# Experiment 3

**Student Name: Bhaskar Kumar** **UID: 23BCS14337**
**Branch: BE-CSE** **Section/Group: KRG-3B**
**Semester: 5** **Date of performance: 22-08-2025**
**Subject name: ADBMS** **Subject code: 23CSP-333**

**Aim:**

1. Max Value without Duplicates [EASY]
   - 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.
   - Insert sample department and employee data.
   - Use subqueries to find the employee(s) with the highest salary in each department.
   - 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.

**Code:**

```
--easy question

/*
```

```
GENERATE AN EMPLOYEE RELATIN WITH ONLY A ONE ATTRIBUTE I.E, EMP_ID
TASK: DIND THE MAX EMP_ID, BUT EXCLUDING THE DUPLICATES

*/

CREATE TABLE EMPLOYEE(

EMPID INT

);

INSERT INTO EMPLOYEE(EMPID) VALUES

(1),

(1),

(2),

(2),

(5),

(5),

(6),

(7),

(8),

(8);

SELECT MAX(EMPID) AS [MAX_UNIQUE] FROM Employee WHERE EmpID IN (SELECT
EmpID FROM Employee GROUP BY EmpID HAVING count(EmpID)=1);

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 TV')

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

/*

TASK:FIND THE ID, NAME ,DESCRIPTION OF PRODUCT WHICH HAS NOT BEEN
SOLD FOR ONCE.

*/

SELECT ID,[NAME],[DESCRIPTION] FROM TBL_PRODUCTS WHERE ID NOT IN

(SELECT DISTINCT PRODUCTID FROM TBL_PRODUCTSALES);


--USING JOIN

SELECT T.*,P.* FROM TBL_PRODUCTS AS T LEFT JOIN

TBL_PRODUCTSALES AS P

ON T.ID=P.PRODUCTID

WHERE PRODUCTID IS NULL;
```

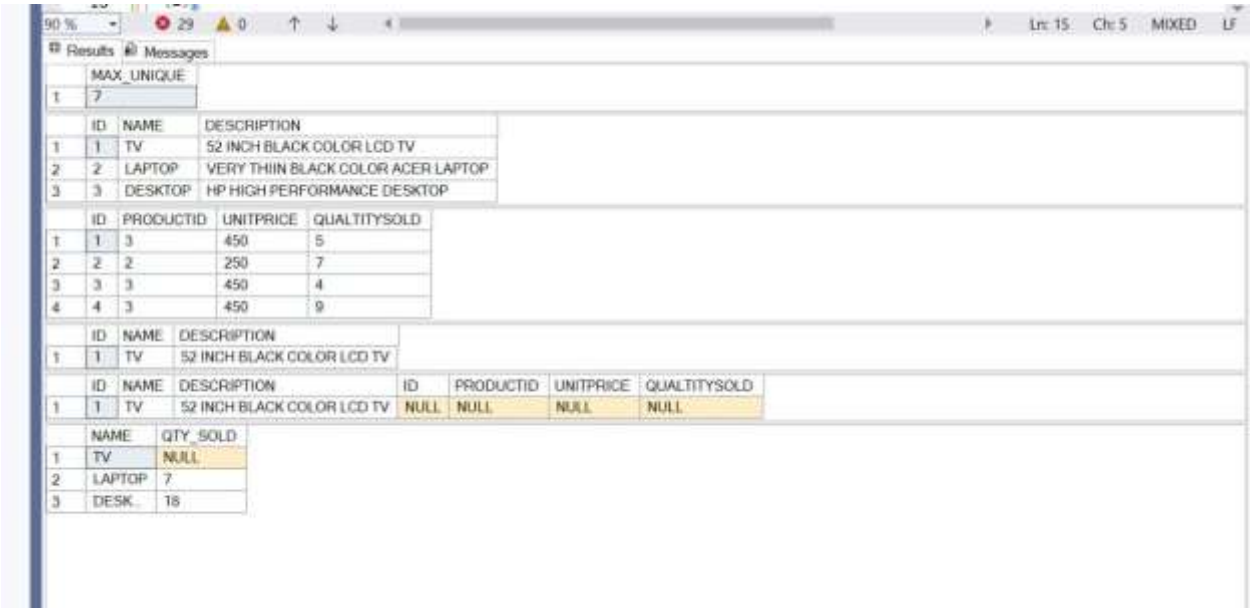
```
/*
TASK: FIND THE TOTAL QUANTITY SOLD FOR EACH RESPECTIVE PRODUCT
*/
SELECT T.NAME, (SELECT SUM(QUALTITYSOLD) FROM TBL_PRODUCTSALES
WHERE PRODUCTID=T.ID) AS QTY_SOLD FROM TBL_PRODUCTS AS T;
create database exp4; use
exp4;
--medium
----------EXPERIMENT 03: (MEDIUM LEVEL)
CREATE TABLE department (     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); --main select
d.dept_name,e.name,e.salary from employee as e inner
join department as d on d.id=e.department_id where
e.salary in( select MAX(e2.salary)  from employee as
e2 where e2.department_id=e.department_id
)
order by  dept_name; -- group by approach select
d.dept_name,e.name,e.salary from employee as e inner
join department as d on d.id=e.department_id where
e.salary in( select MAX(e2.salary)  from employee as
e2 group by e2.department_id
);
--Hard Question
CREATE TABLE TableA (
    Empid INT,
    Ename VARCHAR(50),
    Salary INT
);
CREATE TABLE TableB (
    Empid INT,
    Ename VARCHAR(50),
    Salary INT
);
INSERT INTO TableA VALUES (1, 'AA', 1000), (2, 'BB', 300);
INSERT INTO TableB VALUES (2, 'BB', 400), (3, 'CC', 100);
--TIP; AFF OVER NUMBER DATA ONLY IS WRONG
```

```
--TAKE FIRST LETTER OF EMPNAME WILL CONVERT IN ASCII
select empid, ename ,MIN(salary) AS salary from(
select * from tableA as a union all select * from
tableB as b
) as INTERMIDIATE_RESULT
group by empid,ename;
```

