# -- ALL QUERIES

CREATE TABLE employee (

    emp\_id INT PRIMARY KEY,

    first\_name VARCHAR(40),

    last\_name VARCHAR(40),

    birth\_day DATE,

    sex VARCHAR(1),

    salary INT,

    super\_id INT,

    branch\_id INT

);CREATE TABLE branch (

    branch\_id INT PRIMARY KEY,

    branch\_name VARCHAR(40),

    mgr\_id INT,

    mgr\_start\_date DATE,

    FOREIGN KEY(mgr\_id) REFERENCES employee(emp\_id) ON DELETE

    SET

        NULL

);

ALTER TABLE

    employee

ADD

    FOREIGN KEY(branch\_id) REFERENCES branch(branch\_id) ON DELETE

SET

    NULL;

ALTER TABLE

    employee

ADD

    FOREIGN KEY(super\_id) REFERENCES employee(emp\_id) ON DELETE

SET

    NULL;CREATE TABLE client (

        client\_id INT PRIMARY KEY,

        client\_name VARCHAR(40),

        branch\_id INT,

        FOREIGN KEY(branch\_id) REFERENCES branch(branch\_id) ON DELETE

        SET

            NULL

    );CREATE TABLE works\_with (

        emp\_id INT,

        client\_id INT,

        total\_sales INT,

        PRIMARY KEY(emp\_id, client\_id),

        FOREIGN KEY(emp\_id) REFERENCES employee(emp\_id) ON DELETE CASCADE,

        FOREIGN KEY(client\_id) REFERENCES client(client\_id) ON DELETE CASCADE

    );CREATE TABLE branch\_supplier (

        branch\_id INT,

        supplier\_name VARCHAR(40),

        supply\_type VARCHAR(40),

        PRIMARY KEY(branch\_id, supplier\_name),

        FOREIGN KEY(branch\_id) REFERENCES branch(branch\_id) ON DELETE CASCADE

    );-- -----------------------------------------------------------------------------

    -- Corporate

INSERT INTO

    employee

VALUES(

        100,

        'David',

        'Wallace',

        '1967-11-17',

        'M',

        250000,

        NULL,

        NULL

    );

INSERT INTO

    branch

VALUES(1, 'Corporate', 100, '2006-02-09');

UPDATE

    employee

SET

    branch\_id = 1

WHERE

    emp\_id = 100;

INSERT INTO

    employee

VALUES(

        101,

        'Jan',

        'Levinson',

        '1961-05-11',

        'F',

        110000,

        100,

        1

    );-- Scranton

INSERT INTO

    employee

VALUES(

        102,

        'Michael',

        'Scott',

        '1964-03-15',

        'M',

        75000,

        100,

        NULL

    );

INSERT INTO

    branch

VALUES(2, 'Scranton', 102, '1992-04-06');

UPDATE

    employee

SET

    branch\_id = 2

WHERE

    emp\_id = 102;

INSERT INTO

    employee

VALUES(

        103,

        'Angela',

        'Martin',

        '1971-06-25',

        'F',

        63000,

        102,

        2

    );

INSERT INTO

    employee

VALUES(

        104,

        'Kelly',

        'Kapoor',

        '1980-02-05',

        'F',

        55000,

        102,

        2

    );

INSERT INTO

    employee

VALUES(

        105,

        'Stanley',

        'Hudson',

        '1958-02-19',

        'M',

        69000,

        102,

        2

    );-- Stamford

INSERT INTO

    employee

VALUES(

        106,

        'Josh',

        'Porter',

        '1969-09-05',

        'M',

        78000,

        100,

        NULL

    );

INSERT INTO

    branch

VALUES(3, 'Stamford', 106, '1998-02-13');

UPDATE

    employee

SET

    branch\_id = 3

WHERE

    emp\_id = 106;

INSERT INTO

    employee

VALUES(

        107,

        'Andy',

        'Bernard',

        '1973-07-22',

        'M',

        65000,

        106,

        3

    );

INSERT INTO

    employee

VALUES(

        108,

        'Jim',

        'Halpert',

        '1978-10-01',

        'M',

        71000,

        106,

        3

    );-- BRANCH SUPPLIER

INSERT INTO

    branch\_supplier

VALUES(2, 'Hammer Mill', 'Paper');

INSERT INTO

    branch\_supplier

VALUES(2, 'Uni-ball', 'Writing Utensils');

INSERT INTO

    branch\_supplier

VALUES(3, 'Patriot Paper', 'Paper');

