-- SQL\_CHALLENGE -- HOMEWORK 7

-- MACLEAN ASANTE -- APRIL 24, 2020

-- EMPLOYEE DATABASE: A MYSTERY IN TWO PARTS

-- [I]

-- Added after [II]

-- Viewing new created tables with imported CSV files

-- SELECT \* FROM employees;

-- SELECT \* FROM departments;

-- SELECT \* FROM salaries;

-- SELECT \* FROM titles;

-- SELECT \* FROM dept\_employee;

-- SELECT \* FROM dept\_manager;

-- [II]

-- -- -- -- -- -- -- -- -- -- [DATA ENGINEERING] -- -- -- -- -- -- -- -- -- -- -- -- --

-- Creating tables and importing csv files to tables, FROM ERD Sketch

-- CREATE TABLE "employees" (

-- "emp\_no" int NOT NULL,

-- "birthdate" date NOT NULL,

-- "first\_name" varchar(30) NOT NULL,

-- "last\_name" varchar(30) NOT NULL,

-- "gender" varchar NOT NULL,

-- "hire\_date" date NOT NULL,

-- CONSTRAINT "pk\_employees" PRIMARY KEY (

-- "emp\_no"

-- )

-- );

-- CREATE TABLE "departments" (

-- "dept\_no" VARCHAR(30) NOT NULL,

-- "dept\_name" varchar(30) NOT NULL,

-- CONSTRAINT "pk\_departments" PRIMARY KEY (

-- "dept\_no"

-- )

-- );

-- CREATE TABLE "salaries" (

-- "emp\_no" int NOT NULL,

-- "salary" int NOT NULL,

-- "from\_date" date NOT NULL,

-- "to\_date" date NOT NULL

-- );

-- CREATE TABLE "titles" (

-- "emp\_no" int NOT NULL,

-- "title" varchar(30) NOT NULL,

-- "from\_date" date NOT NULL,

-- "to\_date" date NOT NULL

-- );

-- CREATE TABLE "dept\_employee" (

-- "emp\_no" int NOT NULL,

-- "dept\_no" VARCHAR(30) NOT NULL,

-- "from\_date" date NOT NULL,

-- "to\_date" date NOT NULL

-- );

-- CREATE TABLE "dept\_manager" (

-- "dept\_no" VARCHAR(30) NOT NULL,

-- "emp\_no" int NOT NULL,

-- "from\_date" date NOT NULL,

-- "to\_date" date NOT NULL

-- );

-- ALTER TABLE "salaries" ADD CONSTRAINT "fk\_salaries\_emp\_no" FOREIGN KEY("emp\_no")

-- REFERENCES "employees" ("emp\_no");

-- ALTER TABLE "titles" ADD CONSTRAINT "fk\_titles\_emp\_no" FOREIGN KEY("emp\_no")

-- REFERENCES "employees" ("emp\_no");

-- ALTER TABLE "dept\_employee" ADD CONSTRAINT "fk\_dept\_employee\_emp\_no" FOREIGN KEY("emp\_no")

-- REFERENCES "employees" ("emp\_no");

-- ALTER TABLE "dept\_employee" ADD CONSTRAINT "fk\_dept\_employee\_dept\_no" FOREIGN KEY("dept\_no")

-- REFERENCES "departments" ("dept\_no");

-- ALTER TABLE "dept\_manager" ADD CONSTRAINT "fk\_dept\_manager\_dept\_no" FOREIGN KEY("dept\_no")

-- REFERENCES "departments" ("dept\_no");

-- ALTER TABLE "dept\_manager" ADD CONSTRAINT "fk\_dept\_manager\_emp\_no" FOREIGN KEY("emp\_no")

-- REFERENCES "employees" ("emp\_no");

-- [III]

-- -- -- -- -- -- -- -- -- -- -- -- [DATA ANALYSIS] -- -- -- -- -- -- -- -- -- -- -- -- --

-- -- -- -- -- -- -- [PART 1]

-- List the following details of each employee:

-- employee number, last name, first name, gender, and salary.

