

Task 4.3 Developing queries processing with DML Multirow functions and operators.

Perform the advanced query processing (multirow abilities) and test its heuristics using the designing of optimal correlated and nested subqueries such as finding summary statistics.

Consider the schema for

EMPLOYEES (emp-no emp-name, department, Dept-No, salary, Age)

orders (emp-no, order-id, price, qty-ord, qty-hand)

Itemfile (item-id, item-name, qty-ord, qty-hand, item-rate)

Queries using union, Intersect, Minus

union :- the union operator returns all distinct rows selected by two (or) more queries.

SQL > select emp-no from employees;

~~diff~~

Practice Questions :-

1) Find the emp-no of employees whose name starts with 'S' and ends with 'M'.

2) Find the names of the employees whose age is between 20 and 40.

3) Display all the names of the employees beginning with 'R'.

4) Display the sorted list of employees names.

Queries Using Group By, Having clause and Order clause

Group By :- This query is used to group to all the records in a relation together for each and every value of a specific key and then display them for a selected set of field the relation.

SQL > select deptno_count(*) from employees group by deptno;

Group By Having :- the HAVING clause was added to SQL because the WHERE keyword could not be used with aggregate functions.

The HAVING clause must follow the GROUP BY clause in a query and must be preceded by the ORDER BY clause if used.

SQL > select deptno_count(*) from employees group by deptno having deptno is not null;

Order By :- This query is used to display a select set of fields from a relation in an ordered manner base on storage fields.

Syntax :-

select <column(s)> from <Table Name> where
[condition(s)] [order by <column Name> [asc]]
[desc].

SQL > select empno, ename, salary from

employees order by salary.

Output:-

SQL > select emp-no from orders;

output:-

SQL > select emp-no from employees () union select emp-no
from orders.

output:-

union All:-

SQL > select emp-no from employees union all select emp-no
from orders.

Intersect:-

SQL > select emp-no from employees intersect select
emp-no from orders;

output:-

Minus:-

SQL > select emp-no from employees minus select emp-no
from orders;

output:-

SQL > select salary & comm net-sal from emp-master;

output:-

SQL > select 12 (salary+comm) annual netsal from emp-master;

output:-

SQL > select * from employees

SQL > insert into employees select * from employee where emp-
id in (select emp-id from employees);

SQL plus having following operators

SQL > select salary + column from emp_master, salary + column

IN Query: select * from Employees where department IN
(select Department from employees where department = 'Sales');

NOT IN Query: select * from employees where Department NOT IN
('Sales', 'Marketing');

ALL:

Query: select * from employees where salary > ANY (select salary

From Employees where Department = "Sales");

ANY:

Query: select * from employees where salary > ALL (select salary

From employees where department = 'Sales');

SQL > select * from order_master where order_no > (select order_no

from orders);

SQL > select * from order_master where order_no = (select order_no

from orders);

SET

INSERT, INTO target_table (Column 1, Column 2, ...)

Select column 1, Column 2, ...

From source_table

where condition;

Insert into Alumn(stu_Id, Name, Graduation Year) select stu_Id,

Name, passout_year From student

where Passout_Year 2023;

Delete From Target Table

where column_name IN (select column are from source_table
whose condition).

Delete the lowest paid employee

Delete From Employee

where salary = (

select MIN(salary)

From Employee

);

Delete all orders placed by customer Pn chennai

output:-

item name

key board

Laptop

Mouse

web cam

output:-

item-name

key board

Mouse

output:-

Item name

Laptop

output:-

dept-name	no of emp	avg salary
marketing	3	67500

sales	2	80000
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HR	1	95000
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engineering	3	75000
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output:-

e-name	salary
Frank	850000

David	110000
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Bob	90000
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Frank	850000
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output:-

e-name	salary
Alice	75000
charlie	60000
eve	80000

output:-

e-name	salary
Alice	75000
charlie	60000
eve	80000

```
update Employee  
SET salary = salary + 5000  
where Dept = ID  
select Dept-ID  
From Department  
where Dept-Name = 'IT'  
);
```

Increase salary of employees in IT department.

Create a department summary Table

Create Table Dept-summary AS
Select Dept-ID, COUNT(*) AS Total Employees,
AVG(salary) AS Avg-salary

From Employee

Group By Dept-ID;

Selects only students who scored a A grade.

Result:- queries with DML functions and operators
executed successfully

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