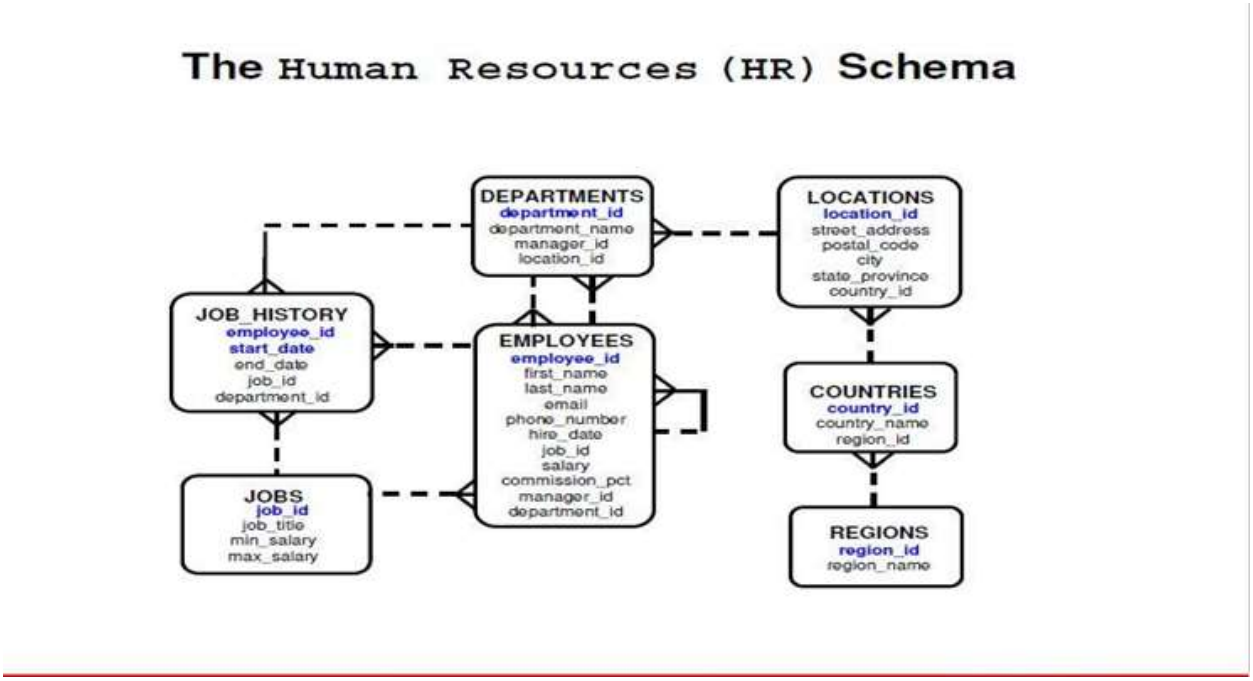


Display the department (id , name), manager(id , name)

