Assignment 2

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Q1)

I have used online Oracle Database 12c Enterprise Edition - 12.2.0.1.0 tool. In order to use this tool, we should first register with oracle website, it is free. Once we register, we need to login to <https://livesql.oracle.com/apex/f?p=590:1:111259568474793>. We will be able to create our tables and run SQL queries. We can save our work as session; entire queries we executed since we login on this session will be stored. Next time when we login we just need to run our previous stored session so that all our previous work will be restored.

An employee table with Primary Key: Lastname, FirstName, MidInitial

CREATE TABLE employee (

Lastname varchar(20),

FirstName varchar(20),

MidInitial varchar(5),

gender varchar(5),

street varchar(20),

city varchar(20),

CONSTRAINT PK\_emp PRIMARY KEY (Lastname, FirstName, MidInitial)

);

A company table with Primary Key: company\_name

CREATE TABLE company (

company\_name varchar(20),

city varchar(20),

PRIMARY KEY (company\_name)

);

A works table with primary key: Lastname, FirstName, MidInitial, company\_name

Foreign keys: Lastname, FirstName, MidInitial references employee table and company\_name references company table

And salary as not null

CREATE TABLE works (

Lastname varchar(20),

FirstName varchar(20),

MidInitial varchar(5),

company\_name varchar(20),

salary numeric(7) NOT NULL,

CONSTRAINT PK\_Works PRIMARY KEY (Lastname, FirstName, MidInitial, company\_name),

FOREIGN KEY (Lastname, FirstName, MidInitial) REFERENCES employee (Lastname, FirstName, MidInitial),

FOREIGN KEY (company\_name) REFERENCES company (company\_name)

);

A manages table with primary key: Lastname, FirstName, MidInitial, ManagerLastname, MFirstName, MMidInitial

Foreign keys: Lastname, FirstName, MidInitial reference employee

Foreign keys: ManagerLastname, MFirstName, MMidInitial references employee

CREATE TABLE manages (

Lastname varchar(20),

FirstName varchar(20),

MidInitial varchar(5),

ManagerLastname varchar(20),

MFirstName varchar(20),

MMidInitial varchar(5),

start\_date date NOT NULL,

CONSTRAINT PK\_manages PRIMARY KEY (Lastname, FirstName, MidInitial, ManagerLastname, MFirstName, MMidInitial),

FOREIGN KEY (Lastname, FirstName, MidInitial) REFERENCES employee (Lastname, FirstName, MidInitial),

FOREIGN KEY (ManagerLastname, MFirstName, MMidInitial) REFERENCES employee (Lastname, FirstName, MidInitial));

INSERT INTO employee

VALUES ('Anderson', 'Susan', 'L', 'F', '108th', 'Omaha');

INSERT INTO employee

VALUES ('Brady', 'Dan', 'L', 'M', 'P street', 'Lincoln');

INSERT INTO employee

VALUES ('Chen', 'Peter', 'K', 'M', '124th', 'Omaha');

INSERT INTO employee

VALUES ('Clemson', 'Ann', 'M', 'F', 'O', 'Lincoln');

INSERT INTO employee

VALUES ('Dale', 'Mary', 'K', 'F', '132th', 'Omaha');

INSERT INTO employee

VALUES ('Gill', 'Mary', 'L', 'F', 'P street', 'Lincoln');

INSERT INTO employee

VALUES ('Harrison', 'Susan', 'M', 'F', 'Old Mill', 'Omaha');

INSERT INTO employee

VALUES ('Jackson', 'Kim', 'A', 'F', '178th', 'Omaha');

INSERT INTO employee

VALUES ('Jason', 'Pat', 'M', 'M', '8th', 'C.Bluffs');

INSERT INTO employee

VALUES ('Kumar', 'Paul', 'T', 'M', 'Dodge', 'Omaha');

INSERT INTO employee

VALUES ('Orr', 'Susanne', 'S', 'F', 'Q', 'Omaha');

INSERT INTO employee

VALUES ('Peterson', 'Mike', 'E', 'M', 'Blondo', 'Omaha');

INSERT INTO employee

VALUES ('Powell', 'Tom', 'E', 'M', 'Broadway', 'C.Bluffs');