INSERT INTO

    branch\_supplier

VALUES(2, 'J.T. Forms & Labels', 'Custom Forms');

INSERT INTO

    branch\_supplier

VALUES(3, 'Uni-ball', 'Writing Utensils');

INSERT INTO

    branch\_supplier

VALUES(3, 'Hammer Mill', 'Paper');

INSERT INTO

    branch\_supplier

VALUES(3, 'Stamford Lables', 'Custom Forms');-- CLIENT

INSERT INTO

    client

VALUES(400, 'Dunmore Highschool', 2);

INSERT INTO

    client

VALUES(401, 'Lackawana Country', 2);

INSERT INTO

    client

VALUES(402, 'FedEx', 3);

INSERT INTO

    client

VALUES(403, 'John Daly Law, LLC', 3);

INSERT INTO

    client

VALUES(404, 'Scranton Whitepages', 2);

INSERT INTO

    client

VALUES(405, 'Times Newspaper', 3);

INSERT INTO

    client

VALUES(406, 'FedEx', 2);-- WORKS\_WITH

INSERT INTO

    works\_with

VALUES(105, 400, 55000);

INSERT INTO

    works\_with

VALUES(102, 401, 267000);

INSERT INTO

    works\_with

VALUES(108, 402, 22500);

INSERT INTO

    works\_with

VALUES(107, 403, 5000);

INSERT INTO

    works\_with

VALUES(108, 403, 12000);

INSERT INTO

    works\_with

VALUES(105, 404, 33000);

INSERT INTO

    works\_with

VALUES(107, 405, 26000);

INSERT INTO

    works\_with

VALUES(102, 406, 15000);

INSERT INTO

    works\_with

VALUES(105, 406, 130000);-- Describing to check whether the data is inserted properly

    describe branch;describe employee;

select

    \*

from

    employee;-- ordr by salary

select

    \*

from

    employee

order by

    salary;-- order by in decreasing order

select

    \*

from

    employee

order by

    salary desc;

select

    \*

from

    employee

order by

    sex,

    first\_name,

    last\_name;-- first 5 employee

select

    \*

from

    employee

limit

    5;-- FIRST AND LAST NAME OF ALL EMPLOYEE

select

    first\_name AS FORENAME,

    last\_name AS SURNAME

from

    employee;

SELECT

    COUNT(EMP\_ID)

FROM

    EMPLOYEE;-- FIND FEMALES BORN AFTER 1970

SELECT

    COUNT(EMP\_ID)

FROM

    EMPLOYEE

WHERE

    SEX = 'F'

    AND BIRTH\_DAY > '1971-01-01';--AVERAGE OF ALL EMPLOYEE SALARY

SELECT

    AVG(salary)

FROM

    EMPLOYEE;-- AVERAGE OF ALL EMPLOYEE SALARY WHO ARE MALE

SELECT

    AVG(SALARY)

FROM

    EMPLOYEE

WHERE

    SEX = 'M';-- SUM OF ALL THE SALARIES OF EMPLOYEES

SELECT

    SUM(SALARY)

FROM

    EMPLOYEE;-- FIND MALE AND FEMALE COUNT

SELECT

    COUNT(SEX),

    SEX

FROM

    employee

GROUP BY

    SEX;-- FIND MALE AND FEMALE COUNT  N DECREASING ORDER OF COUNT

SELECT

    COUNT(SEX) AS D,

    SEX

FROM

    employee

GROUP BY

    SEX

ORDER BY

    D DESC;-- fIND TOTAL SALES OF EACH SALESMAN

SELECT

    SUM(total\_sales)

FROM

    works\_with

GROUP BY

    EMP\_ID;

SELECT

    SUM(TOTAL\_SALES)

FROM

    works\_with

GROUP BY

    CLIENT\_ID;--WILDCARDS

    --FIND ANY CLIENT WHO ARE IN LLC

SELECT

    \*

FROM

    CLIENT

WHERE

    CLIENT\_NAME LIKE '%LLC';-- FIND ANY BRANCH SUPPLIER WHO ARE IN THE LABEL BUISNESS

SELECT

    \*

FROM

    branch\_supplier

WHERE

    supplier\_name LIKE '%LABEL%';--EMPLOYEE BORN IN OCTOBER

SELECT

    \*

FROM

    EMPLOYEE

WHERE

    BIRTH\_DAY LIKE '\_\_\_\_-10%';--CLIENTS THAT ARE SCHOOL

SELECT

    \*

FROM

    CLIENT

WHERE

    CLIENT\_NAME LIKE '%SCHOOL%';

