

9 - SQL Homework - Steve Reiss

—ERD CHART—

<https://app.quickdatabasediagrams.com/#/d/X9uBNG>

employees

-

emp_no INTEGER PK
emp_title_id VARCHAR
birth_date DATE
first_name VARCHAR
last_name VARCHAR
sex VARCHAR
hire_date DATE

departments

-

dept_no PK VARCHAR
dept_name VARCHAR

dept_emp

-

emp_no INTEGER FK >- employees.emp_no
dept_no VARCHAR FK >- departments.dept_no

dept_manager

-

dept_no VARCHAR
emp_no INTEGER FK >- employees.emp_no

salaries

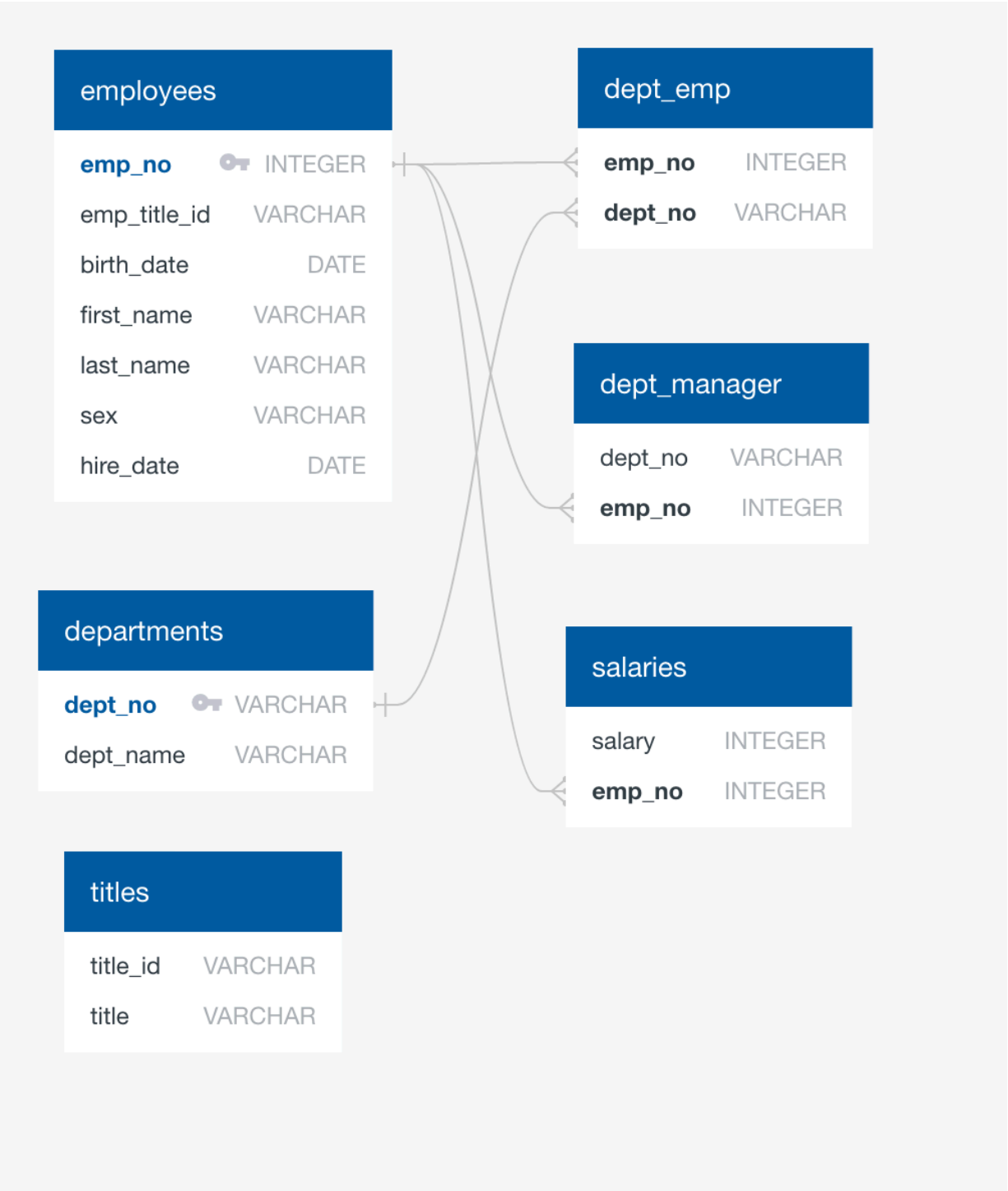
-

salary INTEGER
emp_no INTEGER FK >- employees.emp_no

titles

-

title_id VARCHAR
title VARCHAR



—UPLOAD DATA FILES—

— employees.csv —

DROP TABLE employees

```
CREATE TABLE employees (  
  emp_no INT NOT NULL,  
  emp_title_id VARCHAR (10) NOT NULL,  
  birth_date DATE,  
  first_name VARCHAR (25) NOT NULL,  
  last_name VARCHAR(25) NOT NULL,  
  sex VARCHAR (2) NOT NULL ,  
  hire_date DATE,  
  PRIMARY KEY (emp_no)  
);
```

—departments.csv—

DROP TABLE departments

```
CREATE TABLE departments (  
  dept_no VARCHAR (10),  
  dept_name VARCHAR(25),  
  PRIMARY KEY (dept_no)  
);
```

—dept_emp.csv—

DROP TABLE dept_emp

```
CREATE TABLE dept_emp (  
  emp_no INT NOT NULL,  
  dept_no VARCHAR (10) NOT NULL,  
  FOREIGN KEY (emp_no) REFERENCES employees(emp_no),  
  FOREIGN KEY (dept_no) REFERENCES departments(dept_no)  
);
```

—dept_manager.csv—

DROP TABLE dept_manager

```
CREATE TABLE dept_manager (  
dept_no VARCHAR(10),  
emp_no INT,  
FOREIGN KEY (emp_no) REFERENCES employees(emp_no)  
);
```

—salaries.csv—

DROP TABLE salaries

```
CREATE TABLE salaries (  
emp_no INT,  
salary INT,  
FOREIGN KEY (emp_no) REFERENCES employees (emp_no)  
);
```

—titles.csv—

DROP TABLE titles

