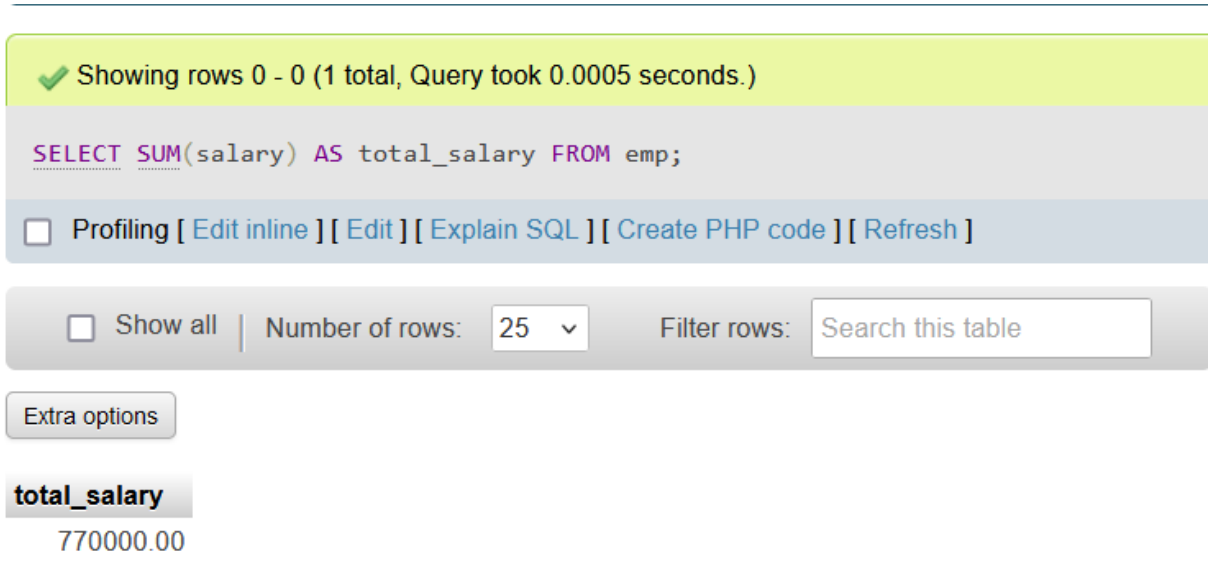
OUTPUT:

3) Get total salary to employees

QUERY:

```
SELECT SUM(salary) AS total_salary FROM emp;
```

OUTPUT:

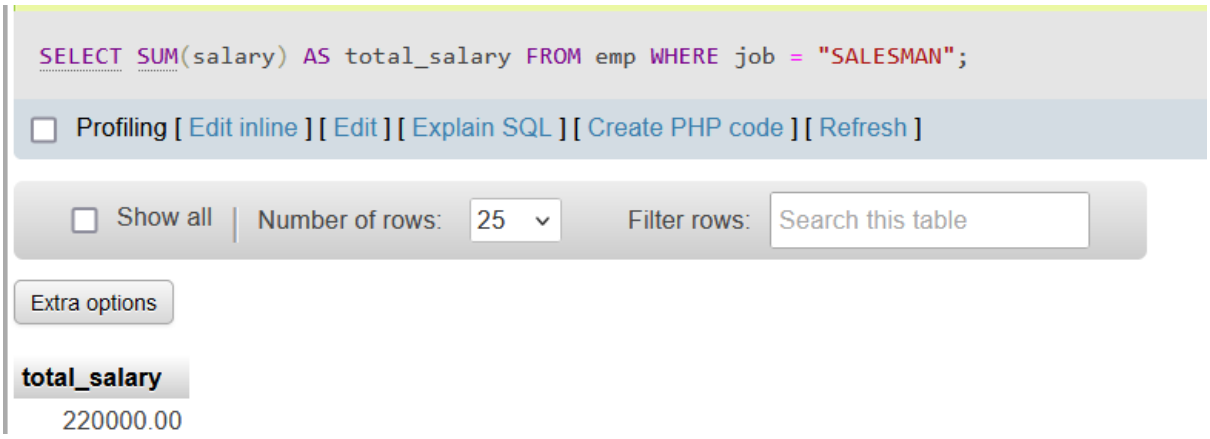


4) Get Total commission to all salesman

QUERY:

```
SELECT SUM(salary) AS total_salary FROM emp WHERE job = "SALESMAN";
```

OUTPUT:

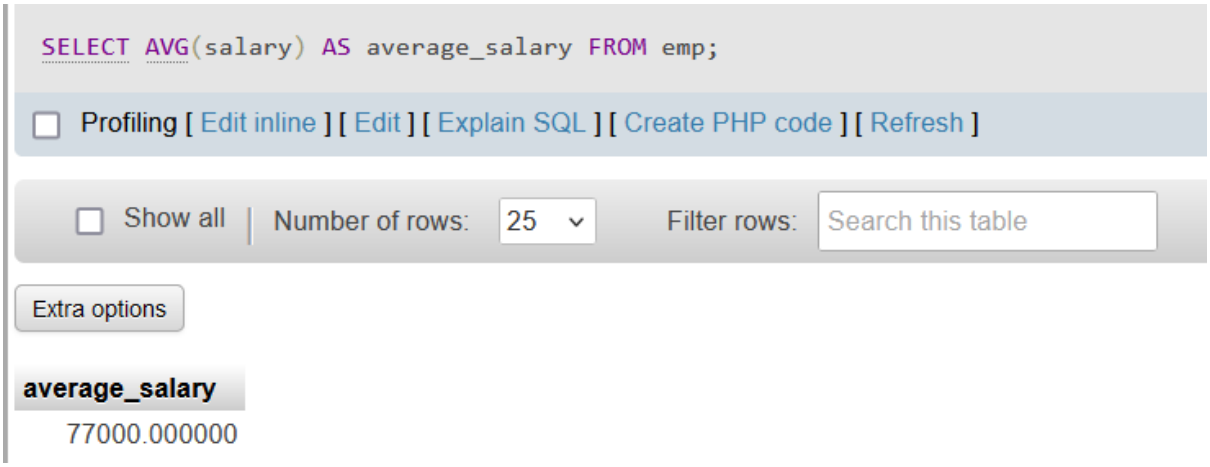


5) Get average salary of the table emp

QUERY:

SELECT AVG(salary) AS average_salary FROM employees;

OUTPUT:

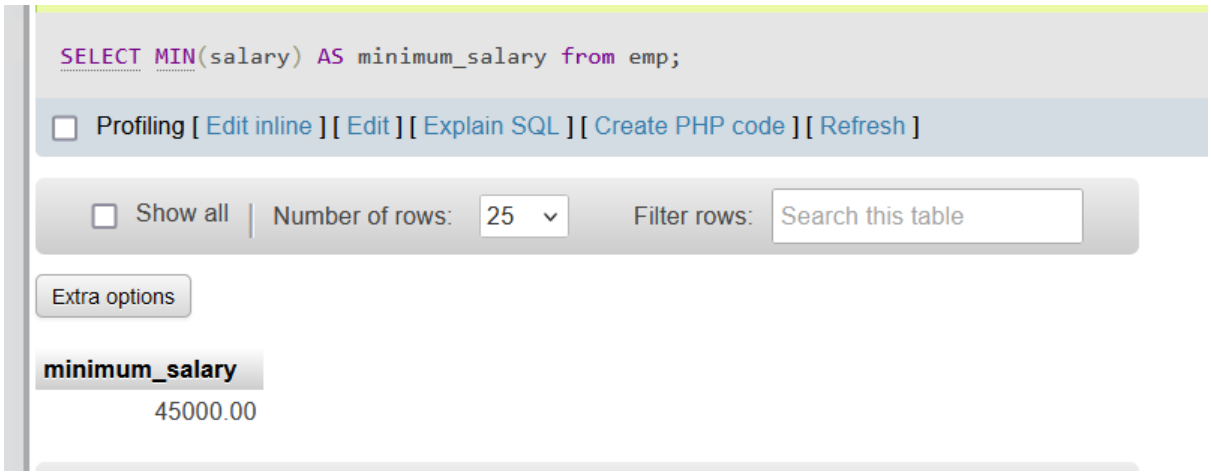


6) Get min salary of the table emp

QUERY:

SELECT MIN(salary) AS minimum_salary from emp;

OUTPUT:

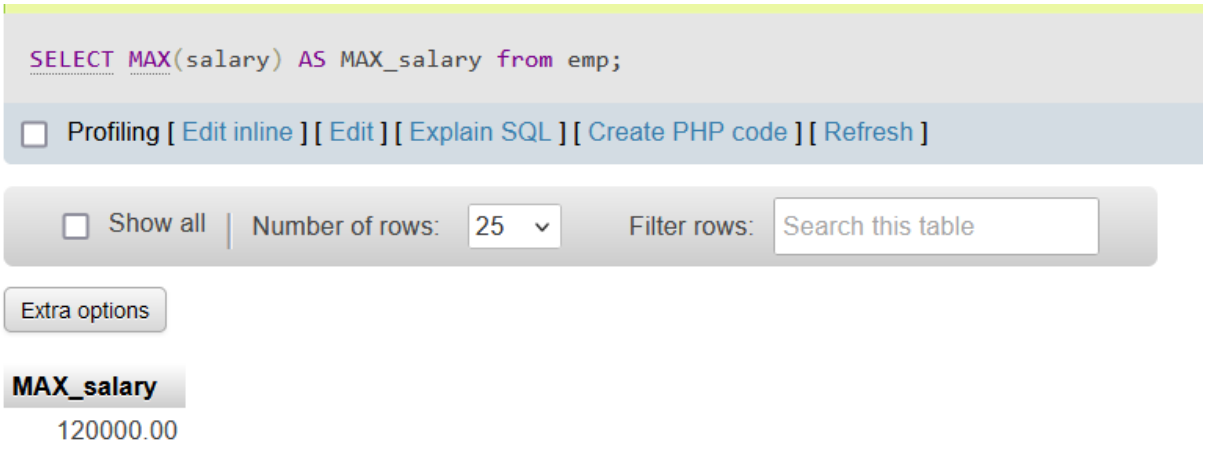


7) Get max salary of the table emp

QUERY:

SELECT MAX(salary) AS minimum_salary from emp;

OUTPUT:



Name: Abdurrahman Qureshi

Roll No: 242466

Practical No: 6

1) Order employees by ascending

QUERY:

```
SELECT * FROM emp ORDER BY salary ASC;
```

OUTPUT:

	id	name	dept_no	job	hire_date	salary 1	manager	commission
Edit Copy Delete	110	Jack Brown	3	CLERK	2024-10-15	45000.00	Martin King	1000.00
Edit Copy Delete	106	Franklin Miller	2	CLERK	2024-09-30	50000.00	Nina Adams	1500.00
Edit Copy Delete	105	Eva Green	3	SALESMAN	2024-09-26	55000.00	Paul Wright	2000.00
Edit Copy Delete	103	Carol Davis	3	CLERK	2024-09-20	60000.00	Emma Clark	3000.00
Edit Copy Delete	109	Ivy Anderson	3	SALESMAN	2024-10-10	70000.00	Emily Davis	3500.00
Edit Copy Delete	101	Alice Johnson	1	MANAGER	2024-09-01	80000.00	Michael Scott	1000.00
Edit Copy Delete	104	David Wilson	1	ANALYST	2024-09-25	85000.00	Sarah Connor	4000.00
Edit Copy Delete	102	Bob Smith	3	SALESMAN	2024-09-15	95000.00	John Smith	7000.00
Edit Copy Delete	108	Henry Carter	2	ANALYST	2024-10-05	110000.00	James Bond	8000.00
Edit Copy Delete	107	Grace Lee	1	PRESIDENT	2024-10-01	120000.00	Olivia White	10000.00

2) Order employees by descending

QUERY:

```
SELECT * FROM emp ORDER BY salary DESC;
```

OUTPUT:

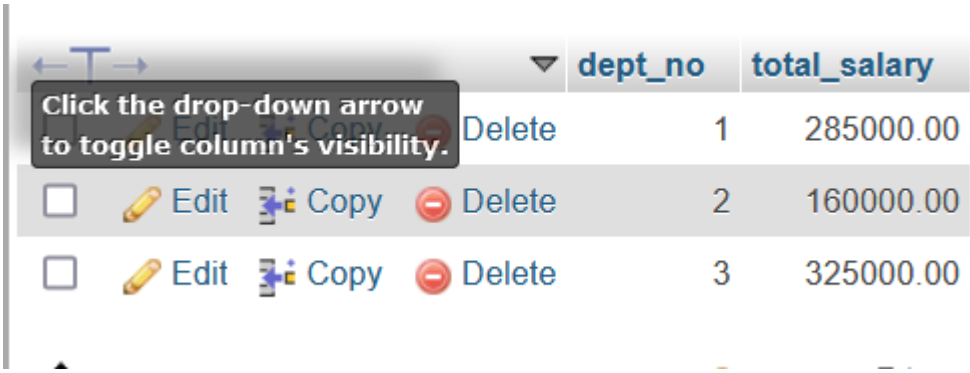
	id	name	dept_no	job	hire_date	salary 1	manager	commission
Edit Copy Delete	107	Grace Lee	1	PRESIDENT	2024-10-01	120000.00	Olivia White	10000.00
Edit Copy Delete	108	Henry Carter	2	ANALYST	2024-10-05	110000.00	James Bond	8000.00
Edit Copy Delete	102	Bob Smith	3	SALESMAN	2024-09-15	95000.00	John Smith	7000.00
Edit Copy Delete	104	David Wilson	1	ANALYST	2024-09-25	85000.00	Sarah Connor	4000.00
Edit Copy Delete	101	Alice Johnson	1	MANAGER	2024-09-01	80000.00	Michael Scott	1000.00
Edit Copy Delete	109	Ivy Anderson	3	SALESMAN	2024-10-10	70000.00	Emily Davis	3500.00
Edit Copy Delete	103	Carol Davis	3	CLERK	2024-09-20	60000.00	Emma Clark	3000.00
Edit Copy Delete	105	Eva Green	3	SALESMAN	2024-09-26	55000.00	Paul Wright	2000.00
Edit Copy Delete	106	Franklin Miller	2	CLERK	2024-09-30	50000.00	Nina Adams	1500.00
Edit Copy Delete	110	Jack Brown	3	CLERK	2024-10-15	45000.00	Martin King	1000.00

3) Group employees by department and calculate the total salary per department

QUERY:

```
SELECT dept_no, SUM(salary) AS total_salary
FROM emp
GROUP BY dept_no;
```

OUTPUT:



4) Get min, max , avg salaray per department

QUERY:

```
SELECT MIN(salary), MAX(salary), AVG(salary) FROM emp GROUP BY dept_no;
```

OUTPUT:

```
SELECT SUM(salary) AS total_salary FROM emp WHERE job = "SALESMAN";
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table

Extra options

total_salary
220000.00

5) Get min salary from all jobs

QUERY:

```
SELECT job, MIN(salary) AS min_salary
FROM emp
GROUP BY job;
```

OUTPUT:

	job	min_salary
Edit Copy Delete	ANALYST	85000.00
Edit Copy Delete	CLERK	45000.00
Edit Copy Delete	MANAGER	80000.00
Edit Copy Delete	PRESIDENT	120000.00
Edit Copy Delete	SALESMAN	55000.00

6) Get salary greater than 80000

QUERY:

```
SELECT *
FROM emp
HAVING salary > 80000;
```

OUTPUT:

	id	name	dept_no	job	hire_date	salary	manager	commission
Edit Copy Delete	102	Bob Smith	3	SALESMAN	2024-09-15	95000.00	John Smith	7000.00
Edit Copy Delete	104	David Wilson	1	ANALYST	2024-09-25	85000.00	Sarah Connor	4000.00
Edit Copy Delete	107	Grace Lee	1	PRESIDENT	2024-10-01	120000.00	Olivia White	10000.00
Edit Copy Delete	108	Henry Carter	2	ANALYST	2024-10-05	110000.00	James Bond	8000.00

7) Order by ename

QUERY:

SELECT dept_no FROM `emp` ORDER BY name;

OUTPUT:

	dept_no
Edit Copy Delete	1
Edit Copy Delete	3
Edit Copy Delete	3
Edit Copy Delete	1
Edit Copy Delete	3
Edit Copy Delete	2
Edit Copy Delete	1
Edit Copy Delete	2
Edit Copy Delete	3
Edit Copy Delete	3

Name: Abdurrahman Qureshi

Roll No: 242466

Practical No: 7

1) CONCAT (String Function)

QUERY:

```
SELECT CONCAT('Hello', ' ', 'World') AS result;
```

OUTPUT:

result
Hello World

2) LENGTH (String Function)

QUERY:

```
SELECT LENGTH('MySQL String Functions') AS result;
```

OUTPUT:

result
22

3) LOWER (String Function)

QUERY:

```
SELECT LOWER('HELLO WORLD') AS result;
```

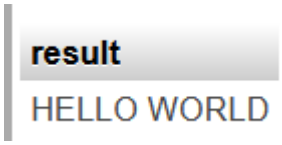
OUTPUT:

4) UPPER (String Function)

QUERY:

```
SELECT UPPER('hello world') AS result;
```

OUTPUT:



5) SUBSTRING (String Function)

QUERY:

```
SELECT SUBSTRING('MySQL String Functions', 7, 6) AS result;
```

OUTPUT:

6) REVERSE (String Function)

QUERY:

```
SELECT REVERSE('MySQL') AS result;
```

OUTPUT:

result
LQSyM

7) REPLACE (String Function)

QUERY:

```
SELECT REPLACE('Hello World', 'World', 'MySQL') AS result;
```

OUTPUT:

result
Hello MySQL

8) DATEDIFF (Date Function)

QUERY:

```
SELECT DATEDIFF('2024-12-31', '2024-10-07') AS days_difference;
```

OUTPUT:

days_difference
85

9) NOW (Date Function)

QUERY:

SELECT NOW() AS current_datetime;

OUTPUT:

current_datetime
2024-10-07 23:11:34

10) CURDATE (Date Function)

QUERY:

SELECT CURDATE() AS c_date;

OUTPUT:

c_date
2024-10-07

11) DATE_ADD (Date Function)

QUERY:

SELECT DATE_ADD('2024-10-07', INTERVAL 10 DAY) AS future_date;

OUTPUT:

future_date
2024-10-17

Name: Abdurrahman Qureshi

Roll No: 242466

Practical No: 8

1) Trigger Demonstration

- Create a trigger log table:

```
CREATE TABLE emp_log (
    log_id INT AUTO_INCREMENT PRIMARY KEY,
    log_message VARCHAR(255),
    log_time TIMESTAMP DEFAULT CURRENT_TIMESTAMP
);
```

- Create a trigger:

```
DELIMITER $$

CREATE TRIGGER after_employee_insert
AFTER INSERT ON emp
FOR EACH ROW
BEGIN
    -- Insert a log message into the log table
    INSERT INTO emp_log (log_message)
    VALUES (CONCAT('Employee added successfully: ', NEW.name));
END $$

DELIMITER ;
```

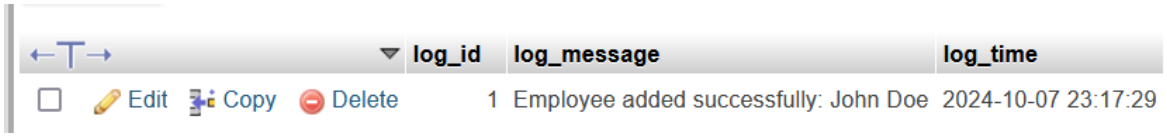
- Insert data to test:

```
INSERT INTO employees (name, dept_no, job, hire_date, salary, manager, commission)
VALUES ('John Doe', 5, 'Engineer', '2024-10-07', 5000.00, 'Jane Smith', 200.00);
```

- Check the Logs

```
SELECT * FROM emp_log;
```

OUTPUT:



	log_id	log_message	log_time
Edit Copy Delete	1	Employee added successfully: John Doe	2024-10-07 23:17:29

Name: Abdurrahman Qureshi

Roll No: 242466

Practical No: 9

1) Create a cursor in MySQL that multiplies each salary by 50%

- Create cursor

```
DELIMITER $$

CREATE PROCEDURE update_salaries_by_50_percent()
BEGIN

    DECLARE done INT DEFAULT 0;
    DECLARE emp_id INT;
    DECLARE emp_salary DECIMAL(10,2);


    DECLARE cur CURSOR FOR
        SELECT id, salary FROM employees;


    DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = 1;

    OPEN cur;


    read_loop: LOOP

        FETCH cur INTO emp_id, emp_salary;


        IF done = 1 THEN
            LEAVE read_loop;
```

```
        END IF;


        UPDATE employees
        SET salary = emp_salary * 1.5
        WHERE id = emp_id;
    END LOOP;


    CLOSE cur;
END $$

DELIMITER ;
```

- Call the Procedure

```
CALL update_salaries_by_50_percent();
```

- Check the Updated Salaries

```
SELECT id, name, salary FROM employees;
```

OUTPUT:

		id	name	salary
☐	Edit Copy Delete	0	John Doe	7500.00
☐	Edit Copy Delete	101	Alice Johnson	120000.00
☐	Edit Copy Delete	102	Bob Smith	142500.00
☐	Edit Copy Delete	103	Carol Davis	90000.00
☐	Edit Copy Delete	104	David Wilson	127500.00
☐	Edit Copy Delete	105	Eva Green	82500.00
☐	Edit Copy Delete	106	Franklin Miller	75000.00
☐	Edit Copy Delete	107	Grace Lee	180000.00
☐	Edit Copy Delete	108	Henry Carter	165000.00
☐	Edit Copy Delete	109	Ivy Anderson	105000.00
☐	Edit Copy Delete	110	Jack Brown	67500.00

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0035 seconds.)