نلاحظ إن اول 3 هنعرضهم موجودين في ال

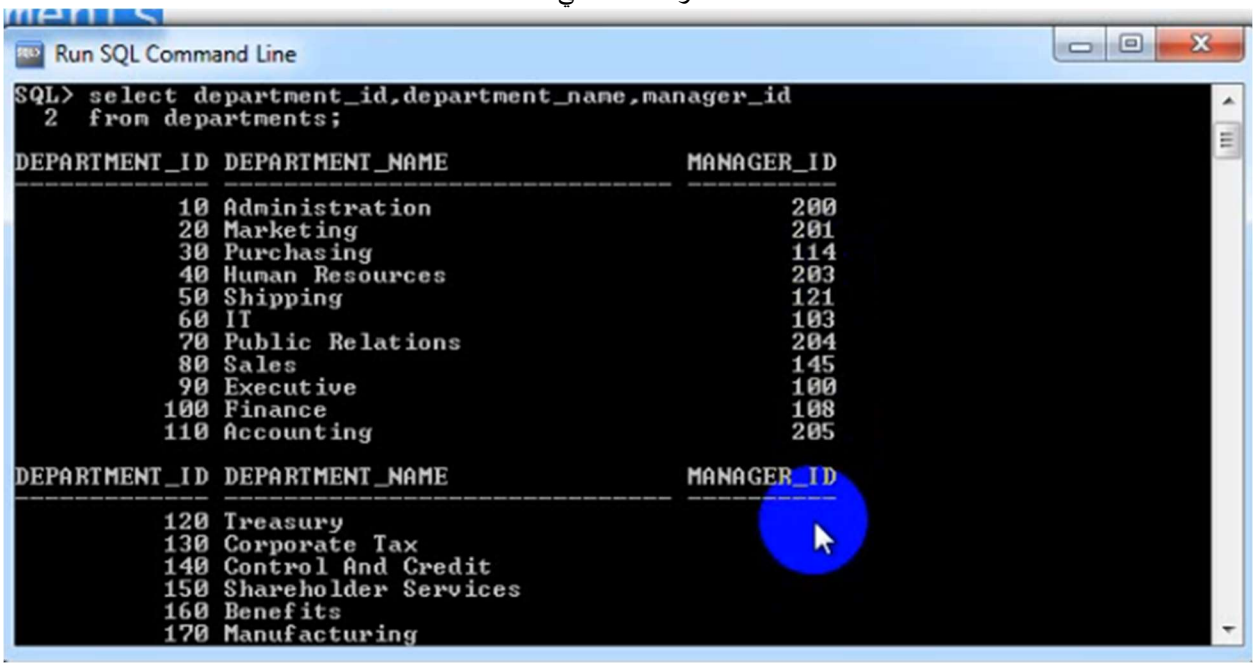
departments

بينما الاخير في ال

employees

####

لو عملت التالي



هتلاحظ ان فيه اقسام ملهاش مديرين

كذلك لو عايز مثلا تعرف اسم المدير ذو الرقم 200 هتعمل

```
SQL> select first_name,last_name
  2  from employees
  3  where employee_id=200;

FIRST_NAME           LAST_NAME
-------------------- -------------------------
Jennifer             Whalen

SQL>
```

يعني لو عملنا الكود بتاع الحل لازم تطلع جينيفر معانا ذات آي دي 200

الكود دا هيشتغل ....

File Edit Format View Help

used on not {using} 'cause with the 2nd we should determine what col is in common { but there is not ... just some col < manager id > is derived from another < employee id >

Task6_Solution
==========

manager name

```
Q1:
select d.department_id,department_name,d.manager_id,first_name||' '||last_name
from departments d join employees e
on d.manager_id = employee_id
```

بس هو كده هيقعد يقارن بين المانيجر آي دي <واللي فيه لعلمك قيم نل >
مع قيم الموظفين وفي الاخر من هتطلع حاجة مفيدة لأنك بتقارن نل بقيمة تانية
فعلشان توفر على نفسك الوقت الضايع في المقارنة المش مفيدة دي
كان كل نل هنقارن بينها وبين 107 قيمة تانية من عمود الآي دي بتاع الموظفين
فهنضيف حتة بسيطة في ال
on

```
SQL>
SQL> select d.department_id,department_name,d.manager_id,first_name||' '||last_n
ame Mgr_Name
  2  from departments d join employees e
  3  on  d.manager_id is not null and d.manager_id = employee_id;
```