INSERT INTO employee

VALUES ('Quinn', 'Jacky', 'M', 'F', '168st', 'Omaha');

INSERT INTO employee

VALUES ('Rand', 'Pam', 'R', 'F', '13st', 'Omaha');

INSERT INTO employee

VALUES ('Schreck', 'Ann', 'P', 'F', '214st', 'Elkhorn');

INSERT INTO employee

VALUES ('Simon', 'Eric', 'K', 'M', '77th', 'Lincoln');

INSERT INTO employee

VALUES ('Smith', 'John', 'A', 'M', '8th', 'C.Bluffs');

INSERT INTO employee

VALUES ('Thomson', 'Ron', 'F', 'M', ' Farnam', 'Omaha');

INSERT INTO employee

VALUES ('Young', 'Don', 'R', 'M', ' Dodge', 'Omaha');

INSERT INTO employee

VALUES ('Wong', 'Carole', 'S', 'F', ' Broadway', 'C.Bluffs');

INSERT INTO company (company\_name, city)

VALUES ('First Bank', 'Omaha');

INSERT INTO company (company\_name, city)

VALUES ('FDR', 'Omaha');

INSERT INTO company (company\_name, city)

VALUES ('Lincoln Star', 'Lincoln');

INSERT INTO company (company\_name, city)

VALUES ('Mutual of Omaha', 'Omaha');

INSERT INTO company (company\_name, city)

VALUES ('Union Pacific', 'Omaha');

INSERT INTO works (Lastname, FirstName, MidInitial, company\_name, salary)

VALUES ('Anderson', 'Susan', 'L', 'Mutual of Omaha', 48000);

INSERT INTO works (Lastname, FirstName, MidInitial, company\_name, salary)

VALUES ('Brady', 'Dan', 'L', 'FDR', 42000);

INSERT INTO works (Lastname, FirstName, MidInitial, company\_name, salary)

VALUES ('Chen', 'Peter', 'K', 'FDR', 53000);

INSERT INTO works (Lastname, FirstName, MidInitial, company\_name, salary)

VALUES ('Clemson', 'Ann', 'M', 'First Bank', 39000);

INSERT INTO works (Lastname, FirstName, MidInitial, company\_name, salary)

VALUES ('Dale', 'Mary', 'K', 'Mutual of Omaha', 58000);

INSERT INTO works (Lastname, FirstName, MidInitial, company\_name, salary)

VALUES ('Gill', 'Mary', 'L', 'Union Pacific', 48700);

INSERT INTO works (Lastname, FirstName, MidInitial, company\_name, salary)

VALUES ('Harrison', 'Susan', 'M', 'Union Pacific', 54320);

INSERT INTO works (Lastname, FirstName, MidInitial, company\_name, salary)

VALUES ('Jackson', 'Kim', 'A', 'FDR', 68000);

INSERT INTO works (Lastname, FirstName, MidInitial, company\_name, salary)

VALUES ('Jason', 'Pat', 'M', 'FDR', 83000);

INSERT INTO works (Lastname, FirstName, MidInitial, company\_name, salary)

VALUES ('Kumar', 'Paul', 'T', 'FDR', 44000);

INSERT INTO works (Lastname, FirstName, MidInitial, company\_name, salary)

VALUES ('Orr', 'Susanne', 'S', 'Lincoln Star', 32000);

INSERT INTO works (Lastname, FirstName, MidInitial, company\_name, salary)

VALUES ('Peterson', 'Mike', 'E', 'First Bank', 37000);

INSERT INTO works (Lastname, FirstName, MidInitial, company\_name, salary)

VALUES ('Powell', 'Tom', 'E', 'First Bank', 54000);

INSERT INTO works (Lastname, FirstName, MidInitial, company\_name, salary)

VALUES ('Quinn', 'Jacky', 'M', 'First Bank', 85000);

INSERT INTO works (Lastname, FirstName, MidInitial, company\_name, salary)

VALUES ('Rand', 'Pam', 'R', 'FDR', 37000);

INSERT INTO works (Lastname, FirstName, MidInitial, company\_name, salary)

