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**Assignment – 04**

SQL> CREATE TABLE Employee3 ( employee\_name VARCHAR(50) PRIMARY KEY, street VARCHAR(50), city VARCHAR(50) );

Table created;

SQL> CREATE TABLE Company2 ( company\_name VARCHAR(50) PRIMARY KEY, city VARCHAR(50) );

Table created;

SQL> CREATE TABLE Works2 (employee\_name VARCHAR(50),company\_name VARCHAR(50),salary DECIMAL(10, 2), PRIMARY KEY (employee\_name, company\_name),FOREIGN KEY (employee\_name) REFERENCES Employee3(employee\_name),FOREIGN KEY (company\_name) REFERENCES Company2(company\_name));

Table created.

SQL> CREATE TABLE Manages2 ( employee\_name VARCHAR(50), manager\_name VARCHAR(50), PRIMARY KEY (employee\_name, manager\_name), FOREIGN KEY (employee\_name) REFERENCES Employee3(employee\_name), FOREIGN KEY (manager\_name) REFERENCES Employee3(employee\_name) );

Table created.

SQL> INSERT ALL INTO Employee3 (employee\_name, street, city) VALUES ('Alice', '123 Main St', 'Metropolis') INTO Employee3 (employee\_name, street, city) VALUES ('Bob', '456 Elm St', 'Gotham') INTO Employee3 (employee\_name, street, city) VALUES ('Carol', '789 Oak St', 'Metropolis') INTO Employee3 (employee\_name, street, city) VALUES ('Dave', '101 Maple St', 'Gotham') INTO Employee3 (employee\_name, street, city) VALUES ('Eve', '202 Pine St', 'Smalltown') INTO Employee3 (employee\_name, street, city) VALUES ('Frank', '303 Cedar St', 'Smalltown') INTO Employee3 (employee\_name, street, city) VALUES ('Grace', '404 Birch St', 'Metropolis') INTO Employee3 (employee\_name, street, city) VALUES ('Henry', '505 Willow St', 'Smalltown') SELECT \* FROM dual;

8 rows created.

SQL> INSERT ALL

2 INTO Company2 (company\_name, city) VALUES ('First Bank Corporation', 'Metropolis')

3 INTO Company2 (company\_name, city) VALUES ('Small Bank Corporation', 'Gotham')

4 INTO Company2 (company\_name, city) VALUES ('MegaCorp', 'Smalltown')

5 SELECT \* FROM dual;

3 rows created.

SQL> INSERT ALL

2 INTO Works2 (employee\_name, company\_name, salary) VALUES ('Alice', 'First Bank Corporation', 12000)

3 INTO Works2 (employee\_name, company\_name, salary) VALUES ('Bob', 'Small Bank Corporation', 8000)

4 INTO Works2 (employee\_name, company\_name, salary) VALUES ('Carol', 'First Bank Corporation', 11000)

5 INTO Works2 (employee\_name, company\_name, salary) VALUES ('Dave', 'First Bank Corporation', 13000)

6 INTO Works2 (employee\_name, company\_name, salary) VALUES ('Eve', 'Small Bank Corporation', 9000)

7 INTO Works2 (employee\_name, company\_name, salary) VALUES ('Frank', 'MegaCorp', 15000)

8 INTO Works2 (employee\_name, company\_name, salary) VALUES ('Grace', 'First Bank Corporation', 14000)

9 INTO Works2 (employee\_name, company\_name, salary) VALUES ('Henry', 'MegaCorp', 16000)

10 SELECT \* FROM dual;

8 rows created.

SQL> INSERT ALL

2 INTO Manages2 (employee\_name, manager\_name) VALUES ('Alice', 'Bob')

3 INTO Manages2 (employee\_name, manager\_name) VALUES ('Carol', 'Dave')

4 INTO Manages2 (employee\_name, manager\_name) VALUES ('Eve', 'Frank')

5 INTO Manages2 (employee\_name, manager\_name) VALUES ('Grace', 'Henry')

6 SELECT \* FROM dual;

4 rows created.

SQL> CREATE TABLE Employee4 ( employee\_name VARCHAR(50) PRIMARY KEY, street VARCHAR(50), city VARCHAR(50) );

Table created.

SQL> CREATE TABLE Company3 ( company\_name VARCHAR(50) PRIMARY KEY, city VARCHAR(50) );

Table created.

