# FINAL REPORT ADBMS

### MAHDSE22.1F

## **Group Members**

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### **EProvider Company Database**

This is Internet Providing company and its Database. This is Departments and Employees Data tables are use to do this task.

The provided SQL statements and queries are related to creating and managing data for departments and employees within the company.

The "departments1" table represents different departments within the company, with each department having a unique department ID and a department name and managerID(employee).

The "employees1" table stores information about employees, including their ID(Primary Key), name, city, email, mobile number, date of birth, salary, and the department they belong to. The tables are linked through a foreign key constraint on the "dept\_id" column in the "employees1" table, referencing the "dept\_id" primary key in the "departments1" table.

Oracle SQL Developer: EProvider <u>File Edit View Navigate Run Source Team Tools Window Help</u> 🚰 🗁 🗐 🦃 🍽 🔾 - 🔘 - 🔠 - 🍓 × 🖃 🖸 Welcome Page × 🔠 EProvider × 🖽 DEPARTMENTS1 × 🗐 EProvider Connections → ₩ ▼ ₩ == Connections Worksheet Query Builder 🖨 🗟 EProvider □ mables (Filtered) CREATE TABLE departments1 ( AO\$ INTERNET AGENT PR dept\_id CHAR(2) PRIMARY KEY, ⊕ ⊞ AO\$ INTERNET AGENTS dept name VARCHAR2 (20) NOT NULL, Manager\_id NUMBER(4) ■ AQ\$\_QUEUES ⊕ Щ AQ\$\_SCHEDULES CREATE SEQUENCE emp\_seq START WITH 1 INCREMENT BY 1; ⊕ € COUNTRIES CREATE TABLE employees1 ( emp\_id NUMBER(4) DEFAULT emp\_seq.nextval NOT NULL, DEPARTMENTS1 emp\_name VARCHAR2(20) NOT NULL, ⊕ ■ EMPLOYEES emp\_city VARCHAR2(20) NOT NULL, **⊞** ■ EMPLOYEES1 emp\_email VARCHAR2(40) NOT NULL, HELP ■ JOB\_HISTORY emp\_mobile VARCHAR2(10) NOT NULL, JOBS JOBS emp\_dob DATE, emp\_salary NUMBER(10,2), dept\_id CHAR(2), FOREIGN KEY (dept\_id) REFERENCES departments1(dept\_id) All Reports Analytic View Reports ⊕ ⊕ OLAP Reports ALTER TABLE employees1 ADD ( CONSTRAINT emp pk PRIMARY KEY (emp id)) Script Output × Duery Result × 📌 🥢 🗄 🚇 🕎 | Task completed in 0.066 seconds Table EMPLOYEES1 created. Table EMPLOYEES1 altered.