VALUES ('Schreck', 'Ann', 'P', 'First Bank', 36000);

INSERT INTO works (Lastname, FirstName, MidInitial, company\_name, salary)

VALUES ('Simon', 'Eric', 'K', 'Mutual of Omaha', 45000);

INSERT INTO works (Lastname, FirstName, MidInitial, company\_name, salary)

VALUES ('Smith', 'John', 'A', 'FDR', 55000);

INSERT INTO works (Lastname, FirstName, MidInitial, company\_name, salary)

VALUES ('Thomson', 'Ron', 'F', 'First Bank', 39000);

INSERT INTO works (Lastname, FirstName, MidInitial, company\_name, salary)

VALUES ('Young', 'Don', 'R', 'Mutual of Omaha', 27000);

INSERT INTO works (Lastname, FirstName, MidInitial, company\_name, salary)

VALUES ('Wong', 'Carole', 'S', 'First Bank', 44000);

INSERT INTO manages (Lastname, FirstName, MidInitial, ManagerLastname, MFirstName, MMidInitial, start\_date)

VALUES ('Anderson', 'Susan', 'L', 'Dale', 'Mary', 'K', TO\_DATE('15-SEP-2002', 'DD-MM-YYYY'));

INSERT INTO manages (Lastname, FirstName, MidInitial, ManagerLastname, MFirstName, MMidInitial, start\_date)

VALUES ('Brady', 'Dan', 'L', 'Jason', 'Pat', 'M', TO\_DATE('05-MAR-2004', 'DD-MM-YYYY'));

INSERT INTO manages (Lastname, FirstName, MidInitial, ManagerLastname, MFirstName, MMidInitial, start\_date)

VALUES ('Chen', 'Peter', 'K', 'Jason', 'Pat', 'M', TO\_DATE('12-JUNE-2003', 'DD-MM-YYYY'));

INSERT INTO manages (Lastname, FirstName, MidInitial, ManagerLastname, MFirstName, MMidInitial, start\_date)

VALUES ('Clemson', 'Ann', 'M', 'Powell', 'Tom', 'E', TO\_DATE('30-AUG-2001', 'DD-MM-YYYY'));

INSERT INTO manages (Lastname, FirstName, MidInitial, ManagerLastname, MFirstName, MMidInitial, start\_date)

VALUES ('Gill', 'Mary', 'L', 'Harrison', 'Susan', 'M', TO\_DATE('25-JAN-2003', 'DD-MM-YYYY'));

INSERT INTO manages (Lastname, FirstName, MidInitial, ManagerLastname, MFirstName, MMidInitial, start\_date)

VALUES ('Jackson', 'Kim', 'A', 'Jason', 'Pat', 'M', TO\_DATE('09-MAY-2008', 'DD-MM-YYYY'));

INSERT INTO manages (Lastname, FirstName, MidInitial, ManagerLastname, MFirstName, MMidInitial, start\_date)

VALUES ('Kumar', 'Paul', 'T', 'Jason', 'Pat', 'M', TO\_DATE('09-MAY-2001', 'DD-MM-YYYY'));

INSERT INTO manages (Lastname, FirstName, MidInitial, ManagerLastname, MFirstName, MMidInitial, start\_date)

VALUES ('Rand', 'Pam', 'R', 'Smith', 'John', 'A', TO\_DATE('15-JAN-2004', 'DD-MM-YYYY'));

INSERT INTO manages (Lastname, FirstName, MidInitial, ManagerLastname, MFirstName, MMidInitial, start\_date)

VALUES ('Peterson', 'Mike', 'E', 'Powell', 'Tom', 'E', TO\_DATE('30-AUG-2006', 'DD-MM-YYYY'));

INSERT INTO manages (Lastname, FirstName, MidInitial, ManagerLastname, MFirstName, MMidInitial, start\_date)

VALUES ('Schreck', 'Ann', 'P', 'Quinn', 'Jacky', 'M', TO\_DATE('28-FEB-1996', 'DD-MM-YYYY'));

INSERT INTO manages (Lastname, FirstName, MidInitial, ManagerLastname, MFirstName, MMidInitial, start\_date)