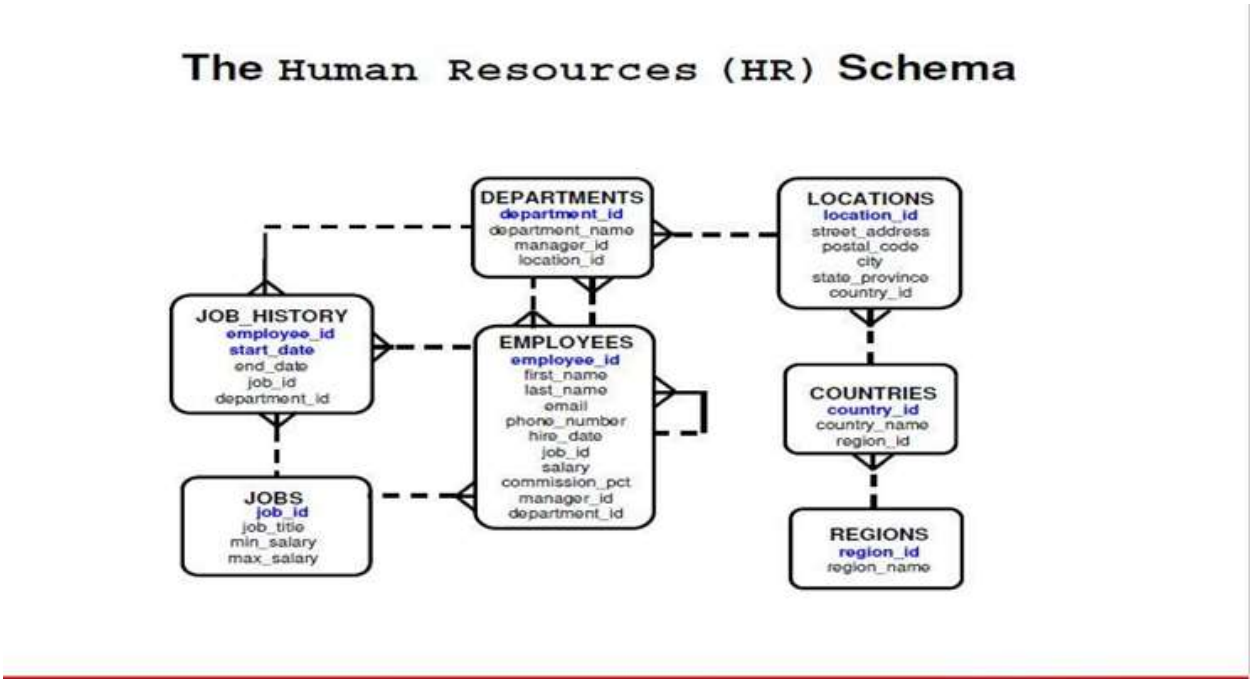
Run SQL Command Line

```
-----------------------------------------------
          10 Administration                200
Jennifer Whalen

          20 Marketing                     201
Michael Hartstein

          40 Human Resources               203
Susan Mavris


DEPARTMENT_ID DEPARTMENT_NAME                MANAGER_ID
------------- ------------------------------ ----------
MGR_NAME
-----------------------------------------------
          70 Public Relations              204
Hermann Baer

         110 Accounting                    205
Shelley Higgins


11 rows selected.

SQL>
```

هيطلع 11 قسم وهم بالفعل اللي ليهم مديرين وعلشان تتأكد

```
SQL> select count(unique department_id)
  2  from employees;

COUNT(UNIQUEDEPARTMENT_ID)
--------------------------
                        11
```