SELECT

    \*

FROM

    CLIENT

WHERE

    CLIENT\_NAME LIKE '%SCHOOL%';

SELECT

    SUM(total\_sales)

FROM

    works\_with

GROUP BY

    EMP\_ID;

SELECT

    SUM(TOTAL\_SALES)

FROM

    works\_with

GROUP BY

    CLIENT\_ID;--WILDCARDS

    --FIND ANY CLIENT WHO ARE IN LLC

SELECT

    \*

FROM

    CLIENT

WHERE

    CLIENT\_NAME LIKE '%LLC';-- FIND ANY BRANCH SUPPLIER WHO ARE IN THE LABEL BUISNESS

SELECT

    \*

FROM

    branch\_supplier

WHERE

    supplier\_name LIKE '%LABEL%';--EMPLOYEE BORN IN OCTOBER

SELECT

    \*

FROM

    EMPLOYEE

WHERE

    BIRTH\_DAY LIKE '\_\_\_\_-10%';--CLIENTS THAT ARE SCHOOL

SELECT

    \*

FROM

    CLIENT

SELECT

    SUM(total\_sales)

FROM

    works\_with

GROUP BY

    EMP\_ID;

SELECT

    SUM(TOTAL\_SALES)

FROM

    works\_with

GROUP BY

    CLIENT\_ID;--WILDCARDS

    --FIND ANY CLIENT WHO ARE IN LLC

SELECT

    \*

FROM

    CLIENT

WHERE

    CLIENT\_NAME LIKE '%LLC';-- FIND ANY BRANCH SUPPLIER WHO ARE IN THE LABEL BUISNESS

SELECT

    \*

FROM

    branch\_supplier

WHERE

    supplier\_name LIKE '%LABEL%';--EMPLOYEE BORN IN OCTOBER

SELECT

    \*

FROM

    EMPLOYEE

WHERE

    BIRTH\_DAY LIKE '\_\_\_\_-10%';--CLIENTS THAT ARE SCHOOL

SELECT

    \*

FROM

    CLIENT

WHERE

    CLIENT\_NAME LIKE '%SCHOOL';-- list of employee and branch names

SELECT

    first\_name

FROM

    EMPLOYEE

UNION

SELECT

    branch\_name

FROM

    BRANCH;-- LIST OF ALL CLIENTS AND BRANCH SUPPLIERS NAME

SELECT

    CLIENT\_NAME

FROM

    CLIENT

UNION

SELECT

    supplier\_name

FROM

    branch\_supplier;-- LIST OF ALL CLIENTS THEIR BRANCH SUPPLIERS NAME

SELECT

    CLIENT\_NAME,

    branch\_id

FROM

    CLIENT

UNION

SELECT

    supplier\_name,

    branch\_id

FROM

    branch\_supplier;--TOTAL MONEY SPENT OR EARNED BY THE COMPANY

SELECT

    SALARY AS SALARY

FROM

    EMPLOYEE

UNION

SELECT

    TOTAL\_SALES AS SALES

FROM

    works\_with;-- Find a list of employee and branch names

SELECT

    employee.first\_name AS Employee\_Branch\_Names

FROM

    employee

UNION

SELECT

    branch.branch\_name

FROM

    branch;-- Find a list of all clients & branch suppliers' names

SELECT

    client.client\_name AS Non - Employee\_Entities,

    client.branch\_id AS Branch\_ID

FROM

    client

UNION

SELECT

    branch\_supplier.supplier\_name,

    branch\_supplier.branch\_id

FROM

    branch\_supplier;

SELECT

    employee.first\_name,

    employee.last\_name

FROM

    employee

WHERE

    employee.emp\_id IN (

        SELECT

            works\_with.emp\_id

        FROM

            works\_with

        WHERE

            works\_with.total\_sales > 50000

    );-- Find all clients who are handles by the branch that Michael Scott manages

    -- Assume you know Michael's ID

SELECT

    client.client\_id,

    client.client\_name

FROM

    client

WHERE

    client.branch\_id = (

        SELECT

            branch.branch\_id

        FROM

            branch

        WHERE

            branch.mgr\_id = 102

    );-- Find all clients who are handles by the branch that Michael Scott manages

    -- Assume you DONT'T know Michael's ID

SELECT

    client.client\_id,

    client.client\_name

FROM

    client

WHERE

    client.branch\_id = (

        SELECT

            branch.branch\_id

        FROM

            branch

        WHERE

            branch.mgr\_id = (

                SELECT

                    employee.emp\_id

                FROM

                    employee

                WHERE

                    employee.first\_name = 'Michael'

