--Create new table

CREATE TABLE departments(

dept\_no VARCHAR(5) NOT NULL PRIMARY KEY,

dept\_name VARCHAR(25) NOT NULL

);

SELECT \* FROM departments;

--Create new table

CREATE TABLE dept\_emp(

emp\_no INTEGER NOT NULL,

dept\_no VARCHAR(5),

from\_date DATE,

to\_date DATE

);

--Add primary key

ALTER TABLE dept\_emp

ADD COLUMN id SERIAL PRIMARY KEY;

--Add foreign key

ALTER TABLE dept\_emp

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

ALTER TABLE dept\_emp

ADD FOREIGN KEY (dept\_no) REFERENCES departments(dept\_no);

SELECT \* FROM dept\_emp;

--Create new table

CREATE TABLE dept\_manager(

dept\_no VARCHAR(5),

emp\_no INTEGER,

from\_date DATE,

to\_date DATE

);

--Add primary key

ALTER TABLE dept\_manager

ADD COLUMN id SERIAL PRIMARY KEY;

--Add foreign key

ALTER TABLE dept\_manager

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

ALTER TABLE dept\_manager

ADD FOREIGN KEY (dept\_no) REFERENCES departments(dept\_no);

SELECT \* FROM dept\_manager;

--Create new table

CREATE TABLE employees(

emp\_no INTEGER NOT NULL PRIMARY KEY,

birth\_date DATE,

first\_name VARCHAR,

last\_name VARCHAR,

gender VARCHAR,

hire\_date DATE

);

SELECT \* FROM employees;

--Create new table

CREATE TABLE salaries(

emp\_no INTEGER,

salary INTEGER,

from\_date DATE,

to\_date DATE

);

--Add primary key

ALTER TABLE salaries

ADD COLUMN id SERIAL PRIMARY KEY;

--Add foreign key

ALTER TABLE salaries

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

SELECT \* FROM salaries;

--If table already exists - used as tables were being modified with primary keys, etc.

DROP TABLE titles;

--Create new table

CREATE TABLE titles(

emp\_no INTEGER,

title VARCHAR,

from\_date DATE,

to\_date DATE

);

--Add primary key

ALTER TABLE titles

ADD COLUMN id SERIAL PRIMARY KEY;

--Add foreign key

ALTER TABLE titles

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

SELECT \* FROM titles;

--Perform an INNER JOIN on the tables - Analysis 1

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

FROM salaries

INNER JOIN employees ON

employees.emp\_no=salaries.emp\_no;

-- Analysis 2

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

FROM employees

WHERE hire\_date > '1985-12-31'

AND hire\_date < '1987-01-01'

;

--Perform an INNER JOIN on the tables - Analysis 3

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

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

FROM dept\_manager

INNER JOIN departments ON

departments.dept\_no=dept\_manager.dept\_no

INNER JOIN employees ON

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

;

--Perform an INNER JOIN on the tables - Analysis 4

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

FROM dept\_manager

INNER JOIN departments ON

departments.dept\_no=dept\_manager.dept\_no

INNER JOIN employees ON

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

;

--Return data from the tables - Analysis 5

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

FROM employees

WHERE employees.first\_name='Hercules'

AND

employees.last\_name LIKE 'B%'

;

--Return data from the tables - Analysis 6

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

FROM dept\_manager

INNER JOIN departments ON

departments.dept\_no=dept\_manager.dept\_no

INNER JOIN employees ON

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

WHERE departments.dept\_name='Sales'

;

--Return data from the tables - Analysis 7

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

FROM dept\_manager

INNER JOIN departments ON

departments.dept\_no=dept\_manager.dept\_no

INNER JOIN employees ON

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

WHERE departments.dept\_name='Sales'

OR departments.dept\_name='Development'

;

--Return data from the tables - Analysis 8

SELECT last\_name, COUNT (last\_name)

FROM employees

GROUP BY last\_name

ORDER BY 2 DESC

;