لو كان القسم ملوش آي دي يبقى ملوش مدير



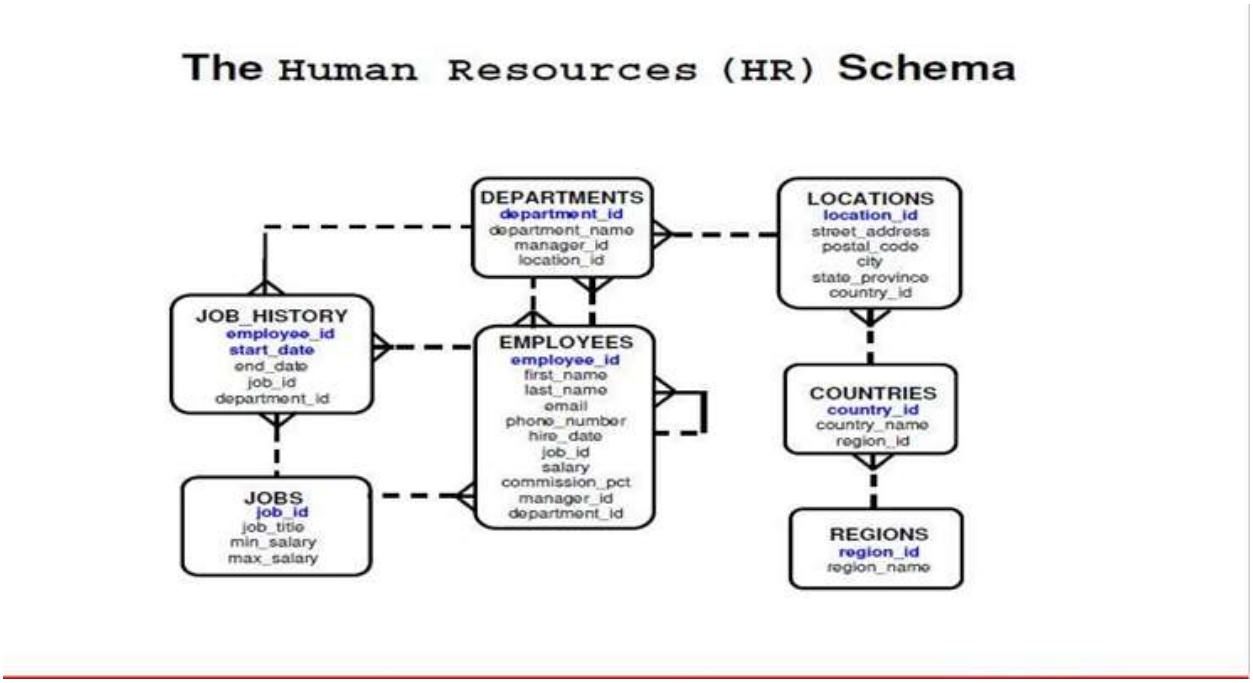
Names of employees who are directly managed by *Steven King*

Then we use the self-join

###

```
14 rows selected.

SQL> select w.employee_id Emp_id,w.first_name||' '||w.last_name Emp_Name
  2  from employees w join employees m
  3  on w.manager_id =m.employee_id and m.first_name='Steven' and m.last_name='K
ing';
```

```
    EMP_ID EMP_NAME
---------- ----------------------------------------
       101 Neena Kochhar
       102 Lex De Haan
       114 Den Raphaely
       120 Matthew Weiss
       121 Adam Fripp
       122 Payam Kaufling
       123 Shanta Vollman
       124 Kevin Mourgos
       145 John Russell
       146 Karen Partners
       147 Alberto Errazuriz

    EMP_ID EMP_NAME
---------- ----------------------------------------
       148 Gerald Cambrault
       149 Eleni Zlotkey
       201 Michael Hartstein

14 rows selected.

SQL>
```