SQL>CREATE TABLE Works3 ( employee\_name VARCHAR(50), company\_name VARCHAR(50), salary DECIMAL(10, 2), PRIMARY KEY (employee\_name, company\_name), FOREIGN KEY (employee\_name) REFERENCES Employee4(employee\_name), FOREIGN KEY (company\_name) REFERENCES Company3(company\_name) );

Table created.

SQL> CREATE TABLE Manages3 ( employee\_name VARCHAR(50), manager\_name VARCHAR(50), PRIMARY KEY (employee\_name, manager\_name), FOREIGN KEY (employee\_name) REFERENCES Employee4(employee\_name), FOREIGN KEY (manager\_name) REFERENCES Employee1(employee\_name) );

Table created.

SQL> INSERT ALL INTO Employee4 (employee\_name, street, city) VALUES ('Alice', '123 Main St', 'Metropolis') INTO Employee4 (employee\_name, street, city) VALUES ('Bob', '456 Elm St', 'Gotham') INTO Employee4 (employee\_name, street, city) VALUES ('Carol', '789 Oak St', 'Metropolis') INTO Employee4 (employee\_name, street, city) VALUES ('Dave', '101 Maple St', 'Gotham') INTO Employee4 (employee\_name, street, city) VALUES ('Eve', '202 Pine St', 'Smalltown') INTO Employee4 (employee\_name, street, city) VALUES ('Frank', '303 Cedar St', 'Smalltown') INTO Employee4 (employee\_name, street, city) VALUES ('Grace', '404 Birch St', 'Metropolis') INTO Employee4 (employee\_name, street, city) VALUES ('Henry', '505 Willow St', 'Smalltown') SELECT \* FROM dual;

8 rows created.

SQL> INSERT ALL INTO Company3 (company\_name, city) VALUES ('First Bank Corporation', 'Metropolis') INTO Company3 (company\_name, city) VALUES ('Small Bank Corporation', 'Gotham') INTO Company3 (company\_name, city) VALUES ('MegaCorp', 'Smalltown') SELECT \* FROM dual;

3 rows created.

SQL> INSERT ALL INTO Works3 (employee\_name, company\_name, salary) VALUES ('Alice', 'First Bank Corporation', 12000) INTO Works3 (employee\_name, company\_name, salary) VALUES ('Bob', 'Small Bank Corporation', 8000) INTO Works3 (employee\_name, company\_name, salary) VALUES ('Carol', 'First Bank Corporation', 11000) INTO Works3 (employee\_name, company\_name, salary) VALUES ('Dave', 'First Bank Corporation', 13000) INTO Works3 (employee\_name, company\_name, salary) VALUES ('Eve', 'Small Bank Corporation', 9000) INTO Works3 (employee\_name, company\_name, salary) VALUES ('Frank', 'MegaCorp', 15000) INTO Works3 (employee\_name, company\_name, salary) VALUES ('Grace', 'First Bank Corporation', 14000) INTO Works3 (employee\_name, company\_name, salary) VALUES ('Henry', 'MegaCorp', 16000) SELECT \* FROM dual;

8 rows created.

SQL> SELECT employee\_name FROM Works3 WHERE company\_name = 'First Bank Corporation';

EMPLOYEE\_NAME

--------------------------------------------------

Alice

Carol

Dave

Grace

SQL> SELECT employee\_name, city FROM Employee4 WHERE employee\_name IN ( SELECT employee\_name FROM Works3 WHERE company\_name = 'First Bank Corporation' );

EMPLOYEE\_NAME CITY

-------------------------------------------------- --------------------------------------------------

Alice Metropolis

Carol Metropolis

Dave Gotham

Grace Metropolis

SQL> SELECT employee\_name, street, city FROM Employee4 WHERE employee\_name IN ( SELECT employee\_name FROM Works3 WHERE company\_name = 'First Bank Corporation' AND salary > 13000 );

EMPLOYEE\_NAME STREET

CITY

-------------------------------------------------- -------------------------------------------------- --------------------------------------------------

Grace 404 Birch St

Metropolis

SQL> SELECT e.employee\_name, e.street, e.city FROM Employee4 e INNER JOIN Works3 w ON e.employee\_name = w.employee\_name;

EMPLOYEE\_NAME STREET

CITY

-------------------------------------------------- -------------------------------------------------- --------------------------------------------------

Alice 123 Main St

Metropolis

Bob 456 Elm St

Gotham

Carol 789 Oak St

Metropolis

Dave 101 Maple St

Gotham

Eve 202 Pine St

Smalltown

Frank 303 Cedar St

Smalltown

Grace 404 Birch St

Metropolis

Henry 505 Willow St

Smalltown

8 rows selected.