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#### For Departments



#### For Employees

```
Worksheet Query Builder
     INSERT INTO employees1 (emp_name,emp_city, emp_email, emp_mobile, emp_dob, emp_salary, dept_id)
    VALUES ('Lahiru', 'Matara', 'lahi@gmail.com', '0703456711', To_DATE('2002-01-02', 'YYYY-MM-DD'), 90000, 'F1');
    INSERT INTO employees1 (emp_name,emp_city, emp_email, emp_mobile, emp_dob, emp_salary, dept_id)
    VALUES ('Naveen','Akuressa', 'navee@gmail.com', '0713456732', TO DATE('1988-01-15', 'YYYY-MM-DD'), 85000, 'M1');
    INSERT INTO employees1 (emp_name,emp_city, emp_email, emp_mobile, emp_dob, emp_salary, dept_id)
    VALUES ( 'Malinga', 'Matara', 'mali@gmail.com', '0744456743', TO DATE('2004-01-20', 'YYYY-MM-DD'), 160000, 'M2');
    INSERT INTO employees1 (emp_name,emp_city, emp_email, emp_mobile, emp_dob, emp_salary, dept_id)
    VALUES ('Dinuka', 'Galle', 'dinu@gmail.com', '0700056754', TO DATE('2005-05-28', 'YYYY-MM-DD'), 65000, 'T1');
    select * from employees1;
select * from departments1;
    SELECT * FROM employees1 WHERE emp_city = 'New York';
    SELECT dept id, COUNT(*) FROM employees1 GROUP BY dept id;
    SELECT dept_id, COUNT(*) FROM employees1 GROUP BY dept_id HAVING COUNT(*) > 5;
    SELECT * FROM employees1 ORDER BY emp_name ASC;
Script Output × Query Result ×
🖈 🖶 🦓 🔯 SQL | All Rows Fetched: 12 in 0.002 seconds
    ♦ EMP_MOBILE ♦ EMP_DOB ♦ EMP_SALARY ♦ DEPT_ID
          1 Supun Dihan Matara supu@gmail.com 0763456789 01-JAN-97 Akuressa kasu@gmail.com 0763456780 08-JAN-98 3 Nuwan Gamage Matara nuwa@gmail.com 0763456769 05-JAN-00
                                                                                   490000 F1
                                                                                   390000 M1
                                                                                   990000 M2
        4 Ruwani Gimhani Galle ruwan@gmail.com 0793456789 01-MAY-99 
27 Buddhi Matara budi@gmail.com 0703456781 08-JAN-02
                                                                                   250000 T1
                                                                                    90000 F1
         28 Chiran
                            Akuressa chira@gmail.com 0713456782 10-JAN-98
                                                                                    80000 M1
                            Matara thisa@gmail.com 0744456763 20-JAN-00 Galle dula@gmail.com 0700056784 27-MAY-92 Matara lahi@gmail.com 0703456711 02-JAN-02
         29 Thisaru
                                                                                   150000 M2
         30 Dulanja
                                                                                    75000 T1
         31 Lahiru
32 Naveen
                                                                                    90000 F1
  10
                           Akuressa navee@gmail.com 0713456732 15-JAN-88
                                                                                    85000 M1
         33 Malinga
  11
                            Matara mali@gmail.com 0744456743 20-JAN-04
                                                                                   160000 M2
                                     dinu@gmail.com 0700056754 28-MAY-05
         34 Dinuka
                            Galle
                                                                                    65000 T1
```

3------

#### Using where

```
SELECT *
FROM employees1
WHERE emp_city = 'Matara';

SELECT dept_id, COUNT(*) FROM employees1 GROUP BY dept_id;

SELECT dept_id, COUNT(*) FROM employees1 GROUP BY dept_id HAVING COUNT(*) > 5;

SELECT * FROM employees1 ORDER BY emp_name ASC;

SELECT emp_name FROM employees1 WHERE dept_id = (SELECT dept_id FROM departments1 WHERE dept_name = 'Sales');

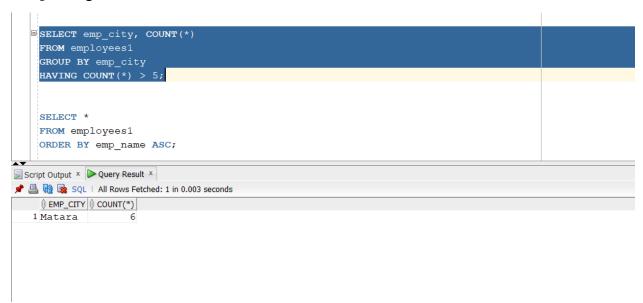
Script Output * Query Result *
```

```
| Script Output | Query Result | Que
```

### Using Group by

```
SELECT emp_city, COUNT(*)
   FROM employees1
   GROUP BY emp_city;
   SELECT dept_id, COUNT(*)
   FROM employees1
   GROUP BY dept_id HAVING COUNT(*) > 5;
   SELECT *
   FROM employees1
   ORDER BY emp_name ASC;
Script Output × Query Result ×
🖈 🚇 🙀 🕦 SQL | All Rows Fetched: 3 in 0.008 seconds
  1 Matara 6
  2 Galle
                  3
  3 Akuressa 3
```