-- SELECT \* FROM employees;

-- -- -- -- -- -- -- [PART 2]

-- List employees who were hired in 1986

-- Use ASC to find the specific dates needed for == 1986 hire\_date; clearer to see

-- SELECT \* FROM employees

-- -- ORDER BY hire\_date ASC;

-- WHERE hire\_date BETWEEN '1986-01-01' AND '1986-12-31';

-- -- -- -- -- -- -- [PART 3]

-- List the manager of each department with the following information: department number,

-- department name, the manager's employee number, last name, first name, and

-- start and end employment dates.

-- Things needed -- departments, dept\_manager, and employees -- columns needed from

-- them include -- emp\_no and demp\_no

-- departments - dept\_no, dept\_manager - dept\_no & emp\_no, employees - emp\_no

-- SELECT \* FROM departments;

-- SELECT \* FROM dept\_manager;

-- SELECT \* FROM employees;

-- SELECT employees.emp\_no, dept\_manager.dept\_no, employees.first\_name, employees.last\_name,

-- employees.hire\_date, dept\_manager.from\_date, dept\_manager.to\_date

-- FROM employees

-- INNER JOIN dept\_manager

-- ON employees.emp\_no = dept\_manager.emp\_no;

-- SELECT employees.emp\_no, dept\_manager.dept\_no, departments.dept\_name, employees.last\_name,

-- employees.first\_name,employees.hire\_date, dept\_manager.from\_date, dept\_manager.to\_date

-- FROM employees INNER JOIN dept\_manager

-- ON employees.emp\_no = dept\_manager.emp\_no

-- INNER JOIN departments

-- ON dept\_manager.dept\_no = departments.dept\_no;

-- -- -- -- -- -- -- [PART 4]

-- List the department of each employee with the following information: employee number,

-- last name, first name, and department name.

-- SELECT employees.emp\_no, employees.last\_name, employees.first\_name, departments.dept\_name

-- FROM employees INNER JOIN dept\_manager

-- ON employees.emp\_no = dept\_manager.emp\_no

-- INNER JOIN departments

-- ON dept\_manager.dept\_no = departments.dept\_no;

-- -- -- -- -- -- -- [PART 5]

-- List all employees whose first name is "Hercules" and last names begin with "B."

-- SELECT \* FROM employees

-- WHERE first\_name LIKE 'Hercules'

-- AND last\_name LIKE 'B%';

-- -- -- -- -- -- -- [PART 6]

-- List all employees in the Sales department, including their employee number,

-- last name, first name, and department name.

-- SELECT dept\_employee.emp\_no, employees.last\_name, employees.first\_name, departments.dept\_name

-- FROM dept\_employee

-- JOIN employees

-- ON dept\_employee.emp\_no = employees.emp\_no

-- JOIN departments

-- ON dept\_employee.dept\_no = departments.dept\_no

-- WHERE departments.dept\_name = 'Sales';

-- -- -- -- -- -- -- [PART 7]

-- List all employees in the Sales and Development departments, including their

-- employee number, last name, first name, and department name.

-- SELECT dept\_employee.emp\_no, employees.last\_name, employees.first\_name, departments.dept\_name

-- FROM dept\_employee

-- JOIN employees

-- ON dept\_employee.emp\_no = employees.emp\_no

-- JOIN departments

-- ON dept\_employee.dept\_no = departments.dept\_no

-- WHERE departments.dept\_name = 'Sales'

-- OR departments.dept\_name = 'Development';

-- -- -- -- -- -- -- [PART 8]

-- In descending order, list the frequency count of employee last names, i.e.,

-- how many employees share each last name.

-- Learned how to change the name of the column from Anthony

-- SELECT last\_name AS "LAST NAME",

-- COUNT(last\_name) AS "FREQUENCY COUNT OF EMPLOYEE LAST NAMES"

-- FROM employees

-- GROUP BY last\_name

-- ORDER BY

-- COUNT(last\_name) DESC;

-- [IV]

-- -- -- -- -- -- -- -- -- -- -- -- [BONUS] -- -- -- -- -- -- -- -- -- -- -- -- --

-- Import the SQL database into Pandas