Kimberly Childers HW 9 explanations

During this homework assignment we were asked to use <https://www.quickdatabasediagrams.com/> to layout some data sets we were given. Once that was done, we were able to import the data into pgAdmin4 and code in SQL to perform some data analysis.

Below is the postgres export from the quickdatabase app and you will find the answers for questions 1-8 (listed below) SQL code and screenshots of each output in the GitHub file.

========================Data Analysis Questions=====================

1. List the employee number, last name, first name, sex, and salary of each employee.
2. List the first name, last name, and hire date for the employees who were hired in 1986.
3. List the manager of each department along with their department number, department name, employee number, last name, and first name.
4. List the department number for each employee along with that employee’s employee number, last name, first name, and department name.
5. List first name, last name, and sex of each employee whose first name is Hercules and whose last name begins with the letter B.
6. List each employee in the Sales department, including their employee number, last name, and first name.
7. List each employee in the Sales and Development departments, including their employee number, last name, first name, and department name.
8. List the frequency counts, in descending order, of all the employee last names (that is, how many employees share each last name).

========================EXPORT=====================

-- Exported from QuickDBD: https://www.quickdatabasediagrams.com/

-- Link to schema: https://app.quickdatabasediagrams.com/#/d/3MUafA

-- NOTE! If you have used non-SQL datatypes in your design, you will have to change these here.

CREATE TABLE "departments" (

"dept\_num" varchar(10) NOT NULL,

"dept\_name" varchar(50) NOT NULL,

CONSTRAINT "pk\_departments" PRIMARY KEY (

"dept\_num"

)

);

CREATE TABLE "titles" (

"title\_id" varchar(10) NOT NULL,

"title" varchar(50) NOT NULL,

CONSTRAINT "pk\_titles" PRIMARY KEY (

"title\_id"

)

);

CREATE TABLE "employees" (

"emp\_num" integer NOT NULL,

"emp\_title\_id" varchar(10) NOT NULL,

"birth\_date" date NOT NULL,

"first\_name" varchar(100) NOT NULL,

"last\_name" varchar(100) NOT NULL,

"sex" varchar(5) NOT NULL,

"hire\_date" date NOT NULL,

CONSTRAINT "pk\_employees" PRIMARY KEY (

"emp\_num"

)

);

CREATE TABLE "salaries" (

"emp\_num" integer NOT NULL,

"salary" integer NOT NULL,

CONSTRAINT "pk\_salaries" PRIMARY KEY (

"emp\_num"

)

);

CREATE TABLE "dept\_emp" (

"emp\_num" integer NOT NULL,

"dept\_num" varchar(10) NOT NULL,

CONSTRAINT "pk\_dept\_emp" PRIMARY KEY (

"emp\_num","dept\_num"

)

);

CREATE TABLE "dept\_manager" (

"dept\_num" varchar(10) NOT NULL,

"emp\_num" integer NOT NULL,

CONSTRAINT "pk\_dept\_manager" PRIMARY KEY (

"dept\_num","emp\_num"

)

);

ALTER TABLE "employees" ADD CONSTRAINT "fk\_employees\_emp\_title\_id" FOREIGN KEY("emp\_title\_id")

REFERENCES "titles" ("title\_id");

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

REFERENCES "employees" ("emp\_num");

ALTER TABLE "dept\_emp" ADD CONSTRAINT "fk\_dept\_emp\_emp\_num" FOREIGN KEY("emp\_num")

REFERENCES "employees" ("emp\_num");

ALTER TABLE "dept\_emp" ADD CONSTRAINT "fk\_dept\_emp\_dept\_num" FOREIGN KEY("dept\_num")

REFERENCES "departments" ("dept\_num");

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

REFERENCES "departments" ("dept\_num");

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

REFERENCES "employees" ("emp\_num");