for each dep

display dep name , max , min , avg salary of its employees

هنعمل ماتش بين جدول الاقسام بسبب أول مطلوب

بين جدول الموظفين بسبب آخر تلاتة

وتلاحظ إنه قال لكل

يعني هنعمل

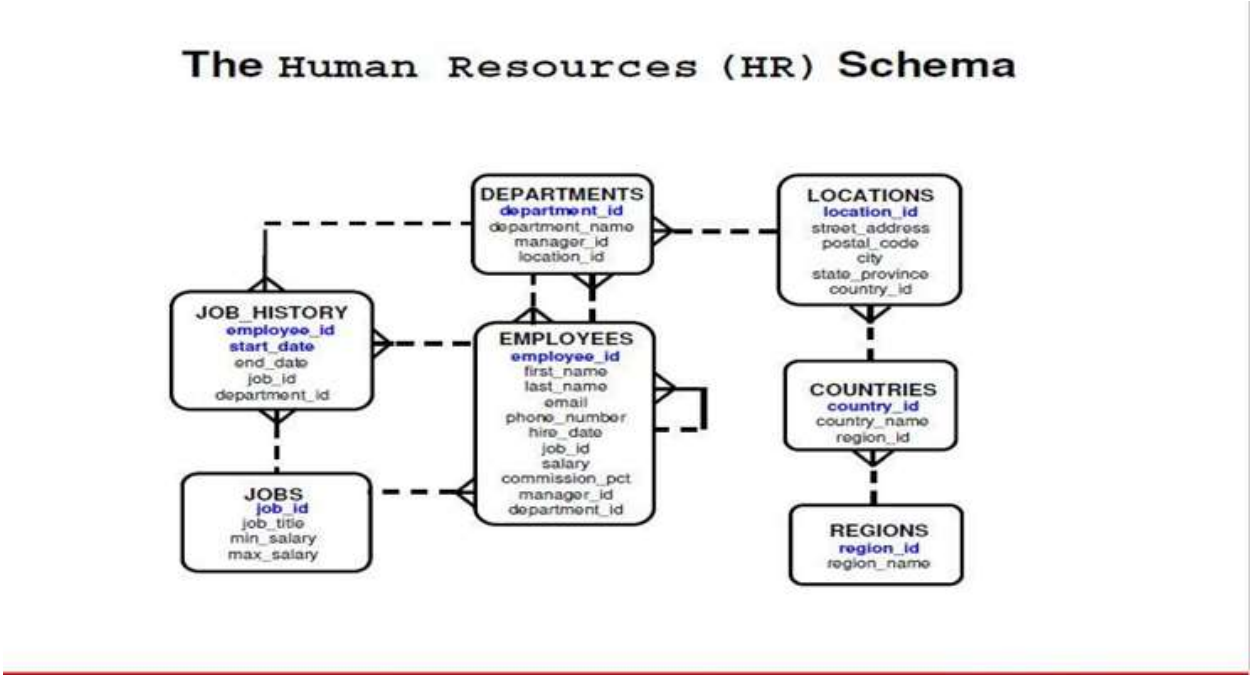
group by

###

```
SQL> select d.department_id ID,department_name Name,max(salary) Max,min(salary)
Min,avg(salary) Avg
  2  from employees e join departments d
  3  on e.department_id = d.department_id
  4  group by d.department_id,department_name;

        ID NAME                           MAX        MIN        AVG
---------- ------------------------------ ---------- ---------- ----------
       100 Finance                         12008       6900 8601.33333
        50 Shipping                         8200       2100 3475.55556
        70 Public Relations                10000      10000      10000
        30 Purchasing                      11000       2500       4150
        90 Executive                       24000      17000 19333.3333
        10 Administration                   4400       4400       4400
       110 Accounting                      12008       8300      10154
        40 Human Resources                  6500       6500       6500
        20 Marketing                       13000       6000       9500
        60 IT                               9000       4200       5760
        80 Sales                           14000       6100 8955.88235

11 rows selected.

SQL>
```

