CREATE TABLE titles (

title\_id VARCHAR(10) NOT NULL,

title VARCHAR(50) NOT NULL,

PRIMARY KEY(title\_id)

);

CREATE TABLE departments (

dept\_no VARCHAR(10) NOT NULL,

dept\_name VARCHAR(20) NOT NULL,

PRIMARY KEY(dept\_no)

);

CREATE TABLE employees (

emp\_no INTEGER NOT NULL,

emp\_title\_id VARCHAR(10) NOT NULL,

birth\_date DATE NOT NULL,

first\_name VARCHAR(20) NOT NULL,

last\_name VARCHAR(20) NOT NULL,

sex VARCHAR(10) NOT NULL,

hire\_date DATE NOT NULL,

PRIMARY KEY(emp\_no),

FOREIGN KEY(emp\_title\_id) REFERENCES titles(title\_id)

);

ALTER DATABASE sql\_challenge\_db SET datestyle TO "ISO, MDY";

CREATE TABLE salaries (

emp\_no INT NOT NULL,

salary INT NOT NULL,

FOREIGN KEY(emp\_no) REFERENCES employees(emp\_no)

);

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)

);

CREATE TABLE dept\_manager (

dept\_no VARCHAR(10) NOT NULL,

emp\_no INT NOT NULL,

FOREIGN KEY(dept\_no) REFERENCES departments(dept\_no),

FOREIGN KEY(emp\_no) REFERENCES employees(emp\_no)

);

1. List the following details of each employee: employee number, last name, first name, sex, and salary.

SELECT employees.emp\_no, employees.last\_name, employees.first\_name, employees.sex,salaries.salary

FROM employees

JOIN salaries

ON salaries.emp\_no = employees.emp\_no

CREATE TABLE titles (

title\_id VARCHAR(10) NOT NULL,

title VARCHAR(50) NOT NULL,

PRIMARY KEY(title\_id)

);

CREATE TABLE departments (

dept\_no VARCHAR(10) NOT NULL,

dept\_name VARCHAR(20) NOT NULL,

PRIMARY KEY(dept\_no)

);

CREATE TABLE employees (

emp\_no INTEGER NOT NULL,

emp\_title\_id VARCHAR(10) NOT NULL,

birth\_date DATE NOT NULL,

first\_name VARCHAR(20) NOT NULL,

last\_name VARCHAR(20) NOT NULL,

sex VARCHAR(10) NOT NULL,

hire\_date DATE NOT NULL,

PRIMARY KEY(emp\_no),

FOREIGN KEY(emp\_title\_id) REFERENCES titles(title\_id)

);

ALTER DATABASE sql\_challenge\_db SET datestyle TO "ISO, MDY";

CREATE TABLE salaries (

emp\_no INT NOT NULL,

salary INT NOT NULL,

FOREIGN KEY(emp\_no) REFERENCES employees(emp\_no)

);

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),

CONSTRAINT PK\_demp\_emp PRIMARY KEY (emp\_no, dept\_no)

);

CREATE TABLE dept\_manager (

dept\_no VARCHAR(10) NOT NULL,

emp\_no INT NOT NULL,

FOREIGN KEY(dept\_no) REFERENCES departments(dept\_no),

FOREIGN KEY(emp\_no) REFERENCES employees(emp\_no),

CONSTRAINT PK\_demp\_manager PRIMARY KEY (dept\_no, emp\_no)

);

CREATE TABLE titles (

title\_id VARCHAR(10) NOT NULL,

title VARCHAR(50) NOT NULL,

PRIMARY KEY(title\_id)

);

CREATE TABLE departments (

dept\_no VARCHAR(10) NOT NULL,

dept\_name VARCHAR(20) NOT NULL,

PRIMARY KEY(dept\_no)

);

CREATE TABLE employees (

emp\_no INTEGER NOT NULL,

emp\_title\_id VARCHAR(10) NOT NULL,

birth\_date DATE NOT NULL,

first\_name VARCHAR(20) NOT NULL,

last\_name VARCHAR(20) NOT NULL,

sex VARCHAR(10) NOT NULL,

hire\_date DATE NOT NULL,

PRIMARY KEY(emp\_no),

FOREIGN KEY(emp\_title\_id) REFERENCES titles(title\_id)

);

ALTER DATABASE sql\_challenge\_db3 SET datestyle TO "ISO, MDY";

CREATE TABLE salaries (

emp\_no INT NOT NULL,

salary INT NOT NULL,

FOREIGN KEY(emp\_no) REFERENCES employees(emp\_no)

);

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),

CONSTRAINT PK\_demp\_emp PRIMARY KEY (emp\_no, dept\_no)

);

CREATE TABLE dept\_manager (

dept\_no VARCHAR(10) NOT NULL,

emp\_no INT NOT NULL,

FOREIGN KEY(dept\_no) REFERENCES departments(dept\_no),

FOREIGN KEY(emp\_no) REFERENCES employees(emp\_no),

CONSTRAINT PK\_demp\_manager PRIMARY KEY (dept\_no, emp\_no)

);

SELECT employees.emp\_no, employees.last\_name, employees.first\_name, employees.sex,salaries.salary

FROM employees

JOIN salaries

ON salaries.emp\_no = employees.emp\_no

SELECT employees.first\_name, employees.last\_name, employees.hire\_date

FROM employees

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

manager of each dept

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

FROM employees

JOIN dept\_manager

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

JOIN departments

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

-- GROUP BY dept\_no;

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

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

FROM employees

JOIN dept\_emp

ON dept\_emp.emp\_no = employees.emp\_no

JOIN departments

ON dept\_emp.dept\_no=departments.dept\_no

WHERE departments.dept\_name = 'Sales'

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

FROM employees

JOIN dept\_emp

ON dept\_emp.emp\_no = employees.emp\_no

JOIN departments

ON dept\_emp.dept\_no=departments.dept\_no

WHERE departments.dept\_name = 'Sales' OR departments.dept\_name = 'Development'

SELECT last\_name, COUNT(last\_name) AS frequency

FROM employees

GROUP BY last\_name

ORDER BY frequency DESC;

SELECT employees.first\_name, employees.last\_name, employees.sex

FROM employees

WHERE first\_name = 'Hercules' AND last\_name LIKE 'B%';

Final

1

SELECT employees.emp\_no, employees.last\_name, employees.first\_name, employees.sex,salaries.salary

FROM employees

JOIN salaries

ON salaries.emp\_no = employees.emp\_no

2

SELECT employees.first\_name, employees.last\_name, employees.hire\_date

FROM employees

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

3

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

FROM employees

JOIN dept\_manager

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

JOIN departments

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

4

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

5

SELECT employees.first\_name, employees.last\_name, employees.sex

FROM employees

WHERE first\_name = 'Hercules' AND last\_name LIKE 'B%';

6

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

FROM employees

JOIN dept\_emp

ON dept\_emp.emp\_no = employees.emp\_no

JOIN departments

ON dept\_emp.dept\_no=departments.dept\_no

WHERE departments.dept\_name = 'Sales'

7

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

FROM employees

JOIN dept\_emp

ON dept\_emp.emp\_no = employees.emp\_no

JOIN departments

ON dept\_emp.dept\_no=departments.dept\_no

WHERE departments.dept\_name = 'Sales' OR departments.dept\_name = 'Development'

8

SELECT last\_name, COUNT(last\_name) AS frequency

FROM employees

GROUP BY last\_name

ORDER BY frequency DESC;