                    AND employee.last\_name = 'Scott'

                LIMIT

                    1

            )

    );-- Find the names of employees who work with clients handled by the scranton branch

SELECT

    employee.first\_name,

    employee.last\_name

FROM

    employee

WHERE

    employee.emp\_id IN (

        SELECT

            works\_with.emp\_id

        FROM

            works\_with

    )

    AND employee.branch\_id = 2;-- Find the names of all clients who have spent more than 100,000 dollars

SELECT

    client.client\_name

FROM

    client

WHERE

    client.client\_id IN (

        SELECT

            client\_id

        FROM

            (

                SELECT

                    SUM(works\_with.total\_sales) AS totals,

                    client\_id

                FROM

                    works\_with

                GROUP BY

                    client\_id

            ) AS total\_client\_sales

        WHERE

            totals > 100000

    );--JOINS

INSERT INTO

    BRANCH

VALUES(4, 'BUFFALO', NULL, NULL);--FIND ALL BRANCHES AND THE NAMES OF THEIR MANAGERS

SELECT

    EMPLOYEE.EMP\_ID,

    EMPLOYEE.first\_name,

    BRANCH.branch\_name

FROM

    EMPLOYEE

    JOIN BRANCH ON EMPLOYEE.EMP\_ID = BRANCH.mgr\_id;--LEFT JOIN

SELECT

    EMPLOYEE.EMP\_ID,

    EMPLOYEE.first\_name,

    BRANCH.branch\_name

FROM

    EMPLOYEE

    LEFT JOIN BRANCH ON EMPLOYEE.EMP\_ID = BRANCH.mgr\_id;--RIGHT JOIN

SELECT

    EMPLOYEE.EMP\_ID,

    EMPLOYEE.first\_name,

    BRANCH.branch\_name

FROM

    EMPLOYEE

    RIGHT JOIN BRANCH ON EMPLOYEE.EMP\_ID = BRANCH.mgr\_id;

SELECT

    \*

FROM

    BRANCH\_SUPPLIER;--TRIGGERS

    CREATE TABLE trigger\_test (message VARCHAR(100));DELIMITER $ $ CREATE TRIGGER my\_trigger1 BEFORE INSERT ON employee FOR EACH ROW BEGIN

INSERT INTO

    trigger\_test

VALUES(NEW.first\_name);END $ $ DELIMITER;

INSERT INTO

    employee

VALUES(

        109,

        'Oscar',

        'Martinez',

        '1968-02-19',

        'M',

        69000,

        106,

        3

    );

SELECT

    \*

FROM

    trigger\_test;--CREATING A NEW TRIGGER WHICH TRIGGERS THE FIRST NAME OF TGHE EMPLOYEE THAT RECENTLY BEEN ADDED TO THE EMPLOYEE TABBLE

    DELIMITER $ $ CREATE TRIGGER my\_trigger1 BEFORE INSERT ON employee FOR EACH ROW BEGIN

INSERT INTO

    trigger\_test

VALUES(NEW.first\_name);END $ $ DELIMITER;--INSERTING NEW EMPLOYEE TO THE TABLE

INSERT INTO

    employee

VALUES(

        110,

        'Kevin',

        'Malone',

        '1978-02-19',

        'M',

        69000,

        106,

        3

    );-- CHECKING OUT THE TRIGGER AFTER A NEW EMPLOYEE HAS BEEN ADDED

SELECT

    \*

FROM

    trigger\_test;-- SETING UP A NEW TRIGGER WHICH SHOWS US WHICH SEX OF THE NEW EMLOYEE HAS BEEN ADDED

    DELIMITER $ $ CREATE TRIGGER my\_trigger2 BEFORE INSERT ON employee FOR EACH ROW BEGIN IF NEW.sex = 'M' THEN

INSERT INTO

    trigger\_test

VALUES('added male employee');ELSEIF NEW.sex = 'F' THEN

INSERT INTO

    trigger\_test

VALUES('added female');ELSE

INSERT INTO

    trigger\_test

VALUES('added other employee');END IF;END $ $ DELIMITER;-- INSERING INTO THE EMPLOYEE TABLE A NEW EMPLOYEE

INSERT INTO

    employee

VALUES(

        111,

        'Pam',

        'Beesly',

        '1988-02-19',

        'F',

        69000,

        106,

        3

    );

SELECT

    \*

FROM

    trigger\_test;