```
CREATE TABLE titles (  
title_id VARCHAR (10),  
title VARCHAR (25)  
);
```

—UNIQUE TEST for primary key columns—

```
SELECT count(dept_no) FROM departments  
WHERE dept_no = Null;
```

```
SELECT count (emp_no) FROM employees  
WHERE emp_no = Null;
```

—No Nulls for employees— (NOTE, primary keys cannot have nulls, just checking)

—No Nulls for departments—

```
SELECT COUNT(emp_no)
FROM employees
GROUP BY emp_no
ORDER BY emp_no desc;
```

```
SELECT COUNT(dept_no)
FROM departments
GROUP BY dept_no
ORDER BY dept_no desc;
```

—No dups for employees— (NOTE, primary keys cannot have dups, just checking)

—No dups for departments—

—DATA ANALYSIS—

—1—

```
SELECT employees.emp_no, employees.last_name, employees.first_name,
employees.sex, salaries.salary
FROM employees
LEFT JOIN salaries
ON employees.emp_no = salaries.emp_no
;
```

```

1
2 SELECT employees.emp_no, employees.last_name, employees.first_name, employees.sex, salaries.salary
3 FROM employees
4 LEFT JOIN salaries
5 ON employees.emp_no = salaries.emp_no
6 ;

```

Data Output Explain Messages Notifications

	emp_no integer	last_name character varying (25)	first_name character varying (25)	sex character varying (2)	salary integer
1	10005	Maliniak	Kyoichi	M	78228
2	10010	Piveteau	Duangkaew	F	72488
3	10011	Sluis	Mary	F	42365
4	10013	Tercki	Eberhardt	M	40000
5	10017	Bouloucos	Cristinel	F	71380
6	10035	Chappelet	Alain	M	41538
7	10037	Makrucki	Pradeep	M	40000
8	10045	Shanbhogue	Moss	M	41971
9	10051	Caine	Hidefumi	M	48817

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Folder

—2—

```

SELECT employees.first_name, employees.last_name, employees.hire_date
FROM employees
WHERE EXTRACT(year from hire_date) = 1986
;

