You Tube MySql Query

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create database Company;

show databases;

use company
--------------------- CREATING TABLES-------------------------------------------

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,
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  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
);

describe employee;
describe branch_supplier;
describe works_with;
describe client;
describe branch;

use company;

-----------------------------INSERTING DATA INTO DATABASE----------------------------

INSERT INTO employee VALUES (100,'David','Wallace','1960-11-12','M',250000,NULL,NULL)

INSERT INTO branch VALUES (1,'Coperate',100,'2006-02-10')

UPDATE employee
SET branch_id = 1
WHERE emp_id = 100;

INSERT INTO employee VALUES(101, 'Jan', 'Levinson', '1961-05-11', 'F', 110000, 100, 1);

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);

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);

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');

INSERT INTO client VALUES(400, 'Dunmore Highschool', 2);
INSERT INTO client VALUES(401, 'Lackawana Country', 2);
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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);

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);

-------------------------------------BASIC QUERIES-------------------------------------

SELECT * FROM employee;

SELECT * FROM client;

--Finding Top 5 Employees ordered by Salaries in Descending order--
SELECT * FROM employee
ORDER BY salary DESC
LIMIT 5;

--Finding Employees by SEX and Then Name--
SELECT * FROM employee
ORDER BY sex,first_name,last_name
DESC;

--fINDING FIRST AND LAST NAME ONLY OF ALL EMPLOYEES--
SELECT first_name,last_name FROM employee;

--Finding all the genders in the empoyee table--
SELECT DISTINCT sex FROM employee;

--fINDING ONLY MALE EMPLOYEES--
SELECT * FROM employee
WHERE sex = 'M';

--Finding all the employees in Branch 2--
SELECT * FROM employee
WHERE branch_id = 2;

--Finding employee id and name who were born after 1969--
SELECT emp_id,first_name,last_name FROM employee
WHERE birth_day > 1969;

--Finding out all the female employees in Branch 2--
SELECT * from employee
where sex = 'F' AND branch_id = 2;

-- Find all employees named Jim, Michael, Johnny or David
SELECT *
FROM employee
WHERE first_name IN ('Jim', 'Michael', 'Johnny', 'David');
```

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------------------------------------------------FUNCTIONS------------------------


-- Find the number of employees
SELECT COUNT(emp_id) FROM employee;

-- Find the average of all employee's salaries
SELECT AVG(salary) FROM employee;

-- Find the sum of all employee's salaries
SELECT SUM(salary) FROM employee;

-- Find out how many males and females there are
SELECT COUNT(sex),sex FROM employee
GROUP BY sex
ORDER BY sex DESC;

-- Find the total amount of money spent by each client
SELECT SUM(total_sales),emp_id
FROM works_with
GROUP BY client_id;


------------------------WILDCARDS------------------------

-- % = any # characters, _ = one character

-- Find any client's who are an LLC
SELECT * FROM client
WHERE client_name LIKE '%LLC';

-- Find any branch suppliers who are in the label business
SELECT * FROM branch_supplier
WHERE supplier_name LIKE '% LABEL%';

-- Find any clients who are schools
SELECT * FROM client
WHERE client_name LIKE '%SCHOOL%';


------------------------UNIONS------------------------

SELECT first_name AS UNION_NAMES FROM employee
UNION
SELECT branch_name FROM branch
UNION
SELECT client_name FROM client


------------------------JOINS------------------------

-- Add the extra branch
INSERT INTO branch VALUES(4, "Buffalo", NULL, NULL);

SELECT * FROM branch;

SELECT employee.emp_id, employee.first_name, branch.branch_name
FROM employee
```

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JOIN branch    -- LEFT JOIN, RIGHT JOIN
ON employee.emp_id = branch.mgr_id;

-----------------------NESTED QUERIES-----------------------

SELECT employee.first_name,employee.last_name
FROM employee
WHERE EMP_ID IN (
    SELECT works_with.emp_id
    FROM works_with
    WHERE total_sales > 30000
);

SELECT client_name,client_id
FROM client
WHERE BRANCH_ID IN (
    SELECT branch_id FROM branch
    WHERE mgr_id = 102
);


SELECT client_name
FROM client
WHERE branch_id IN (
    SELECT branch_id
    FROM branch
    WHERE mgr_id IN (
        SELECT emp_id
        FROM employee
        WHERE last_name = 'scott'
    )
);


SELECT first_name,last_name FROM employee
WHERE emp_id IN (
    SELECT emp_id FROM works_with
    WHERE client_id IN (
        SELECT client_id FROM client
        WHERE branch_id IN (
            SELECT branch_id FROM branch
            WHERE branch_name = 'SCRANTON'
        )
    )
);
```