SQL> SELECT e.employee\_name, e.street, e.city FROM Employee4 e INNER JOIN Works3 w ON e.employee\_name = w.employee\_name WHERE w.company\_name = 'First Bank Corporation' AND w.salary > 13000;

EMPLOYEE\_NAME STREET

CITY

-------------------------------------------------- -------------------------------------------------- --------------------------------------------------

Grace 404 Birch St

Metropolis

SQL> SELECT e.employee\_name FROM Employee4 e WHERE e.city IN ( SELECT c.city FROM Works2 w, Company3 c WHERE w.company\_name = c.company\_name AND w.employee\_name = e.employee\_name );

EMPLOYEE\_NAME

--------------------------------------------------

Alice

Bob

Carol

Frank

Grace

Henry

6 rows selected.

SQL> SELECT e1.employee\_name

2 FROM Employee4 e1

3 INNER JOIN Manages2 m ON e1.employee\_name = m.employee\_name

4 INNER JOIN Employee4 e2 ON m.manager\_name = e2.employee\_name

5 WHERE e1.city = e2.city;

EMPLOYEE\_NAME

--------------------------------------------------

Eve

SQL> SELECT e1.employee\_name FROM Employee4 e1 INNER JOIN Manages2 m ON e1.employee\_name = m.employee\_name INNER JOIN Employee4 e2 ON m.manager\_name = e2.employee\_name WHERE e1.city = e2.city AND e1.street = e2.street;

no rows selected

SQL> SELECT employee\_name FROM Employee4 WHERE employee\_name NOT IN ( SELECT employee\_name FROM Works3 WHERE company\_name = 'First Bank Corporation' );

EMPLOYEE\_NAME

--------------------------------------------------

Bob

Eve

Frank

Henry

SQL> SELECT e.employee\_name FROM Employee4 e LEFT JOIN Works3 w ON e.employee\_name = w.employee\_name AND w.company\_name = 'First Bank Corporation' WHERE w.company\_name IS NULL;

EMPLOYEE\_NAME

--------------------------------------------------

Bob

Eve

Frank

Henry

SQL> SELECT employee\_name, salary FROM Works3 WHERE salary > ALL (SELECT salary FROM Works3 WHERE company\_name = 'Small Bank Corporation');

EMPLOYEE\_NAME SALARY

-------------------------------------------------- ----------

Carol 11000

Alice 12000

Dave 13000

Grace 14000

Frank 15000

Henry 16000

6 rows selected.

SQL> SELECT employee\_name, company\_name, salary FROM Works3 w1 WHERE salary > ( SELECT AVG(salary) FROM Works3 w2 WHERE w1.company\_name = w2.company\_name );

EMPLOYEE\_NAME COMPANY\_NAME

SALARY

-------------------------------------------------- -------------------------------------------------- ----------

Dave First Bank Corporation

13000

Eve Small Bank Corporation

9000

Grace First Bank Corporation

14000

Henry MegaCorp 16000

SQL> SELECT MAX(employee\_count) FROM ( SELECT COUNT(\*) AS employee\_count FROM Works3 GROUP BY company\_name );

MAX(EMPLOYEE\_COUNT)

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4

SQL> SELECT company\_name FROM ( SELECT company\_name, COUNT(\*) AS employee\_count FROM Works3 GROUP BY company\_name ORDER BY employee\_count DESC ) WHERE ROWNUM = 1;

COMPANY\_NAME

--------------------------------------------------

First Bank Corporation

SQL> UPDATE Works3 SET salary = salary \* 1.10 WHERE employee\_name IN ( SELECT employee\_name FROM Works3 WHERE company\_name = 'First Bank Corporation' );

4 rows updated.

SQL> CREATE TABLE HighEarners ( employee\_name VARCHAR2(50), salary NUMBER );

Table created.

SQL> INSERT INTO HighEarners (employee\_name, salary) SELECT employee\_name, salary FROM Works3 WHERE salary > (SELECT AVG(salary) FROM Works2);

5 rows created.

SQL> DELETE FROM Works3 WHERE company\_name IN ( SELECT company\_name FROM Company3 WHERE city = 'Gotham' );

2 rows deleted.