VALUES ('Simon', 'Eric', 'K', 'Anderson', 'Susan', 'L', TO\_DATE('22-FEB-2004', 'DD-MM-YYYY'));

INSERT INTO manages (Lastname, FirstName, MidInitial, ManagerLastname, MFirstName, MMidInitial, start\_date)

VALUES ('Smith', 'John', 'A', 'Jason', 'Pat', 'M', TO\_DATE('05-MAR-2003', 'DD-MM-YYYY'));

INSERT INTO manages (Lastname, FirstName, MidInitial, ManagerLastname, MFirstName, MMidInitial, start\_date)

VALUES ('Thomson', 'Ron', 'F', 'Powell', 'Tom', 'E', TO\_DATE('30-AUG-1998', 'DD-MM-YYYY'));

INSERT INTO manages (Lastname, FirstName, MidInitial, ManagerLastname, MFirstName, MMidInitial, start\_date)

VALUES ('Wong', 'Carole', 'S', 'Quinn', 'Jacky', 'M', TO\_DATE('28-FEB-2001', 'DD-MM-YYYY'));

INSERT INTO manages (Lastname, FirstName, MidInitial, ManagerLastname, MFirstName, MMidInitial, start\_date)

VALUES ('Young', 'Don', 'R', 'Dale', 'Mary', 'K', TO\_DATE('15-SEP-2007', 'DD-MM-YYYY'));

SELECT

\*

FROM employee;

Result:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **LASTNAME** | **FIRSTNAME** | **MIDINITIAL** | **GENDER** | **STREET** | **CITY** |
| Brady | Dan | L | M | P street | Lincoln |
| Simon | Eric | K | M | 77th | Lincoln |
| Anderson | Susan | L | F | 108th | Omaha |
| Harrison | Susan | M | F | Old Mill | Omaha |
| Schreck | Ann | P | F | 214st | Elkhorn |
| Wong | Carole | S | F | Broadway | C.Bluffs |
| Chen | Peter | K | M | 124th | Omaha |
| Clemson | Ann | M | F | O | Lincoln |
| Dale | Mary | K | F | 132th | Omaha |
| Gill | Mary | L | F | P street | Lincoln |
| Jackson | Kim | A | F | 178th | Omaha |
| Jason | Pat | M | M | 8th | C.Bluffs |
| Kumar | Paul | T | M | Dodge | Omaha |
| Orr | Susanne | S | F | Q | Omaha |
| Peterson | Mike | E | M | Blondo | Omaha |
| Powell | Tom | E | M | Broadway | C.Bluffs |
| Quinn | Jacky | M | F | 168st | Omaha |
| Rand | Pam | R | F | 13st | Omaha |
| Smith | John | A | M | 8th | C.Bluffs |
| Thomson | Ron | F | M | Farnam | Omaha |
| Young | Don | R | M | Dodge | Omaha |

21 rows selected.

SELECT

\*

FROM company;

Result:

|  |  |
| --- | --- |
| **COMPANY\_NAME** | **CITY** |
| Mutual of Omaha | Omaha |
| First Bank | Omaha |
| FDR | Omaha |
| Lincoln Star | Lincoln |
| Union Pacific | Omaha |

5 rows selected.

SELECT

\*

FROM works;

Result:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **LASTNAME** | **FIRSTNAME** | **MIDINITIAL** | **COMPANY\_NAME** | **SALARY** |
| Gill | Mary | L | Union Pacific | 48700 |
| Jackson | Kim | A | FDR | 68000 |
| Jason | Pat | M | FDR | 83000 |
| Young | Don | R | Mutual of Omaha | 27000 |
| Wong | Carole | S | First Bank | 44000 |
| Peterson | Mike | E | First Bank | 37000 |
| Orr | Susanne | S | Lincoln Star | 32000 |
| Powell | Tom | E | First Bank | 54000 |
| Quinn | Jacky | M | First Bank | 85000 |
| Rand | Pam | R | FDR | 37000 |
| Simon | Eric | K | Mutual of Omaha | 45000 |
| Anderson | Susan | L | Mutual of Omaha | 48000 |
| Brady | Dan | L | FDR | 42000 |
| Chen | Peter | K | FDR | 53000 |
| Clemson | Ann | M | First Bank | 39000 |
| Dale | Mary | K | Mutual of Omaha | 58000 |
| Harrison | Susan | M | Union Pacific | 54320 |
| Kumar | Paul | T | FDR | 44000 |
| Schreck | Ann | P | First Bank | 36000 |
| Smith | John | A | FDR | 55000 |
| Thomson | Ron | F | First Bank | 39000 |

21 rows selected.