```

NOTE: add if you want to sort (not specified)
ORDER BY hire_date ASC;

```

1
2 SELECT employees.first_name, employees.last_name, employees.hire_date
3 FROM employees
4 WHERE EXTRACT(year from hire_date) = 1986
5 ;|

```

Data Output Explain Messages Notifications

	first_name character varying (25)	last_name character varying (25)	hire_date date	
1	Eran	Cusworth	1986-11-14	
2	Bojan	Zallocco	1986-10-14	
3	Nevio	Demizu	1986-05-18	
4	Ziva	Vecchi	1986-07-03	
5	Mohit	Speek	1986-01-14	
6	Qunsheng	Speer	1986-02-13	
7	Dines	Encarnacion	1986-08-02	
8	Harnghdar	Swick	1986-05-28	

—3—

```

SELECT dept_manager.dept_no, departments.dept_name,
employees.emp_no, employees.first_name, employees.last_name
FROM dept_manager
LEFT JOIN departments
ON dept_manager.dept_no = departments.dept_no
LEFT JOIN employees
ON dept_manager.emp_no = employees.emp_no
;

```

```

1
2 SELECT dept_manager.dept_no, departments.dept_name,
3 employees.emp_no, employees.first_name, employees.last_name
4 FROM dept_manager
5 LEFT JOIN departments
6 ON dept_manager.dept_no = departments.dept_no
7 LEFT JOIN employees
8 ON dept_manager.emp_no = employees.emp_no
9 |;
10
11
12

```

Data Output Explain Messages Notifications

	dept_no character varying (10)	dept_name character varying (25)	emp_no integer	first_name character varying (25)	last_name character varying (25)	
1	d001	Marketing	110022	Margareta	Markovitch	
2	d001	Marketing	110039	Vishwani	Minakawa	
3	d002	Finance	110085	Ebru	Alpin	
4	d002	Finance	110114	Isamu	Legleitner	
5	d003	Human Resources	110183	Shirish	Ossenbruggen	
6	d003	Human Resources	110228	Karsten	Sigstam	
7	d004	Production	110303	Krassimir	Wegerle	
8	d004	Production	110344	Rosine	Cools	
9	d004	Production	110386	Shem	Kieras	

—4—

```

SELECT
employees.emp_no, employees.last_name, employees.first_name,
departments.dept_name
FROM employees
LEFT JOIN dept_emp
ON dept_emp.emp_no = employees.emp_no
LEFT JOIN departments
ON dept_emp.dept_no = departments.dept_no
;

```



```

1
2 SELECT
3 employees.emp_no, employees.last_name, employees.first_name, departments.dept_name
4 FROM employees
5 LEFT JOIN dept_emp
6 ON dept_emp.emp_no = employees.emp_no
7 LEFT JOIN departments
8 ON dept_emp.dept_no = departments.dept_no
9 ;
10
11
12 --List the department of each employee with the following information:
13 --employee number, last name, first name, and department name.

```

Data Output Explain Messages Notifications

	emp_no integer	last_name character varying (25)	first_name character varying (25)	dept_name character varying (25)	
1	10005	Maliniak	Kyoichi	Human Resources	
2	10010	Piveteau	Duangkaew	Production	
3	10010	Piveteau	Duangkaew	Quality Management	
4	10011	Sluis	Mary	Customer Service	
5	10013	Terkki	Eberhardt	Human Resources	
6	10017	Bouloucos	Cristinel	Marketing	
7	10035	Chappelet	Alain	Production	
8	10037	Makrucki	Pradeep	Development	
9	10045	Shanbhogue	Moss	Production	
10	10051	Caine	Hidefumi	Production	

—5—

```

SELECT employees.first_name, employees.last_name, employees.sex
FROM employees
WHERE first_name = 'Hercules' AND last_name like 'B%';

```

Query Editor
Query History

```

1
2 SELECT employees.first_name, employees.last_name, employees.sex
3 FROM employees
4 WHERE first_name = 'Hercules' AND last_name like 'B%';
5
6

