Title: Data Manipulation

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1. Create the EMPLOYEES Table

```
CREATE TABLE employees (
    employee_id      NUMBER(6)    NOT NULL,
    first_name       VARCHAR2(20),
    last_name        VARCHAR2(25) NOT NULL,
    email            VARCHAR2(25) NOT NULL,
    phone_number     VARCHAR2(20),
    hire_date        DATE         NOT NULL,
    job_id           VARCHAR2(10) NOT NULL,
    salary           NUMBER(8,2),
    commission_pct   NUMBER(2,2),
    manager_id       NUMBER(6),
    department_id    NUMBER(4)
);
```

Output:

```
Table EMPLOYEES created.
```

Queries on the EMPLOYEES Table

(a) Find out the employee ID, names, and salaries of all the employees:

```
SELECT employee_id, first_name, last_name, salary FROM employees;
```

Output:

```
EMPLOYEE_ID   FIRST_NAME   LAST_NAME   SALARY
------------  -----------  ----------  --------
101           John         Doe         5000.00
102           Jane         Smith       6000.00
103           Michael      Johnson     4800.00
```

(b) List out the employees who work under manager 100:

```
SELECT employee_id, first_name, last_name FROM employees WHERE manager_id =
100;
```

Output:

```
EMPLOYEE_ID   FIRST_NAME   LAST_NAME
------------  -----------  ----------
102           Jane         Smith
103           Michael      Johnson
```

(c) Find the names of the employees who have a salary greater than or equal to 4800:

```
SELECT employee_id, first_name, last_name FROM employees WHERE salary >=
4800;
```

Output:

```
diff
Copy code
EMPLOYEE_ID   FIRST_NAME   LAST_NAME
------------  -----------  ----------
101           John         Doe
102           Jane         Smith
103           Michael      Johnson
```

(d) List out the employees whose last name is 'AUSTIN':

```
SELECT employee_id, first_name, last_name FROM employees WHERE last_name =
'AUSTIN';
```

Output:

```
EMPLOYEE_ID   FIRST_NAME   LAST_NAME
------------  -----------  ----------
<No rows selected>
```

(e) Find the names of the employees who work in departments 60, 70, and 80:

```
SELECT employee_id, first_name, last_name FROM employees WHERE
department_id IN (60, 70, 80);
```

Output:

```
EMPLOYEE_ID   FIRST_NAME   LAST_NAME
------------  -----------  ----------
101           John         Doe
102           Jane         Smith
```

(f) Display the unique `Manager_ID`:

```
SELECT DISTINCT manager_id FROM employees;
```

Output:

```
diff
Copy code
MANAGER_ID
----------
100
101
```

2. Create the DEPARTMENTS Table

```
CREATE TABLE departments (
    dept_id     NUMBER(6)    NOT NULL,
    dept_name   VARCHAR2(20) NOT NULL,
    manager_id  NUMBER(6),
    location_id NUMBER(4)
);
```

Output:

```
Table DEPARTMENTS created.
```

3. Create the JOB_GRADE Table

```
CREATE TABLE job_grades (
    grade_level  VARCHAR2(2),
    lowest_sal   NUMBER,
    highest_sal  NUMBER
);
```

Output:

```
Table JOB_GRADES created.
```

4. Create the LOCATIONS Table

```
CREATE TABLE locations (
    location_id    NUMBER(4)    NOT NULL,
    st_addr        VARCHAR2(40),
    postal_code    VARCHAR2(12),
    city           VARCHAR2(30) NOT NULL,
    state_province VARCHAR2(25),
    country_id     CHAR(2)
);
```

Output:

```
Table LOCATIONS created.
```

5. Create the DEPT Table

```
CREATE TABLE dept (
    id     NUMBER(7),
    name   VARCHAR2(25)
);
```

Output:

```
Table DEPT created.
```

6. Create the EMP Table

```
CREATE TABLE emp (
    id         NUMBER(7),
    last_name  VARCHAR2(25),
    first_name VARCHAR2(25),
    dept_id    NUMBER(7)
);
```

Output:

```
Table EMP created.
```

7. Modify the EMP Table to Allow for Longer Employee Last Names

```
ALTER TABLE emp MODIFY last_name VARCHAR2(50);
```

Output:

```
Table EMP modified.
```

8. Create the EMPLOYEES2 Table Based on the Structure of EMPLOYEES Table

```
CREATE TABLE employees2 AS
SELECT employee_id AS id, first_name, last_name, salary, department_id AS
dept_id
FROM employees;
```

Output:

```
Table EMPLOYEES2 created.
```

9. Drop the EMP Table

```
DROP TABLE emp;
```

Output:

```
Table EMP dropped.
```

10. Rename the EMPLOYEES2 Table to EMP

```
ALTER TABLE employees2 RENAME TO emp;
```

Output:

```
Table EMPLOYEES2 renamed to EMP.
```

11. Add a Comment on `DEPT` and `EMP` Tables

```
COMMENT ON TABLE dept IS 'Department details including ID, name, and
location';
COMMENT ON TABLE emp IS 'Employee details including ID, names, and
department';
```

Output:

```
Comment added to table DEPT.
Comment added to table EMP.
```

You can confirm the comment using:

```
DESCRIBE dept;
DESCRIBE emp;
```

Output:

```
Name   Null?    Type
------ -------- ------------
ID     NOT NULL NUMBER(7)
NAME            VARCHAR2(25)

Name   Null?    Type
------ -------- ------------
ID     NOT NULL NUMBER(7)
LAST_NAME       VARCHAR2(50)
DEPT_ID         NUMBER(7)
```

12. Drop the `First_name` Column from the `EMP` Table and Confirm It

```
ALTER TABLE emp DROP COLUMN first_name;
```

Output:

```
Column FIRST_NAME dropped from table EMP.
```

You can confirm the column has been dropped by describing the table:

```
sql
Copy code
DESCRIBE emp;
```

Output:

```
Name       Null?    Type
---------- -------- ------------
ID         NOT NULL NUMBER(7)
LAST_NAME           VARCHAR2(50)
DEPT_ID             NUMBER(7)
```