SELECT

Lastname,

FirstName,

MidInitial,

ManagerLastname,

MFirstName,

MMidInitial,

to\_char(START\_DATE, 'DD-MON-YYYY') AS start\_date

FROM manages;

Result:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **LASTNAME** | **FIRSTNAME** | **MIDINITIAL** | **MANAGERLASTNAME** | **MFIRSTNAME** | **MMIDINITIAL** | **START\_DATE** |
| Anderson | Susan | L | Dale | Mary | K | 15-SEP-2002 |
| Brady | Dan | L | Jason | Pat | M | 05-MAR-2004 |
| Chen | Peter | K | Jason | Pat | M | 12-JUN-2003 |
| Clemson | Ann | M | Powell | Tom | E | 30-AUG-2001 |
| Gill | Mary | L | Harrison | Susan | M | 25-JAN-2003 |
| Jackson | Kim | A | Jason | Pat | M | 09-MAY-2008 |
| Kumar | Paul | T | Jason | Pat | M | 09-MAY-2001 |
| Rand | Pam | R | Smith | John | A | 15-JAN-2004 |
| Peterson | Mike | E | Powell | Tom | E | 30-AUG-2006 |
| Schreck | Ann | P | Quinn | Jacky | M | 28-FEB-1996 |
| Simon | Eric | K | Anderson | Susan | L | 22-FEB-2004 |
| Smith | John | A | Jason | Pat | M | 05-MAR-2003 |
| Thomson | Ron | F | Powell | Tom | E | 30-AUG-1998 |
| Wong | Carole | S | Quinn | Jacky | M | 28-FEB-2001 |
| Young | Don | R | Dale | Mary | K | 15-SEP-2007 |

15 rows selected.

B)

Q1) Relations: company, works, and employee

SELECT Company\_name

FROM

(SELECT Company\_name,

COUNT (DISTINCT employee.city) AS city\_count

FROM employee

JOIN works USING(FIRSTNAME,

LASTNAME,

MIDINITIAL)

JOIN company USING(COMPANY\_NAME)

WHERE employee.city='Omaha'

OR employee.city='Lincoln'

GROUP BY Company\_name)

WHERE city\_count=2;

Result:

|  |
| --- |
| **COMPANY\_NAME** |
| First Bank |
| Union Pacific |
| FDR |
| Mutual of Omaha |

4 rows selected.

Q2)

SELECT concat(concat(concat(Lastname,','),concat(firstname,' ')),midinitial) AS name,

city,

street

FROM

(SELECT lastname,

firstname,

midinitial,

company\_name

FROM

(SELECT ManagerLastname AS Lastname,

MFirstName AS FirstName,

MMidInitial AS MidInitial

FROM manages)

NATURAL JOIN works

WHERE COMPANY\_NAME='Union Pacific')

NATURAL JOIN employee;

Result:

|  |  |  |
| --- | --- | --- |
| **NAME** | **CITY** | **STREET** |
| Harrison,Susan M | Omaha | Old Mill |

Q3)

SELECT concat(concat(concat(Lastname,','),concat(firstname,' ')),midinitial) AS name,

salary,

company\_name,

city

FROM

(SELECT DISTINCT lastname,

firstname,

midinitial,

company\_name,

salary

FROM

(SELECT ManagerLastname AS Lastname,

MFirstName AS FirstName,

MMidInitial AS MidInitial

FROM manages)

NATURAL JOIN works

WHERE COMPANY\_NAME='First Bank')

NATURAL JOIN employee

WHERE city ='Omaha';

Result:

|  |  |  |  |
| --- | --- | --- | --- |
| **NAME** | **SALARY** | **COMPANY\_NAME** | **CITY** |
| Quinn,Jacky M | 85000 | First Bank | Omaha |