### Using having



#### Using order by

```
SELECT *
     FROM employees1
    SELECT emp_name FROM employees1 WHERE dept_id = (SELECT dept_id FROM departments1 WHERE dept_name = 'Sales');
    SELECT emp name FROM employees1 WHERE dept id IN (SELECT dept id FROM departments1 WHERE dept name IN ('Sales', 'Marketing'
Script Output × Query Result ×
🖈 볼 🝓 🔯 SQL | All Rows Fetched: 12 in 0.005 seconds
    90000 F1
                                                                                       80000 M1
                                                                                       65000 T1
                                                                                       75000 T1
                                                                                   390000 M1
       31 Lahiru Matara lahi@gmail.com 0703456711 02-JAN-02 33 Malinga Matara mali@gmail.com 0744456743 20-JAN-04
                                                                                       90000 F1
                                                                                   160000 M2
      32 Naveen
                             Akuressa navee@gmail.com 0713456732 15-JAN-88
                                                                                       85000M1
         3Nuwan Gamage Matara nuwa@gmail.com 0783456769 05-JAN-00
                                                                                     990000 M2

      4 Ruwani Gimhani Galle
      ruwan@gmail.com
      0793456789
      01-MAY-99

      1 Supun Dihan
      Matara
      supu@gmail.com
      0723456789
      01-JAN-97

      29 Thisaru
      Matara
      thisa@gmail.com
      0744456763
      20-JAN-00

                                                                                    250000 T1
  10
  11
                                                                                      490000 F1
```

# 4------

### single-row subquery

```
SELECT emp_name AS Finance_Employee
FROM employees1
WHERE (dept_id = (SELECT dept_id FROM departments1 WHERE dept_name = 'Finance'))
AND emp_salary>=100000;

SELECT emp_name AS Finance_Marketing_Employees
FROM employees1
WHERE dept_id IN (SELECT dept_id FROM departments1 WHERE dept_name IN ('Finance', 'Marketing'));

SELECT employees1.emp_name, departments1.dept_name,employees1.emp_salary
FROM employees1
LEFT JOIN departments1 ON employees1.dept_id = departments1.dept_id;

Script Output ×  Query Result ×
Secript Output ×  Query Result ×  Query Re
```

### multiple-row subquery

```
SELECT emp_name AS Finance_Marketing_Employees
FROM employees1
WHERE dept_id IN (SELECT dept_id FROM departments1 WHERE dept_name IN ('Finance', 'Marketing'));

SELECT employees1.emp_name, departments1.dept_name, employees1.emp_salary
FROM employees1
LEFT JOIN departments1 ON employees1.dept_id = departments1.dept_id;

Script Output × Query Result ×
```



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### Left joins.

```
SELECT employees1.emp_name, departments1.dept_name,employees1.emp_salary
FROM employees1
LEFT JOIN departments1 ON employees1.dept_id = departments1.dept_id;

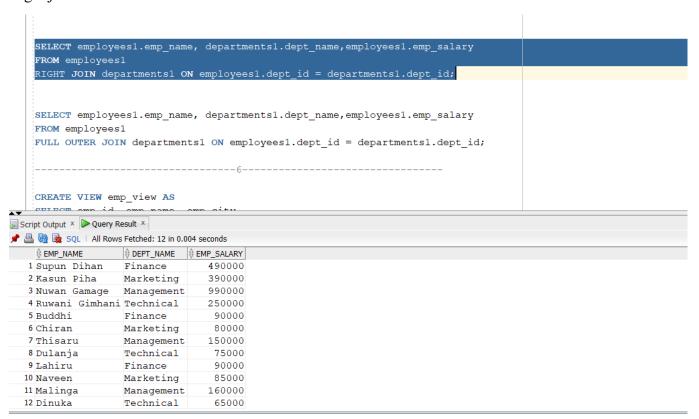
SELECT employees1.emp_name, departments1.dept_name,employees1.emp_salary
FROM employees1
RIGHT JOIN departments1 ON employees1.dept_id = departments1.dept_id;

SELECT employees1.emp_name, departments1.dept_name,employees1.emp_salary
FROM employees1
FULL OUTER JOIN departments1 ON employees1.dept_id = departments1.dept_id;

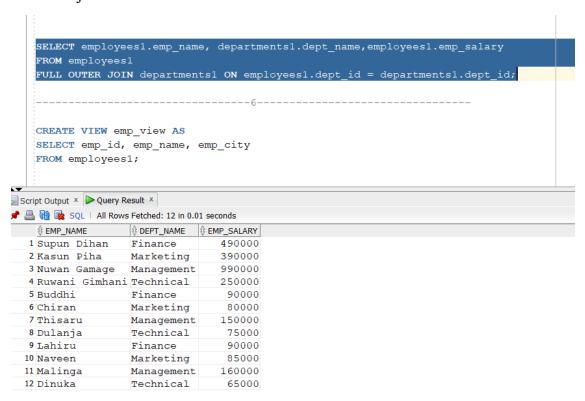
CREATE VIEW emp_view AS
SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON ON AS SCRIPTON
```

