Departments

-

dept\_no varchar pk

dept\_name varchar

Employees

-

emp\_no int fk - Salaries.emp\_no

birth\_date date

first\_name varchar

last\_name varchar

gender varchar

hire\_date date

Managers

-

dept\_no varchar pk fk - Departments.dept\_no

emp\_no int pk fk - Employees.emp\_no

from\_date date

to\_date date

Dept\_emp

-

dept\_no varchar pk fk - Departments.dept\_no

emp\_no int fk - Employees.emp\_no

from\_date date

to\_date date

Salaries

-

emp\_no varchar fk - Dept\_emp.emp\_no

salary int

from\_date date

to\_date date

Titles

-

emp\_no int fk - Salaries.emp\_no

title varcahr

from\_date date

to\_date date

Step 1.

-- Creating tables for PH-EmployeeDB

CREATE TABLE departments (

dept\_no VARCHAR(4) NOT NULL,

dept\_name VARCHAR(40) NOT NULL,

PRIMARY KEY (dept\_no),

UNIQUE (dept\_name)

);

Step 2.

CREATE TABLE employees (

emp\_no INT NOT NULL,

birth\_date DATE NOT NULL,

first\_name VARCHAR NOT NULL,

last\_name VARCHAR NOT NULL,

gender VARCHAR NOT NULL,

hire\_date DATE NOT NULL,

PRIMARY KEY (emp\_no)

);

Step 3.

CREATE TABLE dept\_manager (

dept\_no VARCHAR(4) NOT NULL,

emp\_no INT NOT NULL,

from\_date DATE NOT NULL,

to\_date DATE NOT NULL,

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

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

PRIMARY KEY (emp\_no, dept\_no)

);

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

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

Step 4.

CREATE TABLE salaries (

emp\_no INT NOT NULL,

salary INT NOT NULL,

from\_date DATE NOT NULL,

to\_date DATE NOT NULL,

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

PRIMARY KEY (emp\_no)

);

Step 5.

CREATE TABLE dept\_emp(emp\_no int NOT NULL,

dept\_no varchar(4) NOT NULL,

from\_date date NOT NULL,

to\_date date NOT NULL,

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

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

PRIMARY KEY (emp\_no, dept\_no)

);

Step 6.

CREATE TABLE titles(

emp\_no INT NOT NULL,

title varchar NOT NULL,

from\_date Date NOT NULL,

to\_date Date NOT NULL,

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

PRIMARY KEY (emp\_no, title, from\_date)

);

Step 7.

SELECT first\_name, last\_name

FROM employees

WHERE birth\_date BETWEEN '1952-01-01' AND '1955-12-31';

Step 8.

SELECT first\_name, last\_name

FROM employees

WHERE birth\_date BETWEEN '1952-01-01' AND '1952-12-31';

Step 9.

-- Retirement eligibility

SELECT first\_name, last\_name

FROM employees

WHERE birth\_date BETWEEN '1952-01-01' AND '1955-12-31';

Step 10.

-- Retirement eligibility

SELECT first\_name, last\_name

FROM employees

WHERE (birth\_date BETWEEN '1952-01-01' AND '1955-12-31')

AND (hire\_date BETWEEN '1985-01-01' AND '1988-12-31');

AND (hire\_date BETWEEN '1985-01-01' AND '1988-12-31');

Step 11.

-- Retirement eligibility

SELECT first\_name, last\_name

FROM employees

WHERE (birth\_date BETWEEN '1952-01-01' AND '1955-12-31')

AND (hire\_date BETWEEN '1985-01-01' AND '1988-12-31');

Step 12.

-- Number of employees retiring

SELECT COUNT(first\_name)

FROM employees

WHERE (birth\_date BETWEEN '1952-01-01' AND '1955-12-31')

AND (hire\_date BETWEEN '1985-01-01' AND '1988-12-31');

Step 13.

SELECT first\_name, last\_name

FROM employees

WHERE (birth\_date BETWEEN '1952-01-01' AND '1955-12-31')

AND (hire\_date BETWEEN '1985-01-01' AND '1988-12-31');

Step 14.

SELECT first\_name, last\_name

INTO retirement\_info

FROM employees

WHERE (birth\_date BETWEEN '1952-01-01' AND '1955-12-31')

AND (hire\_date BETWEEN '1985-01-01' AND '1988-12-31');

Step 15.

SELECT \* FROM retirement\_info;

Step 16.

-- Create new table for retiring employees

SELECT emp\_no, first\_name, last\_name

INTO retirement\_info

FROM employees

WHERE (birth\_date BETWEEN '1952-01-01' AND '1955-12-31')

AND (hire\_date BETWEEN '1985-01-01' AND '1988-12-31');

-- Check the table

SELECT \* FROM retirement\_info;

Step 17.

-- Joining departments and dept\_manager tables

SELECT departments.dept\_name,

dept\_manager.emp\_no,

dept\_manager.from\_date,

dept\_manager.to\_date

FROM departments

INNER JOIN dept\_manager

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

Step 18.

-- Joining retirement\_info and dept\_emp tables

SELECT retirement\_info.emp\_no,

retirement\_info.first\_name,

retirement\_info.last\_name,

dept\_emp.to\_date

FROM retirement\_info

LEFT JOIN dept\_emp

ON retirement\_info.emp\_no = dept\_emp.emp\_no;

Step 19.