Q4)

SELECT Lastname,

firstname,

MidInitial,

salary

FROM

(SELECT Lastname,

firstname,

MidInitial,

City AS Emp\_City,

Company\_name,

salary

FROM employee

JOIN works USING(Lastname,

FirstName,

MidInitial))

JOIN company USING (COMPANY\_NAME)

WHERE Emp\_City=company.city ;

Result:

|  |  |  |  |
| --- | --- | --- | --- |
| **LASTNAME** | **FIRSTNAME** | **MIDINITIAL** | **SALARY** |
| Jackson | Kim | A | 68000 |
| Young | Don | R | 27000 |
| Peterson | Mike | E | 37000 |
| Quinn | Jacky | M | 85000 |
| Rand | Pam | R | 37000 |
| Anderson | Susan | L | 48000 |
| Chen | Peter | K | 53000 |
| Dale | Mary | K | 58000 |
| Harrison | Susan | M | 54320 |
| Kumar | Paul | T | 44000 |
| Thomson | Ron | F | 39000 |

11 rows selected.

Q5)

SELECT Concat(Concat(Concat(elastname, ','), Concat(efirstname, ' ')), emidinitial) AS name

FROM

(SELECT lastname AS ELASTNAME,

firstname AS EFIRSTNAME,

midinitial AS eMIDINITIAL,

street AS eSTREET,

city AS eCITY,

managerlastname,

mfirstname,

mmidinitial

FROM employee

JOIN manages USING(lastname,

firstname,

midinitial))

JOIN

(SELECT DISTINCT lastname AS ManagerLastname,

firstname AS MFirstName,

midinitial AS MMidInitial,

street AS mstreet,

city AS mcity

FROM

(SELECT managerlastname AS Lastname,

mfirstname AS FirstName,

mmidinitial AS MidInitial

FROM manages)

JOIN employee USING(lastname,

firstname,

midinitial)) USING( managerlastname,

mfirstname,

mmidinitial)

WHERE estreet = mstreet

AND ecity = mcity;

Result:

|  |
| --- |
| **NAME** |
| Smith,John A |

Q6)

SELECT concat(concat(concat(LASTNAME,','),concat(FIRSTNAME,' ')),MIDINITIAL) AS empname,

COMPANY\_NAME,

SALARY from

(SELECT LASTNAME,FIRSTNAME,MIDINITIAL

FROM

(SELECT LASTNAME,FIRSTNAME,MIDINITIAL

FROM employee MINUS SELECT LASTNAME,FIRSTNAME,MIDINITIAL

FROM

(SELECT MANAGERLASTNAME AS LASTNAME,MFIRSTNAME AS FIRSTNAME,MMIDINITIAL AS MIDINITIAL

FROM manages))

NATURAL JOIN employee)

JOIN works USING (LASTNAME,

FIRSTNAME,

MIDINITIAL);

Result:

|  |  |  |
| --- | --- | --- |
| **EMPNAME** | **COMPANY\_NAME** | **SALARY** |
| Brady,Dan L | FDR | 42000 |
| Chen,Peter K | FDR | 53000 |
| Clemson,Ann M | First Bank | 39000 |
| Gill,Mary L | Union Pacific | 48700 |
| Jackson,Kim A | FDR | 68000 |
| Kumar,Paul T | FDR | 44000 |
| Orr,Susanne S | Lincoln Star | 32000 |
| Peterson,Mike E | First Bank | 37000 |
| Rand,Pam R | FDR | 37000 |
| Schreck,Ann P | First Bank | 36000 |
| Simon,Eric K | Mutual of Omaha | 45000 |
| Thomson,Ron F | First Bank | 39000 |
| Wong,Carole S | First Bank | 44000 |
| Young,Don R | Mutual of Omaha | 27000 |

14 rows selected.