	⊕ EMP_NAME	DEPT_NAME	
1	Supun Dihan	Finance	490000
2	Buddhi	Finance	90000
3	Lahiru	Finance	90000
4	Kasun Piha	Marketing	390000
5	Chiran	Marketing	80000
6	Naveen	Marketing	85000
7	Nuwan Gamage	Management	990000
8	Thisaru	Management	150000
9	Malinga	Management	160000
10	Ruwani Gimhani	Technical	250000
11	Dulanja	Technical	75000
12	Dinuka	Technical	65000

### Right joins.



#### Full outer joins.



```
© CREATE VIEW employees_views AS
   SELECT emp_id, emp_name, emp_city
   FROM employees1
   WHERE emp_salary> 100000;
   select * from employees_views;
  DECLARE
Script Output × Query Result ×
🎤 🖺 🝓 📚 SQL | All Rows Fetched: 6 in 0.006 seconds
 1 Supun Dihan Matara
  1
    2 Kasun Piha Akuressa
3 Nuwan Gamage Matara
4 Ruwani Gimhani Galle
  2
  3
  4
    29 Thisaru Matara
  5
     33 Malinga
                        Matara
```

DECLARE

v\_emp\_name employees1.emp\_name\$TYPE;

BEGIN

SELECT emp\_name INTO v\_emp\_name

FROM employees1

WHERE emp\_id = 1;

DBMS\_OUTPUT.PUT\_LINE('Employee name: ' || v\_emp\_name);

END;

/

Script Output x | Query Result x

PL/SQL procedure successfully completed.

Employee name: Supun Dihan

PL/SQL procedure successfully completed.

DECLARE v\_emp\_id employees1.emp\_id%TYPE := 4; BEGIN UPDATE employees1 SET emp\_salary = emp\_salary + 20000 WHERE emp\_id = v\_emp\_id; DBMS OUTPUT.PUT LINE('Record updated successfully.'); END; DECLARE v\_emp\_id employees1.emp\_id%TYPE := 31; BEGIN DELETE FROM employees1 WHERE emp\_id = v\_emp\_id; Script Output × Duery Result × 🎤 🧼 🖥 🚇 📝 | Task completed in 0.058 seconds PL/SQL procedure successfully completed. Record updated successfully. PL/SQL procedure successfully completed.

```
DECLARE
     v_emp_city employees1.emp_city%TYPE := 'Matara';
      DELETE FROM employees1
      WHERE emp_city = v_emp_city;
      DBMS_OUTPUT.PUT_LINE('Record deleted successfully.');
    END;
  DECLARE
      v_emp_city employees1.emp_city%TYPE := 'Matara';
Script Output X Descript Output X
📌 🧼 🖥 🚇 📘 | Task completed in 0.043 seconds
PL/SQL procedure successfully completed.
Record deleted successfully.
PL/SQL procedure successfully completed.
```

```
DECLARE
      v emp city employees1.emp city%TYPE := 'Matara';
      v_rows_deleted NUMBER;
     DELETE FROM employees1
     WHERE emp_city = v_emp_city;
     v_rows_deleted := SQL%ROWCOUNT;
     DBMS_OUTPUT.PUT_LINE('Number of rows deleted: ' || v_rows_deleted);
    END;
Script Output × Duery Result ×
📌 🧽 🖥 🚇 🗾 | Task completed in 0.093 seconds
PL/SQL procedure successfully completed.
Number of rows deleted: 5
PL/SQL procedure successfully completed.
```