-- Joining retirement\_info and dept\_emp tables

SELECT retirement\_info.emp\_no,

retirement\_info.first\_name,

retirement\_info.last\_name,

dept\_emp.to\_date

FROM retirement\_info

LEFT JOIN dept\_emp

ON retirement\_info.emp\_no = dept\_emp.emp\_no;

Step 20.

SELECT ri.emp\_no,

ri.first\_name,

ri.last\_name,

de.to\_date

FROM retirement\_info as ri

LEFT JOIN dept\_emp as de

ON ri.emp\_no = de.emp\_no;

Step 21.

-- Joining departments and dept\_manager tables

SELECT departments.dept\_name,

dept\_manager.emp\_no,

dept\_manager.from\_date,

dept\_manager.to\_date

FROM departments

INNER JOIN dept\_manager

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

Step 22.

SELECT d.dept\_name,

dm.emp\_no,

dm.from\_date,

dm.to\_date

FROM departments as d

INNER JOIN dept\_manager as dm

ON d.dept\_no = dm.dept\_no;

Step 23.

SELECT ri.emp\_no,

ri.first\_name,

ri.last\_name,

de.to\_date

INTO current\_emp

FROM retirement\_info as ri

LEFT JOIN dept\_emp as de

ON ri.emp\_no = de.emp\_no

WHERE de.to\_date = ('9999-01-01');

Step 24.

-- Employee count by department number

SELECT COUNT(ce.emp\_no), de.dept\_no

FROM current\_emp as ce

LEFT JOIN dept\_emp as de

ON ce.emp\_no = de.emp\_no

GROUP BY de.dept\_no;

Step 25.

-- Employee count by department number

SELECT COUNT(ce.emp\_no), de.dept\_no

FROM current\_emp as ce

LEFT JOIN dept\_emp as de

ON ce.emp\_no = de.emp\_no

GROUP BY de.dept\_no

ORDER BY de.dept\_no;

Step 26.

SELECT \* FROM salaries;

Step 27.

SELECT \* FROM salaries

ORDER BY to\_date DESC;

Step 28.

SELECT emp\_no, first\_name, last\_name

INTO retirement\_info

FROM employees

WHERE (birth\_date BETWEEN '1952-01-01' AND '1955-12-31')

AND (hire\_date BETWEEN '1985-01-01' AND '1988-12-31');

Step 29.

SELECT emp\_no,

first\_name,

last\_name,

gender

INTO emp\_info

FROM employees

WHERE (birth\_date BETWEEN '1952-01-01' AND '1955-12-31')

AND (hire\_date BETWEEN '1985-01-01' AND '1988-12-31');

Step 30.

SELECT e.emp\_no,

e.first\_name,

e.last\_name,

e.gender,

s.salary,

de.to\_date

INTO emp\_info

FROM employees as e

INNER JOIN salaries as s

ON (e.emp\_no = s.emp\_no)

INNER JOIN dept\_emp as de

ON (e.emp\_no = de.emp\_no)

WHERE (e.birth\_date BETWEEN '1952-01-01' AND '1955-12-31')

AND (e.hire\_date BETWEEN '1985-01-01' AND '1988-12-31')

AND (de.to\_date = '9999-01-01');

Step 31.

-- List of managers per department

SELECT dm.dept\_no,

d.dept\_name,

dm.emp\_no,

ce.last\_name,

ce.first\_name,

dm.from\_date,

dm.to\_date

INTO manager\_info

FROM dept\_manager AS dm

INNER JOIN departments AS d

ON (dm.dept\_no = d.dept\_no)

INNER JOIN current\_emp AS ce

ON (dm.emp\_no = ce.emp\_no);

Step 32.

SELECT ce.emp\_no,

ce.first\_name,

ce.last\_name,

d.dept\_name

-- INTO dept\_info

FROM current\_emp as ce

INNER JOIN dept\_emp AS de

ON (ce.emp\_no = de.emp\_no)

INNER JOIN departments AS d

ON (de.dept\_no = d.dept\_no);

Module 7 Challenege starts here

--Use Dictinct with Orderby to remove duplicate rows

SELECT Distinct (employees.emp\_no),employees.first\_name,employees.last\_name, t.title, t.from\_date,t.to\_date

into retirement\_titles

from employees

inner join titles t

on employees.emp\_no = t.emp\_no

WHERE (birth\_date BETWEEN '1952-01-01' AND '1955-12-31')

ORDER BY emp\_no;

select \* from titles

select \* from employee

DROP TABLE retirement\_titles;

select \* from retirement\_titles;

SELECT DISTINCT on (emp\_no) emp\_no, first\_name, last\_name, title

into unique\_titles

from retirement\_titles

where (to\_date = '9999-01-01')

order by emp\_no;

drop table update\_titles

select \* from update\_titles

Select count (title),title

into retiring\_titles

from unique\_titles

Group by title

order by count desc;

select \* from dept\_emp

SELECT DISTINCT ON (employees.emp\_no) employees.emp\_no, employees.first\_name, employees.last\_name, employees.birth\_date, dept\_emp.from\_date, dept\_emp.to\_date, t.title

into mentorship\_eligibility

from employees

inner join dept\_emp

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

inner join titles as t

on employees.emp\_no = t.emp\_no

where (dept\_emp.to\_date = '9999-01-01')

and (birth\_date between '1965-01-01' and '1965-12-31')

order by emp\_no;

select \* from titles

select \* from mentorship\_eligibility