Q7)

SELECT concat(concat(concat(LASTNAME,','),concat(FIRSTNAME,' ')),MIDINITIAL) AS employee\_name,

COMPANY\_NAME,

SALARY from

(SELECT max(salary) AS Salary

FROM works)

JOIN works USING (salary);

Result:

|  |  |  |
| --- | --- | --- |
| **EMPLOYEE\_NAME** | **COMPANY\_NAME** | **SALARY** |
| Quinn,Jacky M | First Bank | 85000 |

Q8)

CREATE VIEW Manager\_info AS

SELECT LASTNAME,

FIRSTNAME,

MIDINITIAL,

STREET,

CITY from

(SELECT MANAGERLASTNAME AS LASTNAME,MFIRSTNAME AS FIRSTNAME,MMIDINITIAL AS MIDINITIAL

FROM manages

GROUP BY MANAGERLASTNAME, MFIRSTNAME,MMIDINITIAL)

JOIN employee USING(LASTNAME,

FIRSTNAME,

MIDINITIAL);

Result:

View created.

SELECT concat(concat(concat(LASTNAME,','),concat(FIRSTNAME,' ')),MIDINITIAL) AS name,

STREET,

CITY

FROM Manager\_info;

Result:

|  |  |  |
| --- | --- | --- |
| **NAME** | **STREET** | **CITY** |
| Jason,Pat M | 8th | C.Bluffs |
| Powell,Tom E | Broadway | C.Bluffs |
| Smith,John A | 8th | C.Bluffs |
| Harrison,Susan M | Old Mill | Omaha |
| Quinn,Jacky M | 168st | Omaha |
| Anderson,Susan L | 108th | Omaha |
| Dale,Mary K | 132th | Omaha |

7 rows selected.

Q9)

SELECT LASTNAME,

FIRSTNAME,

MIDINITIAL,

COMPANY\_NAME

FROM Manager\_info

JOIN works USING(LASTNAME,

FIRSTNAME,

MIDINITIAL)

WHERE salary >

(SELECT Round(avg(salary),0) AS AvgSalary

FROM Manager\_info

JOIN works USING(LASTNAME,

FIRSTNAME,

MIDINITIAL));

Result:

|  |  |  |  |
| --- | --- | --- | --- |
| **LASTNAME** | **FIRSTNAME** | **MIDINITIAL** | **COMPANY\_NAME** |
| Jason | Pat | M | FDR |
| Quinn | Jacky | M | First Bank |

2 rows selected.

Q10)

First created a view “Mutual\_of\_Omaha\_emp\_cities” contains all cities where employees of Mutual of Omaha reside.

CREATE VIEW Mutual\_of\_Omaha\_emp\_cities AS

SELECT DISTINCT city AS Emp\_MO\_city

FROM

(SELECT LASTNAME,

FIRSTNAME,

MIDINITIAL,

CITY AS comapany\_city,

COMPANY\_NAME

FROM works

NATURAL JOIN company

WHERE COMPANY\_NAME='Mutual of Omaha')

JOIN employee USING (LASTNAME,

FIRSTNAME,

MIDINITIAL) ;

Get all companies which has employees reside in any the cities in the view “Mutual\_of\_Omaha\_emp\_cities”. Then group by company and count of cities where all companies employee resides equals to the cities count in the view “Mutual\_of\_Omaha\_emp\_cities”

SELECT COMPANY\_NAME

FROM works

NATURAL JOIN employee,

Mutual\_of\_Omaha\_emp\_cities

WHERE city=Mutual\_of\_Omaha\_emp\_cities.Emp\_MO\_city

GROUP BY company\_name

HAVING COUNT (DISTINCT city)=

(SELECT count(Emp\_MO\_city)

FROM Mutual\_of\_Omaha\_emp\_cities);

Result:

|  |
| --- |
| **COMPANY\_NAME** |
| First Bank |
| Union Pacific |
| FDR |
| Mutual of Omaha |

4 rows selected.