```

Data Output
Explain
Messages
Notifications

	first_name character varying (25)	last_name character varying (25)	sex character varying (2)
1	Hercules	Baer	M
2	Hercules	Biron	F
3	Hercules	Birge	F
4	Hercules	Berstel	F
5	Hercules	Bernatsky	M
6	Hercules	Bail	F
7	Hercules	Benantar	F
8	Hercules	Bodoff	M
9	Hercules	Basagni	M
10	Hercules	Bernardinello	F
11	Hercules	Baranowski	M
12	Hercules	Benzmuller	M

```

SELECT employees.emp_no, employees.last_name, employees.first_name,
departments.dept_name
FROM employees
JOIN dept_emp
ON employees.emp_no = dept_emp.emp_no
JOIN departments
```

ON dept_emp.dept_no = departments.dept_no
WHERE dept_name = 'Sales';

Query Editor Query History

```
1  
2 SELECT employees.emp_no, employees.last_name,  
3 |employees.first_name, departments.dept_name  
4 FROM employees  
5 JOIN dept_emp  
6 ON employees.emp_no = dept_emp.emp_no  
7 JOIN departments  
8 ON dept_emp.dept_no = departments.dept_no  
9 WHERE dept_name = 'Sales';  
10  
11
```

Data Output Explain Messages Notifications

	emp_no integer	last_name character varying (25)	first_name character varying (25)	dept_name character varying (25)
1	10002	Simmel	Bezalel	Sales
2	10016	Cappelletti	Kazuhito	Sales
3	10034	Swan	Bader	Sales
4	10041	Lenart	Uri	Sales
5	10050	Dredge	Yinghua	Sales
6	10053	Zschoche	Sanjiv	Sales
7	10060	Billingsley	Breannnda	Sales
8	10061	Herber	Tse	Sales
9	10068	Brattka	Charlene	Sales
10	10087	Eugenio	Xinglin	Sales
11	10088	Syrzycki	Jungsoon	Sales
12	10089	Flasterstein	Sudharsan	Sales

```

SELECT employees.emp_no, employees.last_name,
employees.first_name, departments.dept_name
FROM employees
JOIN dept_emp
ON employees.emp_no = dept_emp.emp_no
JOIN departments
ON dept_emp.dept_no = departments.dept_no
WHERE departments.dept_name = 'Sales' OR departments.dept_name =
'Development';

```

Query Editor Query History

```

1
2 SELECT employees.emp_no, employees.last_name,
3 employees.first_name, departments.dept_name
4 FROM employees
5 JOIN dept_emp
6 ON employees.emp_no = dept_emp.emp_no
7 JOIN departments
8 ON dept_emp.dept_no = departments.dept_no
9 WHERE departments.dept_name = 'Sales' OR departments.dept_name = 'Development';
10
11




```

Data Output Explain Messages Notifications

	emp_no integer	last_name character varying (25)	first_name character varying (25)	dept_name character varying (25)	
6	10014	Genn	Genn	Development	
7	10016	Cappelletti	Kazuhito	Sales	
8	10018	Peha	Kazuhide	Development	
9	10021	Erde	Ramzi	Development	
10	10022	Famili	Shahaf	Development	
11	10023	Montemayor	Bojan	Development	
12	10025	Heyers	Prasadram	Development	
13	10027	Reistad	Divier	Development	
14	10028	Tempesti	Domenick	Development	
15	10031	Joslin	Karsten	Development	
16	10034	Swan	Bader	Sales	
17	10037	Makrucki	Pradeep	Development	
18	10040	Meriete	Wakil	Development	

```
SELECT count(last_name) as "no_count", last_name  
FROM employees  
GROUP BY last_name  
ORDER BY no_count desc  
;
```

```
1
2 SELECT count(last_name) as "no_count", last_name
3 FROM employees
4 GROUP BY last_name
5 ORDER BY no_count desc
6 ;
```

	 no_count bigint 	last_name character varying (25) 
1	226	Baba
2	223	Gelosh
3	223	Coorg
4	222	Sudbeck
5	222	Farris
6	221	Adachi
7	220	Osgood
8	218	Neiman
9	218	Mandell
10	218	Masada
11	217	Boudaillier
12	217	Wendorf

```
8 SELECT * FROM employees where emp_no = 499942;
9
```

[Data Output](#) [Explain](#) [Messages](#) [Notifications](#)

	emp_no [PK] integer	emp_title_id character varying (10)	birth_date date	first_name character varying (25)	last_name character varying (25)	sex character varying (2)	hire_date date
1	499942	e0004	1963-01-10	April	Foolsday	F	1997-02-...