

Experiment 3

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Branch: BE-CSE **Section/Group:** KRG - 1A

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Course Name: ADBMS Course Code: 23CSP-333

1. AIM

- 1. Max Value without Duplicates [EASY]
 - o Create a table of Employee IDs.
 - Insert sample IDs (with duplicates).
 - Write a query to return the maximum EmpID excluding duplicate values using subqueries.
- 2. Department Salary Champions [MEDIUM]
 - Create dept and employee tables with a relationship.
 - o Insert sample department and employee data.
 - Use subqueries to find the employee(s) with the highest salary in each department.
 - o If multiple employees share the max salary in a department, include all.
- 3. Merging Employee Histories: Who Earned Least? [HARD]
 - Create two legacy tables (TableA and TableB).
 - Insert sample records (some overlapping).
 - Merge both tables and find the minimum salary per employee using subqueries.

2. Tool Used

- 1. MS SQL Server
- 2. Data Grip

3. SQL Code

```
-- Easy Task
-- Generate employee relation with only 1 attribute ( ID )
-- Find the max id but excluding the duplicates

create table employees_tbl(
    e_id int
);

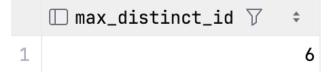
insert into employees_tbl values
(1),
(1),
```

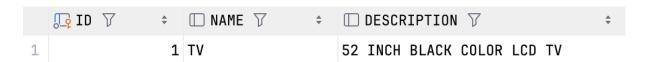
```
(2),
(3),
(3),
(4),
(5),
(5),
(6),
(7),
(7);
select max(a.e_id) as max_distinct_id from (select e_id,
count(e_id) as id_cnt from employees_tbl group by e_id) as a where
a.id cnt = 1;
---- Task 2:
-- select product which has not been sold once
-- find the total quantity of sold for each respective product
CREATE TABLE TBL PRODUCTS
     ID INT PRIMARY KEY IDENTITY,
     [NAME] NVARCHAR (50),
     [DESCRIPTION] NVARCHAR (250)
)
CREATE TABLE TBL PRODUCTSALES
     ID INT PRIMARY KEY IDENTITY,
     PRODUCTID INT FOREIGN KEY REFERENCES TBL PRODUCTS (ID),
     UNITPRICE INT,
     QUALTITYSOLD INT
)
INSERT INTO TBL PRODUCTS VALUES ('TV','52 INCH BLACK COLOR LCD
INSERT INTO TBL PRODUCTS VALUES ('LAPTOP', 'VERY THIIN BLACK COLOR
ACER LAPTOP')
INSERT INTO TBL PRODUCTS VALUES ('DESKTOP', 'HP HIGH PERFORMANCE
DESKTOP')
INSERT INTO TBL PRODUCTSALES VALUES (3,450,5)
INSERT INTO TBL PRODUCTSALES VALUES (2,250,7)
INSERT INTO TBL PRODUCTSALES VALUES (3,450,4)
INSERT INTO TBL PRODUCTSALES VALUES (3,450,9)
```

```
select * from TBL_PRODUCTS
select * from TBL PRODUCTSALES
select * from TBL PRODUCTS where TBL PRODUCTS.ID not in (select
distinct PRODUCTID from TBL PRODUCTSALES);
select Name, (select SUM(TBL PRODUCTSALES.QUALTITYSOLD) from
TBL_PRODUCTSALES where PRODUCTID = TBL_PRODUCTS.ID) as [PRODUCT
SALES] from TBL_PRODUCTS;
-----EXPERIMENT 03: (MEDIUM LEVEL)
CREATE TABLE department (
   id INT PRIMARY KEY,
   dept name VARCHAR(50)
);
-- Create Employee Table
CREATE TABLE employee (
   id INT,
   name VARCHAR(50),
   salary INT,
   department id INT,
   FOREIGN KEY (department id) REFERENCES department(id)
);
-- Insert into Department Table
INSERT INTO department (id, dept name) VALUES
(1, 'IT'),
(2, 'SALES');
-- Insert into Employee Table
INSERT INTO employee (id, name, salary, department id) VALUES
(1, 'JOE', 70000, 1),
(2, 'JIM', 90000, 1),
(3, 'HENRY', 80000, 2),
(4, 'SAM', 60000, 2),
(5, 'MAX', 90000, 1);
select e.salary, e.name, t.m salary, t.dept name from employee e
   join
```

```
(select e.department id, d.dept name, max(e.salary) as
m_salary from employee e join department d
        on e.department id = d.id group by e.department id,
d.dept name)
            t on t.department_id = e.department_id and t.m_salary
= e.salary;
-- Hard level
create table emp_a_tbl(
   empid int,
   empname varchar(255),
   salary int
);
create table emp b tbl(
   empid int,
   empname varchar(255),
   salary int
);
insert into emp a tbl values
                          (1, 'AA', 1000),
                          (2, 'BB', 300);
insert into emp b tbl values
                          (2, 'BB', 400),
                          (3, 'CC', 100);
select t.empid, min(t.empname), min(t.salary) from (select * from
emp_a_tbl union (select * from emp_b_tbl)) t group by t.empid;
```

4. Output





| | \square Name $ egthinspace$ | \$ ☐ [PRODUCT SALES] [¬] | ₹ \$ |
|---|-------------------------------|--------------------------------------|---------------|
| 1 | TV | | <null></null> |
| 2 | LAPT0P | | 7 |
| 3 | DESKTOP | | 18 |

| | □ salary | \square name $ egreen$ $\qquad 																																			$ | <pre>□ m_salary</pre> | \square dept_name $ abla$ $ abla$ |
|---|----------|---|-----------------------|-------------------------------------|
| 1 | 90000 | JIM | 90000 | IT |
| 2 | 80000 | HENRY | 80000 | SALES |
| 3 | 90000 | MAX | 90000 | IT |

| | \square empid $ eg$ \qquad $ eq$ | <pre>□ <anonymous> ▽</anonymous></pre> ‡ | <pre>□ <anonymous> ▽</anonymous></pre> <pre> ‡</pre> |
|---|--------------------------------------|--|--|
| 1 | 1 | AA | 1000 |
| 2 | 2 | ВВ | 300 |
| 3 | 3 | CC | 100 |