ولو ربتناهم هيبقوا كالتالي

```
  4  group by d.department_id,department_name
  5  order by 1;

        ID NAME                                 MAX        MIN        AVG
---------- ------------------------------ ---------- ---------- ----------
        10 Administration                       4400       4400       4400
        20 Marketing                           13000       6000       9500
        30 Purchasing                          11000       2500       4150
        40 Human Resources                      6500       6500       6500
        50 Shipping                             8200       2100 3475.55556
        60 IT                                   9000       4200       5760
        70 Public Relations                    10000      10000      10000
        80 Sales                               14000       6100 8955.88235
        90 Executive                           24000      17000 19333.3333
       100 Finance                             12008       6900 8601.33333
       110 Accounting                          12008       8300      10154

11 rows selected.

SQL>
```



display how many empl , sum (sal) , job_title
for each job_id

هنستعمل

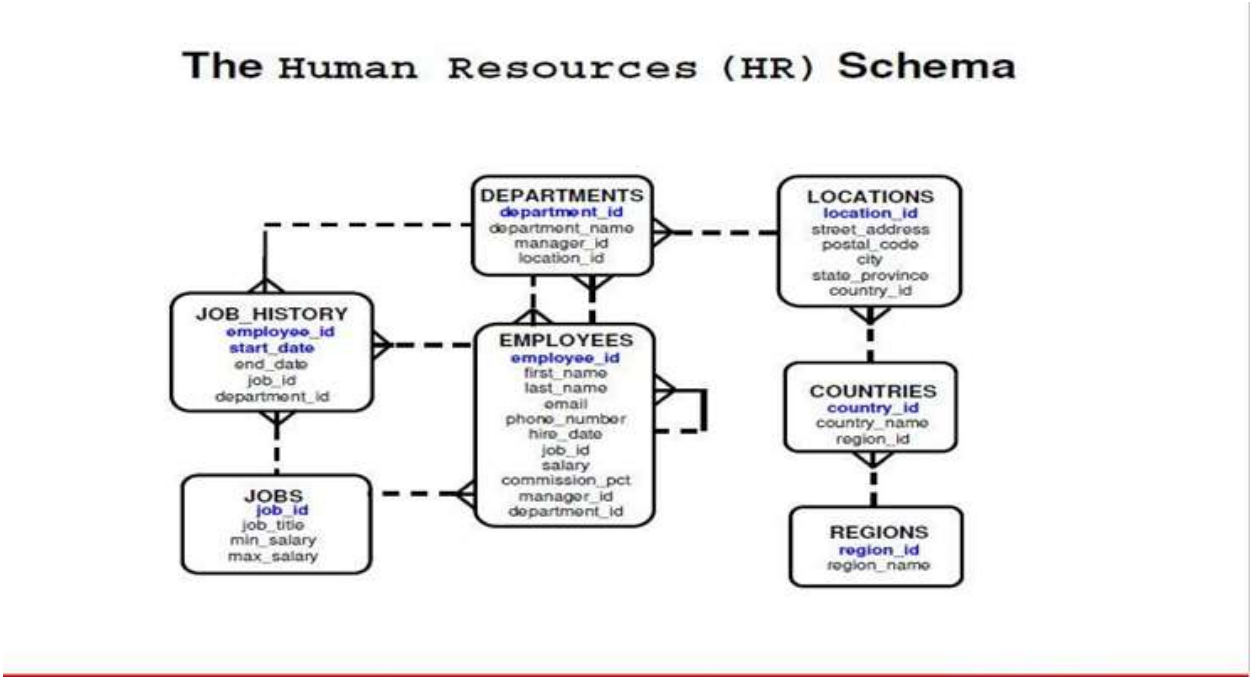
group by job_id

هنربط بين جدول الموظفين و....الوظائف بسبب المعروض الاخير

###

```
SQL> select j.job_id ID,job_title Title,count(employee_id) Num,sum(salary) Total
  2  from jobs j join employees e
  3  on j.job_id=e.job_id
  4  group by j.job_id,job_title
```

```
IT_PROG    Programmer                          5      28800
