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CLASS: 4-B

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TASK:

```sql
CREATE DATABASE company_db;
SHOW DATABASES;
USE company_db;
CREATE TABLE employees(
employee_id INT(11) PRIMARY KEY,
    first_name VARCHAR(100),
    last_name VARCHAR(100),
    department_id INT(11),
    hire_date DATE,
    salary DECIMAL(10, 2)
);
-- task 1 part 1
CREATE TABLE departments (
    department_id INT(11) PRIMARY KEY,
    department_name VARCHAR(100),
    manager_id INT(11) NOT NULL
);
-- part 2
CREATE TABLE projects (
    project_id INT(11) AUTO_INCREMENT PRIMARY KEY,
    project_name VARCHAR(100),
    start_date DATE,
    employee_id INT (20)
```

```
    employee_id INT (20)
);

ALTER TABLE employees
CHANGE employee_id emp_id INT(11);
ALTER TABLE employees
MODIFY COLUMN salary DECIMAL(15,2);
ALTER TABLE employees
ADD COLUMN email VARCHAR(255);
ALTER TABLE employees
DROP COLUMN email;
-- task 2
ALTER TABLE employees
CHANGE COLUMN first_name f_name VARCHAR (100);
ALTER TABLE employees
DROP COLUMN last_name;
ALTER TABLE employees
MODIFY COLUMN emp_id INT (20);
ALTER TABLE employees
ADD COLUMN contact_num INT (200);

RENAME TABLE employees TO staff;
SELECT f_name,hire_date from staff;
```

```sql
RENAME TABLE employees TO staff;
SELECT f_name,hire_date from staff;
INSERT INTO departments (department_id, department_name, manager_id)
VALUES
(1, 'HR', 101),
(2, 'Finance', 102),
(3, 'Engineering', 103);
INSERT INTO staff (emp_id, f_name, department_id, hire_date, salary)
VALUES
(1, 'John', 1, '2025-02-20', 50000.00),
(2, 'Jane', 2, '2025-02-21', 55000.00),
(3, 'Alice', 3, '2025-02-22', 60000.00),
(4, 'Bob', 1, '2025-02-23', 47000.00);
INSERT INTO projects (project_id, project_name, start_date, employee_id)
VALUES
(1, 'Project Alpha', '2025-02-20', 1),
(2, 'Project Beta', '2025-02-21', 2),
(3, 'Project Gamma', '2025-02-22', 3),
(4, 'Project Delta', '2025-02-23', 4);
UPDATE staff
SET salary = 55000
WHERE emp_id = 1;
UPDATE staff
```

```sql
UPDATE staff
SET salary = salary * 1.10
WHERE hire_date < '2025-01-01';
DELETE FROM staff WHERE emp_id = 1;
DELETE FROM staff WHERE hire_date < '2025-01-01';
SELECT * FROM staff;
SELECT * FROM departments;
SELECT * FROM projects;
```

```sql
-- Task questions..
-- 1
CREATE TABLE salaries(
salary_id INT AUTO_INCREMENT PRIMARY KEY,
emp_id INT,
salary_amount DECIMAL(15,2),
date_recieved DATE
);
-- 2
ALTER TABLE staff
ADD birthdate DATE;
-- 3
ALTER TABLE staff
MODIFY COLUMN salary DECIMAL (20,2);
-- 4th already done in task2
-- 5
UPDATE salaries
SET salary_amount = salary_amount * 1.10
WHERE emp_id IN (
    SELECT emp_id FROM staff WHERE department_id = 1
);
```

```sql
-- 6
UPDATE staff
SET f_name = 'megan'
WHERE emp_id = 3;
-- 7
SELECT * FROM staff
WHERE salary > 50000
AND hire_date > '2025-01-01';
-- 8
SELECT s.f_name, s.salary, d.department_name
FROM staff s
JOIN departments d ON s.department_id = d.department_id;
-- 9
SELECT * FROM staff
WHERE salary = (SELECT MAX(salary) FROM staff);
-- 10
SELECT department_id, COUNT(*) AS total_employees
FROM staff
GROUP BY department_id;
```

```sql
SELECT * FROM staff
WHERE salary > 50000
AND hire_date > '2025-01-01';
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

emp_id	f_name	department_id	hire_date	salary	contact_num	birthdate
2	Jane	2	2025-02-21	55000.00	NULL	NULL
3	megan	3	2025-02-22	60000.00	NULL	NULL
NULL	NULL	NULL	NULL	NULL	NULL	NULL

```sql
-- 8
SELECT s.f_name, s.salary, d.department_name
FROM staff s
JOIN departments d ON s.department_id = d.department_id;
```

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

f_name	salary	department_name
Jane	55000.00	Finance
megan	60000.00	Engineering
Bob	47000.00	HR

```sql
-- 9
SELECT * FROM staff
WHERE salary = (SELECT MAX(salary) FROM staff);
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

emp_id	f_name	department_id	hire_date	salary	contact_num	birthdate
3	megan	3	2025-02-22	60000.00	NULL	NULL
NULL	NULL	NULL	NULL	NULL	NULL	NULL

```sql
WHERE salary = (SELECT MAX(salary) FROM staff);
-- 10
SELECT department_id, COUNT(*) AS total_employees
FROM staff
GROUP BY department_id;
```

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

department_id	total_employees
2	1
3	1
1	1

Tables After Permorming Each Task

```
114 • SELECT * FROM staff;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

emp_id	f_name	department_id	hire_date	salary	contact_num	birthdate
2	Jane	2	2025-02-21	55000.00	NULL	NULL
3	megan	3	2025-02-22	60000.00	NULL	NULL
4	Bob	1	2025-02-23	47000.00	NULL	NULL
NULL	NULL	NULL	NULL	NULL	NULL	NULL

```
115 • SELECT * FROM departments;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

department_id	department_name	manager_id
1	HR	101
2	Finance	102
3	Engineering	103
NULL	NULL	NULL

```
115 • SELECT * FROM departments;
116 • SELECT * FROM projects;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

project_id	project_name	start_date	employee_id
1	Project Alpha	2025-02-20	1
2	Project Beta	2025-02-21	2
3	Project Gamma	2025-02-22	3
4	Project Delta	2025-02-23	4
NULL	NULL	NULL	NULL

projects 10 ×

```
117 • SELECT * FROM salaries;
```

Result Grid | Filter Rows: | Edit:

salary_id	emp_id	salary_amount	date_recieved
NULL	NULL	NULL	NULL
