-- EXERCISE

Part 1

Create a new database, Take a look at the tables. Go straight to point 1

CREATE TABLE DEPARTMENT

(

DEPTCODE INTEGER,

DeptName CHAR(30),

LOCATION VARCHAR(33)

);

CREATE TABLE EMPLOYEE

(

EmpCode INTEGER,

EmpFName VARCHAR(15),

EmpLName VARCHAR(15),

Job VARCHAR(45),

Manager CHAR(4),

HireDate DATE,

Salary INTEGER,

Commission INTEGER,

Department\_code INTEGER

);

Don't create the tables right away, first modified them as explained below:

1. DEPTCODE is the PK of the Department table (incremented by 10) the first deptcode is 10, the second dept code is 20 ect... --> Look in the internet, how to create a sequence: https://www.postgresqltutorial.com/postgresql-sequences/ https://www.postgresqltutorial.com/postgresql-serial/

2. Location department needs to be unique

3. EmpCode is the PK of the Employee table (not serial)

4. Department\_code in the Employee table is the FK of the Department table (reference the DEPTCODE column of the Department table)

5. Default salary is : 0 and is a decimal

6. Employee names cannot be null

Part 2 : Insert the rows

INSERT INTO DEPARTMENT (DeptName,LOCATION) VALUES

('FINANCE', 'EDINBURGH'),

('SOFTWARE','PADDINGTON'),

('SALES', 'MAIDSTONE'),

('MARKETING', 'DARLINGTON'),

('ADMIN', 'BIRMINGHAM');

INSERT INTO EMPLOYEE (EmpCode,EmpFName,EmpLName,Job,Manager,HireDate,Salary,Commission,Department\_code)

VALUES (9369, 'TONY', 'STARK', 'SOFTWARE ENGINEER', 7902, '1980-12-17', 2800,0,20),

(9499, 'TIM', 'ADOLF', 'SALESMAN', 7698, '1981-02-20', 1600, 300,30),

(9566, 'KIM', 'JARVIS', 'MANAGER', 7839, '1981-04-02', 3570,0,20),

(9654, 'SAM', 'MILES', 'SALESMAN', 7698, '1981-09-28', 1250, 1400, 30),

(9782, 'KEVIN', 'HILL', 'MANAGER', 7839, '1981-06-09', 2940,0,10),

(9788, 'CONNIE', 'SMITH', 'ANALYST', 7566, '1982-12-09', 3000,0,20),

(9839, 'ALFRED', 'KINSLEY', 'PRESIDENT', 7566, '1981-11-17', 5000,0, 10),

(9844, 'PAUL', 'TIMOTHY', 'SALESMAN', 7698, '1981-09-08', 1500,0,30),

(9876, 'JOHN', 'ASGHAR', 'SOFTWARE ENGINEER', 7788, '1983-01-12',3100,0,20),

(9900, 'ROSE', 'SUMMERS', 'TECHNICAL LEAD', 7698, '1981-12-03', 2950,0, 20),

(9902, 'ANDREW', 'FAULKNER', 'ANALYST', 7566, '1981-12-03', 3000,0, 10),

(9934, 'KAREN', 'MATTHEWS', 'SOFTWARE ENGINEER', 7782, '1982-01-23', 3300,0,20),

(9591, 'WENDY', 'SHAWN', 'SALESMAN', 7698, '1981-02-22', 500,0,30),

(9698, 'BELLA', 'SWAN', 'MANAGER', 7839, '1981-05-01', 3420, 0,30),

(9777, 'MADII', 'HIMBURY', 'ANALYST', 7839, '1981-05-01', 2000, 200, NULL),

(9860, 'ATHENA', 'WILSON', 'ANALYST', 7839, '1992-06-21', 7000, 100, 50),

(9861, 'JENNIFER', 'HUETTE', 'ANALYST', 7839, '1996-07-01', 5000, 100, 50);

Part 3 : Display DATA

1. How many employees are in dept 10.

2. How many employees are analyst in dept 10.

3. Display the names of each employees, their job and dept location

4. Find the avg salary of the software engineers

5. Create a query that displays EMPFNAME, EMPLNAME, Department\_code, DEPTNAME, LOCATION from EMPLOYEE, and DEPARTMENT tables. Make sure the results are in the ascending order based on the EMPFNAME and LOCATION of the department.

6. Display EMPFNAME and "TOTAL SALARY" for each employee (commission and salary)

7. Display MAX SALARY from the EMPLOYEE table.

8. Bonus : Which join should we use to display the employee 9777 even if he has no deptcode?

PART 4 : Using the Emp/Dept database

1. Create a Boss table with the columns boss\_id, boss\_name, boss\_type (ie.nice, angry, funny ect...), and dept\_number:

The boss table,has a one to one relationship with the department table: => a department can be managed by only 1 boss, and a boss can manage only 1 department

2. Add a few bosses : one for the finance dept, one for sales and one for marketing

3. What is the type and name of the boss of the dept Finance (show the dept name, not the dept id)