MK_MAN     Marketing Manager                   1      13000
SA_REP     Sales Representative               30     250500
AC_MGR     Accounting Manager                  1      12008
AC_ACCOUNT Public Accountant                   1       8300
FI_MGR     Finance Manager                     1      12008
PU_MAN     Purchasing Manager                  1      11000
SH_CLERK   Shipping Clerk                     20      64300
FI_ACCOUNT Accountant                          5      39600
AD_PRES    President                           1      24000

ID         TITLE                               NUM      TOTAL
---------- ---------------------------------- ---------- ----------
MK_REP     Marketing Representative            1       6000
SA_MAN     Sales Manager                       5      61000
AD_VP      Administration Vice President       2      34000
PU_CLERK   Purchasing Clerk                    5      13900
ST_CLERK   Stock Clerk                        20      55700
ST_MAN     Stock Manager                       5      36400
HR_REP     Human Resources Representative      1       6500
PR_REP     Public Relations Representative     1      10000

19 rows selected.
```



display dep name , city , country name , region name

هنربط بين 4 جداول

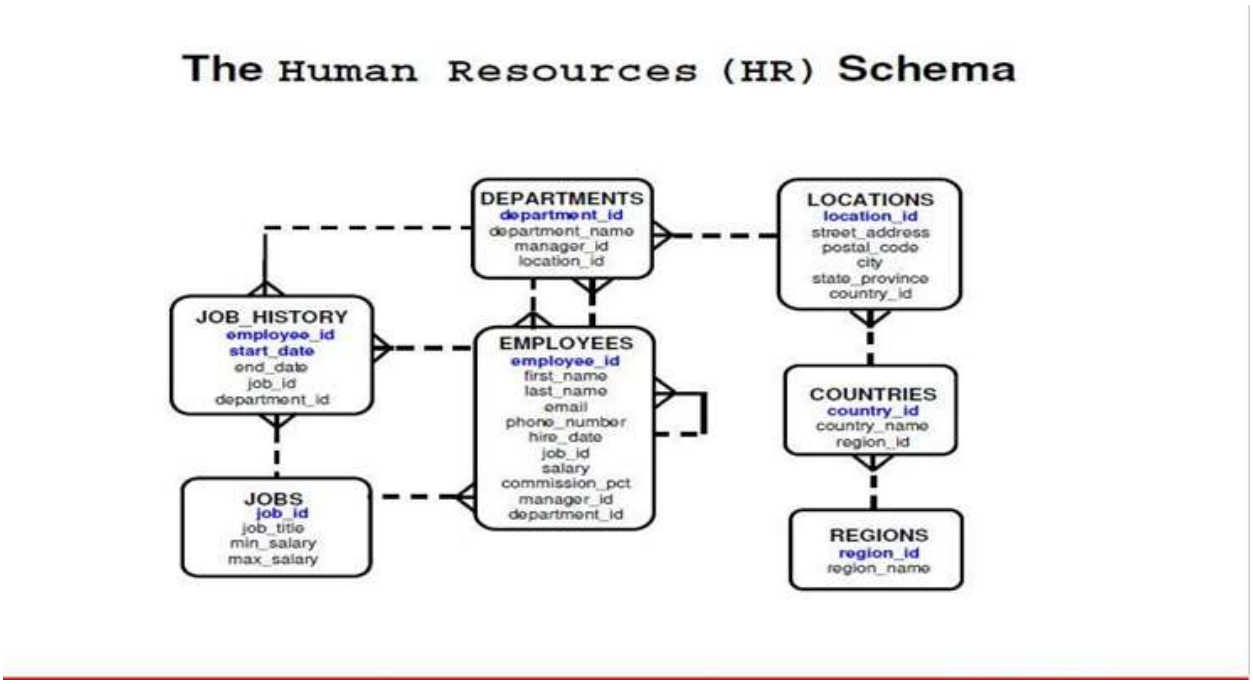
الأقسام و الموقع والدول والمناطق

###

```
SQL> select department_name,city,country_name,region_name
  2  from departments d join locations l
  3  on d.location_id = l.location_id join countries c
  4  on c.country_id = l.country_id join regions r
  5  on r.region_id = c.region_id;
```