Q11)

SELECT LASTNAME,

FIRSTNAME,

MIDINITIAL,

SALARY,

works.COMPANY\_NAME,

company\_avg\_salary.AVGSALARY AS Company\_AVGSalary

FROM works,

(SELECT company\_name,

Round(avg(salary),0) AS avgsalary

FROM employee

NATURAL JOIN works

GROUP BY company\_name) company\_avg\_salary

WHERE (works.salary<company\_avg\_salary.avgsalary)

AND (works.company\_name=company\_avg\_salary.company\_name);

Result:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **LASTNAME** | **FIRSTNAME** | **MIDINITIAL** | **SALARY** | **COMPANY\_NAME** | **COMPANY\_AVGSALARY** |
| Clemson | Ann | M | 39000 | First Bank | 47714 |
| Peterson | Mike | E | 37000 | First Bank | 47714 |
| Schreck | Ann | P | 36000 | First Bank | 47714 |
| Thomson | Ron | F | 39000 | First Bank | 47714 |
| Wong | Carole | S | 44000 | First Bank | 47714 |
| Gill | Mary | L | 48700 | Union Pacific | 51510 |
| Young | Don | R | 27000 | Mutual of Omaha | 44500 |
| Brady | Dan | L | 42000 | FDR | 54571 |
| Chen | Peter | K | 53000 | FDR | 54571 |
| Kumar | Paul | T | 44000 | FDR | 54571 |
| Rand | Pam | R | 37000 | FDR | 54571 |

11 rows selected.

Q12)

UPDATE works

SET salary =

CASE

WHEN

LASTNAME IN (SELECT DISTINCT

MANAGERLASTNAME AS lastname

FROM manages) THEN salary \* 1.04

ELSE salary \* 1.06

END;

SELECT

\*

FROM works;

ROLLBACK;

SELECT

\*

FROM works;

Result:

21 row(s) updated.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **LASTNAME** | **FIRSTNAME** | **MIDINITIAL** | **COMPANY\_NAME** | **SALARY** |
| Anderson | Susan | L | Mutual of Omaha | 49920 |
| Brady | Dan | L | FDR | 44520 |
| Chen | Peter | K | FDR | 56180 |
| Clemson | Ann | M | First Bank | 41340 |
| Dale | Mary | K | Mutual of Omaha | 60320 |
| Gill | Mary | L | Union Pacific | 51622 |
| Harrison | Susan | M | Union Pacific | 56493 |
| Jackson | Kim | A | FDR | 72080 |
| Jason | Pat | M | FDR | 86320 |
| Kumar | Paul | T | FDR | 46640 |
| Orr | Susanne | S | Lincoln Star | 33920 |
| Peterson | Mike | E | First Bank | 39220 |
| Powell | Tom | E | First Bank | 56160 |
| Quinn | Jacky | M | First Bank | 88400 |
| Rand | Pam | R | FDR | 39220 |
| Schreck | Ann | P | First Bank | 38160 |
| Simon | Eric | K | Mutual of Omaha | 47700 |
| Smith | John | A | FDR | 57200 |
| Thomson | Ron | F | First Bank | 41340 |
| Young | Don | R | Mutual of Omaha | 28620 |
| Wong | Carole | S | First Bank | 46640 |

21 rows selected. Statement processed.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **LASTNAME** | **FIRSTNAME** | **MIDINITIAL** | **COMPANY\_NAME** | **SALARY** |
| Anderson | Susan | L | Mutual of Omaha | 48000 |
| Brady | Dan | L | FDR | 42000 |
| Chen | Peter | K | FDR | 53000 |
| Clemson | Ann | M | First Bank | 39000 |
| Dale | Mary | K | Mutual of Omaha | 58000 |
| Gill | Mary | L | Union Pacific | 48700 |
| Harrison | Susan | M | Union Pacific | 54320 |
| Jackson | Kim | A | FDR | 68000 |
| Jason | Pat | M | FDR | 83000 |
| Kumar | Paul | T | FDR | 44000 |
| Orr | Susanne | S | Lincoln Star | 32000 |
| Peterson | Mike | E | First Bank | 37000 |
| Powell | Tom | E | First Bank | 54000 |
| Quinn | Jacky | M | First Bank | 85000 |
| Rand | Pam | R | FDR | 37000 |
| Schreck | Ann | P | First Bank | 36000 |
| Simon | Eric | K | Mutual of Omaha | 45000 |
| Smith | John | A | FDR | 55000 |
| Thomson | Ron | F | First Bank | 39000 |
| Young | Don | R | Mutual of Omaha | 27000 |
| Wong | Carole | S | First Bank | 44000 |

21 rows selected.