**OUTPUT:**

**EASY:**



Results Messages

| | MAX_UNIQUE |
|---|---|
| 1 | 7 |

| | ID | NAME | DESCRIPTION |
|---|---|---|---|
| 1 | 1 | TV | 52 INCH BLACK COLOR LCD TV |
| 2 | 2 | LAPTOP | VERY THIIN BLACK COLOR ACER LAPTOP |
| 3 | 3 | DESKTOP | HP HIGH PERFORMANCE DESKTOP |

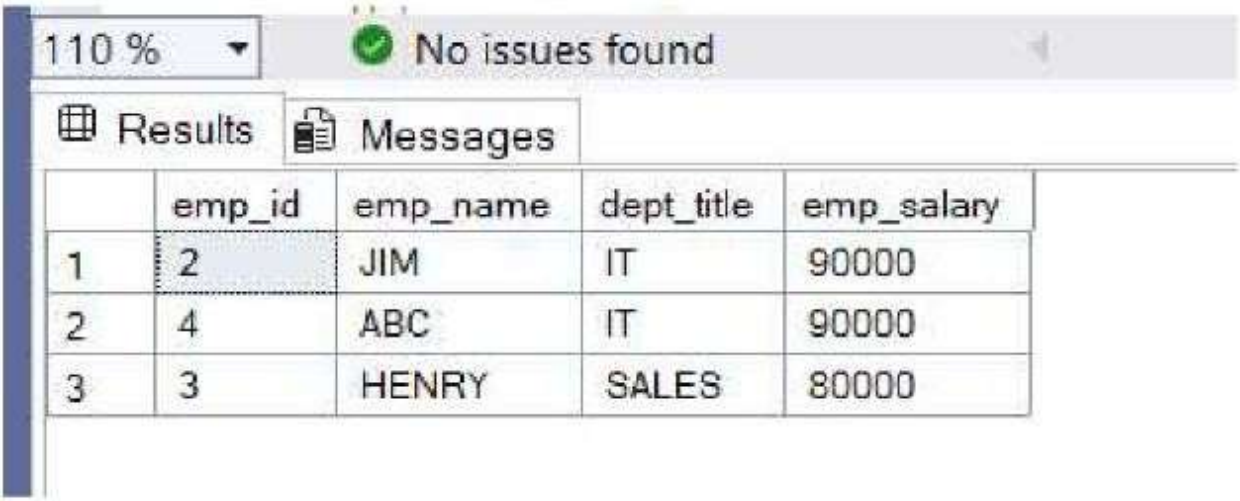
| | ID | PRODUCTID | UNITPRICE | QUALTITYSOLD |
|---|---|---|---|---|
| 1 | 1 | 3 | 450 | 5 |
| 2 | 2 | 2 | 250 | 7 |
| 3 | 3 | 3 | 450 | 4 |
| 4 | 4 | 3 | 450 | 9 |

| | ID | NAME | DESCRIPTION |
|---|---|---|---|
| 1 | 1 | TV | 52 INCH BLACK COLOR LCD TV |

| | ID | NAME | DESCRIPTION | ID | PRODUCTID | UNITPRICE | QUALTITYSOLD |
|---|---|---|---|---|---|---|---|
| 1 | 1 | TV | 52 INCH BLACK COLOR LCD TV | NULL | NULL | NULL | NULL |

| | NAME | QTY_SOLD |
|---|---|---|
| 1 | TV | NULL |
| 2 | LAPTOP | 7 |
| 3 | DESK... | 18 |

**MEDIUM**




| | emp_id | emp_name | dept_title | emp_salary |
|---|---|---|---|---|
| 1 | 2 | JIM | IT | 90000 |
| 2 | 4 | ABC | IT | 90000 |
| 3 | 3 | HENRY | SALES | 80000 |

**HARD**

| | EmpID | Ename | Min_Salary |
|---|---|---|---|
| 1 | 1 | AA | 1000 |
| 2 | 2 | BB | 300 |
| 3 | 3 | CC | 100 |