Run SQL Command Line

```
Executive                      Seattle
United States of America                  Americas

Purchasing                     Seattle
United States of America                  Americas


DEPARTMENT_NAME                CITY
------------------------------ ------------------------------
COUNTRY_NAME                               REGION_NAME
---------------------------------------- ------------------------------
Administration                 Seattle
United States of America                  Americas

Shipping                       South San Francisco
United States of America                  Americas

IT                             Southlake
United States of America                  Americas

27 rows selected.

SQL>
```



for each manager

display manager (id , name) , no. of empl they manage

هنستعمل

group by manager_id

وكلهم في نفس الجدول

يبقى هنعمل

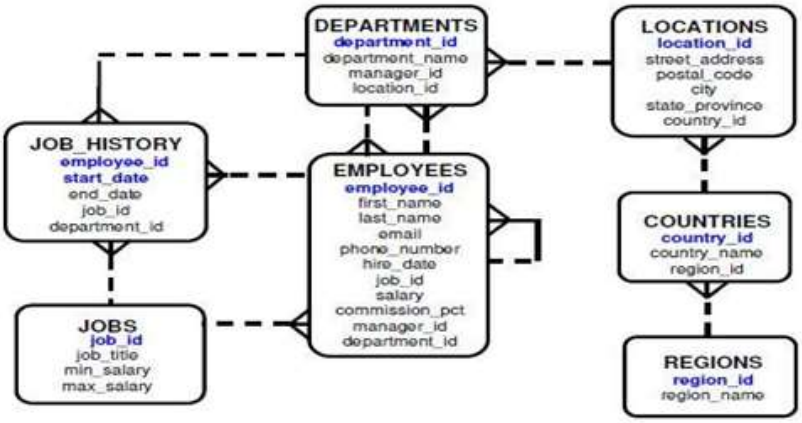
self-join

###

```
27 rows selected.

SQL> select w.manager_id Mgr_ID,m.first_name||' '||m.last_name Mgr_Name,count(w.
employee_id) Num_Of_Emps
  2  from employees w join employees m
  3  on w.manager_id=m.employee_id
  4  group by w.manager_id,m.first_name||' '||m.last_name
```

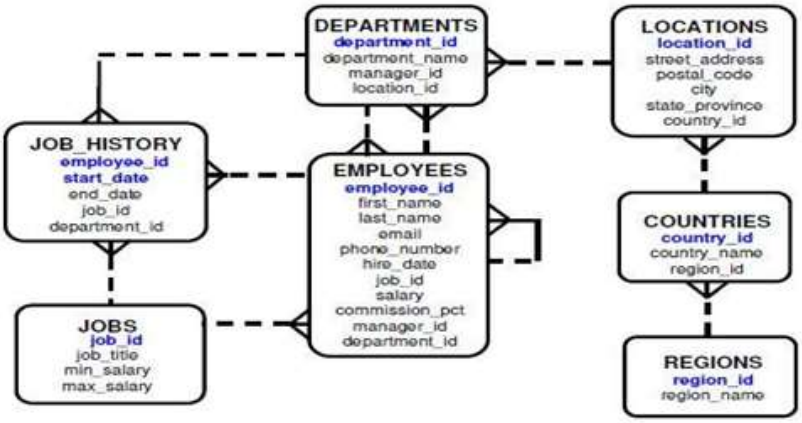
```
       205 Shelley Higgins                                          1

    MGR_ID MGR_NAME                                       NUM_OF_EMPS
---------- ---------------------------------------------- -----------
       101 Neena Kochhar                                           5
       120 Matthew Weiss                                           8
       122 Payam Kaufling                                          8
       147 Alberto Errazuriz                                       6
       145 John Russell                                            6
       124 Kevin Mourgos                                           8
       149 Eleni Zlotkey                                           6

18 rows selected.

SQL>
```

The Human Resources (HR) Schema



###

The Human Resources (HR) Schema



###