**SUB QUERIES:**

Database Name: **HR**

1. Write a query to display the last name and hire date of any employee in the same department as SALES.

select last\_name,hire\_date

from [HR].[employees]

where department\_id=(

select department\_id from [HR].[departments]

where [department\_name]='Sales');

2. Create a query to display the employee numbers and last names of all employees who earn more than the average salary. Sort the results in ascending order of salary.

select [employee\_id],[last\_name] from [HR].[employees]

where salary > (select avg(salary)

from [HR].[employees] );

3. Write a query that displays the employee numbers and last names of all employees who work in a department with any employee whose last name contains a ‘*u’*.

select [employee\_id],[last\_name] from [HR].[employees]

where [employee\_id]in (select [employee\_id]

from [HR].[employees]

where [last\_name] like '%u%')

4. Display the last name, department number, and job ID of all employees whose department location is ATLANTA.

select last\_name,department\_id,job\_id

from [HR].[employees]

where department\_id in (select department\_id

from [HR].[departments] where [location\_id] in (Select location\_id

from [HR].[locations] where [city]='ATLANTA'))

5. Display the last name and salary of every employee who reports to FILLMORE.

SELECT LAST\_NAME ,SALARY

FROM [HR].[employees]

WHERE [employee\_id] IN

(SELECT [manager\_id]

FROM [HR].[employees]

WHERE LAST\_NAME LIKE 'FILLMORE')

6. Display the department number, last name, and job ID for every employee in the OPERATIONS department.

select [department\_id],[last\_name],[job\_id]

from [HR].[employees]

where [employee\_id]=(

select department\_id

from [HR].[departments]

where [department\_name]='Operations');

7. Modify the above query to display the employee numbers, last names, and salaries of all employees who earn more than the average salary and who work in a department with any employee with a ‘*u’* in their name.

select [employee\_id],last\_name,salary

from [HR].[employees]

where salary>(select avg(salary) from [HR].[employees] where department\_id in(

select department\_id from [HR].[employees]

where concat(first\_name,' ',last\_name) like '%u%'));

8. Display the names of all employees whose job title is the same as anyone in the sales dept.

select last\_name

from [HR].[employees]

where [department\_id] in (select [department\_id]

from [HR].[departments]

where [department\_name] like '%sales%')

9. Write a compound query to produce a list of employees showing raise percentages, employee IDs, and salaries. Employees in department 1 and 3 are given a 5% raise, employees in department 2 are given a 10% raise, employees in departments 4 and 5 are given a 15% raise, and employees in department 6 are not given a raise.

10. Write a query to display the top three earners in the EMPLOYEES table. Display their last names and salaries.

SELECT \*

FROM (select salary ,dense\_rank() over (order by salary )as k from [HR].[employees]) e

where k between 1 and 3;

11. Display the names of all employees with their salary and commission earned. Employees with a null commission should have 0 in the commission column

SELECT first\_name,salary,isnull([commission\_pct],0) as commission\_value

from [HR].[employees]

12. Display the Managers (name) with top three salaries along with their salaries and department information.

SELECT \*

FROM

(select last\_name as manager\_name,salary

,row\_number() over (order by salary desc )as k from [HR].[employees]

where [employee\_id] in (select [manager\_id] from [HR].[employees])) e

where k between 1 and 3 ;**ADVANCED SUBQUERIES:**

13. Write a query to display the last name, department number, and salary of any employee whose department number and salary both match the department number and salary of any employee who elarns a commission.

select [last\_name],[department\_id],[salary]

from [HR].[employees] e

where [department\_id] in (select department\_id from [HR].[employees]

where [department\_id]=e.[department\_id] and [salary]=e.[salary] and

[employee\_id] <>e.[employee\_id] and e.[commission\_pct] is not null

)

15 (doubt). Display the last name, department name, and salary of any employee whose salary and commission match the salary and commission of any employee with a manager ID 10.

select e.[last\_name] ,

(select [department\_name]

from [HR].[departments] where [department\_id]=e.[department\_id]

) as department\_name

from

[HR].[employees] e

where e.salary = (select salary from [HR].[employees] where [manager\_id]=100)

and

e.[commission\_pct] = (select [commission\_pct] from [HR].[employees]

where [manager\_id]=100)

16. Create a query to display the last name, hire date (hire date should be in 'Mon dd, yy' format), and salary for all employees who have the same salary and commission as GARFIELD.

**Note:** Do not display GARFIELD in the result set.

select [last\_name],format([hire\_date],'ddd dd,yy') from [HR].[employees]

where

[salary]+[commission\_pct]=

(select (select [salary]+[commission\_pct] from [HR].[employees] ) where

[department\_name]='GARFIELD')

17. Create a query to display the employees who earns salary that is higher than the salary of all the sales managers (JOB = ‘SALES I’). Sort the results of salary from highest to lowest.

SELECT first\_name,salary FROM [HR].[employees]

where salary>(select max\_salary from [HR].[jobs]

WHERE [job\_title]='Sales Manager' )

order by salary;

19. Write a query to find all employees who earn more than the average salary in their department. Display last name, salary, department ID, and the average salary for that department. Sort by average salary. Use aliases for the columns retrieved by the query.

select \* from(

select [last\_name],[salary],[department\_id],

(select avg(salary)

from [HR].[employees] where [department\_id]=e.[department\_id]

) as avg

from [HR].[employees] e

where [salary]>(select avg([salary]) from [HR].[employees]

where [department\_id]=e.[department\_id])

) x

order by avg

20. Find all employees who are not supervisors.

a.First do this by using the NOT EXISTS operator.

select \* from [HR].[employees]

where not exists(

select [employee\_id] from [HR].[employees] where [manager\_id] is null)

b. Can this be done by using the NOT IN operator? How, or why not?

select \* from [HR].[employees]

where not in(

select [employee\_id] from [HR].[employees] where [manager\_id] is null)

NO,we can’t perform the not in operation ,because that will take the range values….

21. Write a query to display the firstname concatenated with last names in upper case of the employees who earn less than the average salary in their departments.

select concat(first\_name,upper([last\_name]) )

from [HR].[employees] e

where [salary]<(select avg([salary]) from [HR].[employees]

where [department\_id]=e.[department\_id])

22. Write a query to display the last name of employees who have one or more coworkers in their departments with later hire dates, but higher salaries.

23. Write a query to display the employee ID, last names, and department names (first letter of dept name should be in caps) of all employees.

**Note**: Use a scalar sub query to retrieve the department name in the SELECT statement.

select [employee\_id],[last\_name],(select concat(

upper(Left([department\_name],1)),substring([department\_name],2,len([department\_name])))

from [HR].[departments]

where e.[department\_id]=[department\_id] ) from [HR].[employees] e

24. Write a query to display the department names of those departments whose total salary cost is above one-eighth (1/8) of the total salary cost of the whole company. Use the WITH clause to write this query. Name the query SUMMARY.

;WITH temp as (

select (sum(salary)/8) sume from [HR].[employees] group by [department\_id])

select distinct[department\_id],[salary] from [HR].[employees],temp

where [HR].[employees].[salary]>sume