```
CREATE PROCEDURE update_salaries_by_50_percent() BEGIN -- Declare variables for cursor DECLARE done INT DEFAULT 0; DECLARE emp_id INT; DECLARE emp_salary DECIMAL(10,2); -- Declare a cursor to iterate through all employee records DECLARE cur CURSOR FOR SELECT id, salary FROM emp; -- Declare a CONTINUE HANDLER to exit the loop DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = 1; -- Open the cursor OPEN cur; -- Cursor loop read_loop: LOOP -- Fetch the current row into the variables FETCH cur INTO emp_id, emp_salary; -- Exit the loop if no more rows IF done = 1 THEN LEAVE read_loop; END IF; -- Update the salary by multiplying it by 50% UPDATE employees SET salary = emp_salary * 1.5 WHERE id = emp_id; END LOOP; -- Close the cursor CLOSE cur; END;
```

[Edit inline] [Edit] [Create PHP code]

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0146 seconds.)

```
CALL update_salaries_by_50_percent();
```

[Edit inline] [Edit] [Create PHP code]

←T→				id	name	salary
☐	Edit	Copy	Delete	0	John Doe	11250.00
☐	Edit	Copy	Delete	101	Alice Johnson	180000.00
☐	Edit	Copy	Delete	102	Bob Smith	213750.00
☐	Edit	Copy	Delete	103	Carol Davis	135000.00
☐	Edit	Copy	Delete	104	David Wilson	191250.00
☐	Edit	Copy	Delete	105	Eva Green	123750.00
☐	Edit	Copy	Delete	106	Franklin Miller	112500.00
☐	Edit	Copy	Delete	107	Grace Lee	270000.00
☐	Edit	Copy	Delete	108	Henry Carter	247500.00
☐	Edit	Copy	Delete	109	Ivy Anderson	157500.00
☐	Edit	Copy	Delete	110	Jack Brown	101250.00

Name: Abdurrahman Qureshi

Roll No: 242466

Practical No: 10

1) Connect to database via JDBC and print the table data

CODE:

```
import java.sexp10Annection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.Statement;

public class exp10 {
    public static void main(String[] args) {
        // Database connection variables
        String url = "jdbc:mysql://localhost:3306/dbms"; // JDBC URL for MySQL database
        String user = "root"; // MySQL username
        String password = ""; // MySQL password

        try {
            // Establish a connection to the database
            Connection connection = DriverManager.getConnection(url, user, password);
            System.out.println("Connection to MySQL database established successfully.");

            // Example: Querying the emp table
            String querySQL = "SELECT * FROM emp";
            Statement statement = connection.createStatement();
            ResultSet resultSet = statement.executeQuery(querySQL);

            // Display the results
            System.out.println("Employee Details:");
            while (resultSet.next()) {
                int id = resultSet.getInt("id");
```

```
            String name = resultSet.getString("name");
            String department = resultSet.getString("department");
            double salary = resultSet.getDouble("salary");
            System.out.println("ID: " + id + ", Name: " + name + ", Department: " + department + ", Salary: " +
salary);
        }

        // Clean up and close resources
        resultSet.close();
        statement.close();
        connection.close();
        System.out.println("Database connection closed.");

    } catch (Exception e) {
        e.printStackTrace();
    }
  }
}
```

OUTPUT:

```
Abdurrahman Qureshi@GhouledGadget MINGW64 /d/Degree/SEM 3/DMS/Programs/mysql-connector-j-8.4.0 (master)
$ java exp10
ID      Name            Dept No Salary
0       John Doe        5       1125000.00
101     Alice Johnson   1       18000000.00
102     Bob Smith       3       21375000.00
103     Carol Davis     3       13500000.00
104     David Wilson    1       19125000.00
105     Eva Green       3       123750.00
106     Franklin Miller 2       112500.00
107     Grace Lee       1       27000000.00
108     Henry Carter    2       24750000.00
109     Ivy Anderson    3       15750000.00
110     Jack Brown      3       10125000.00

Abdurrahman Qureshi@GhouledGadget MINGW64 /d/Degree/SEM 3/DMS/Programs/mysql-connector-j-8.4.0 (master)
$
```