Project DataBase Management

The Idea (Pharmacy Inventory Management System) :

Preserving all information related to the pharmacy so that it is not lost or causing errors, saving customer, supplier and employee data for easy access to it whenever we need it, and recording all medications entering or leaving the pharmacy to know the quantities available and those that are about to run out.

Problems :

- Medical mistake in medications due to randomness
- Delayed arrival of medications to the patient
- Lack of patient information record
- Placing medications in the wrong departments
- Lack of knowledge of available medications

Solution :

Helping pharmacies access any data related to medical and nutritional medicines, as well as accessing patient data in a smooth and easy way. This helps pharmacy employees reduce the rate of medical mistake and prevent any patient from being given the wrong medication

Member Groub :

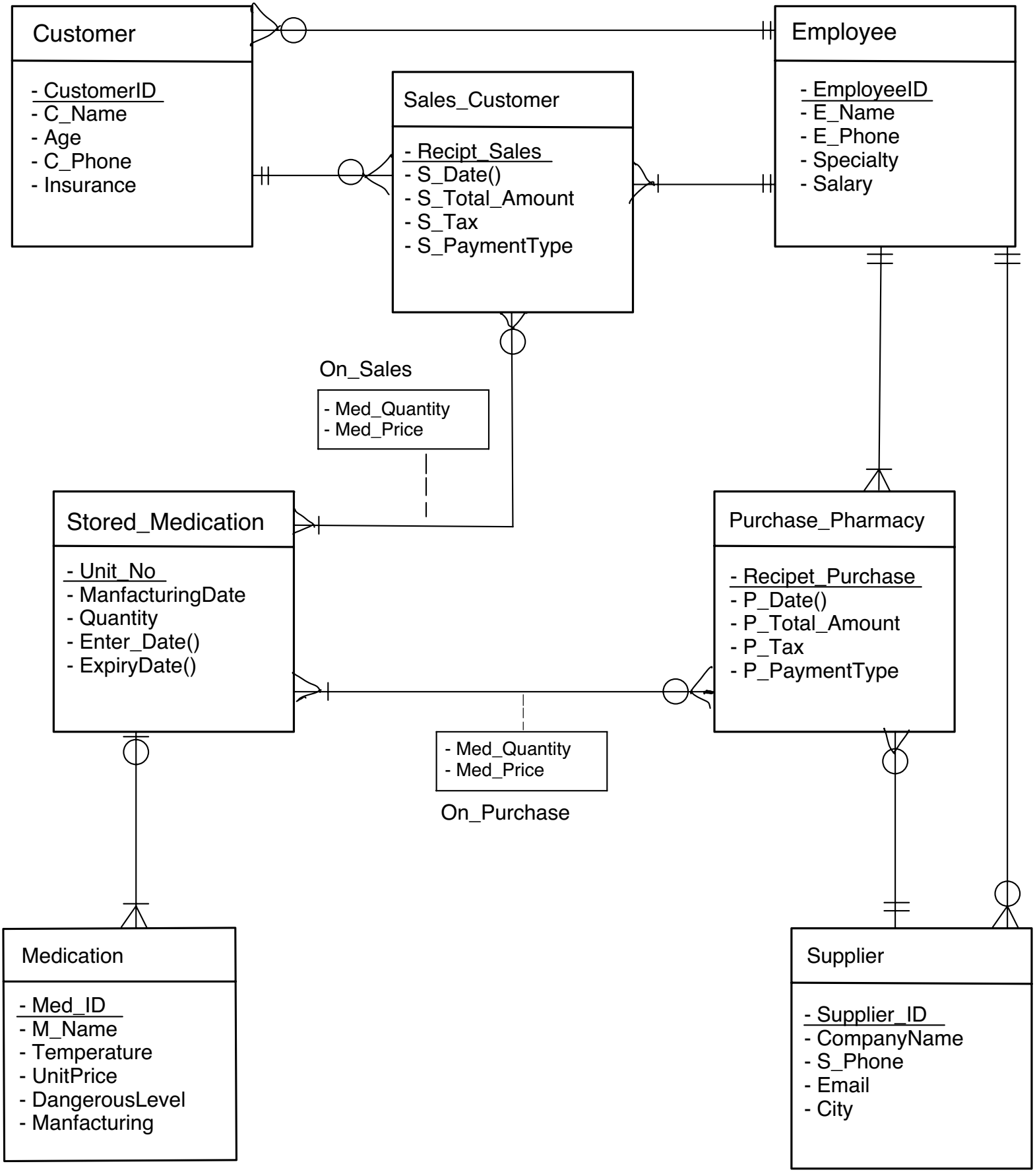
The Leader : Yousef Mohammed Raad 2240032

Abdullah Ahmed Bazuhair 2240109

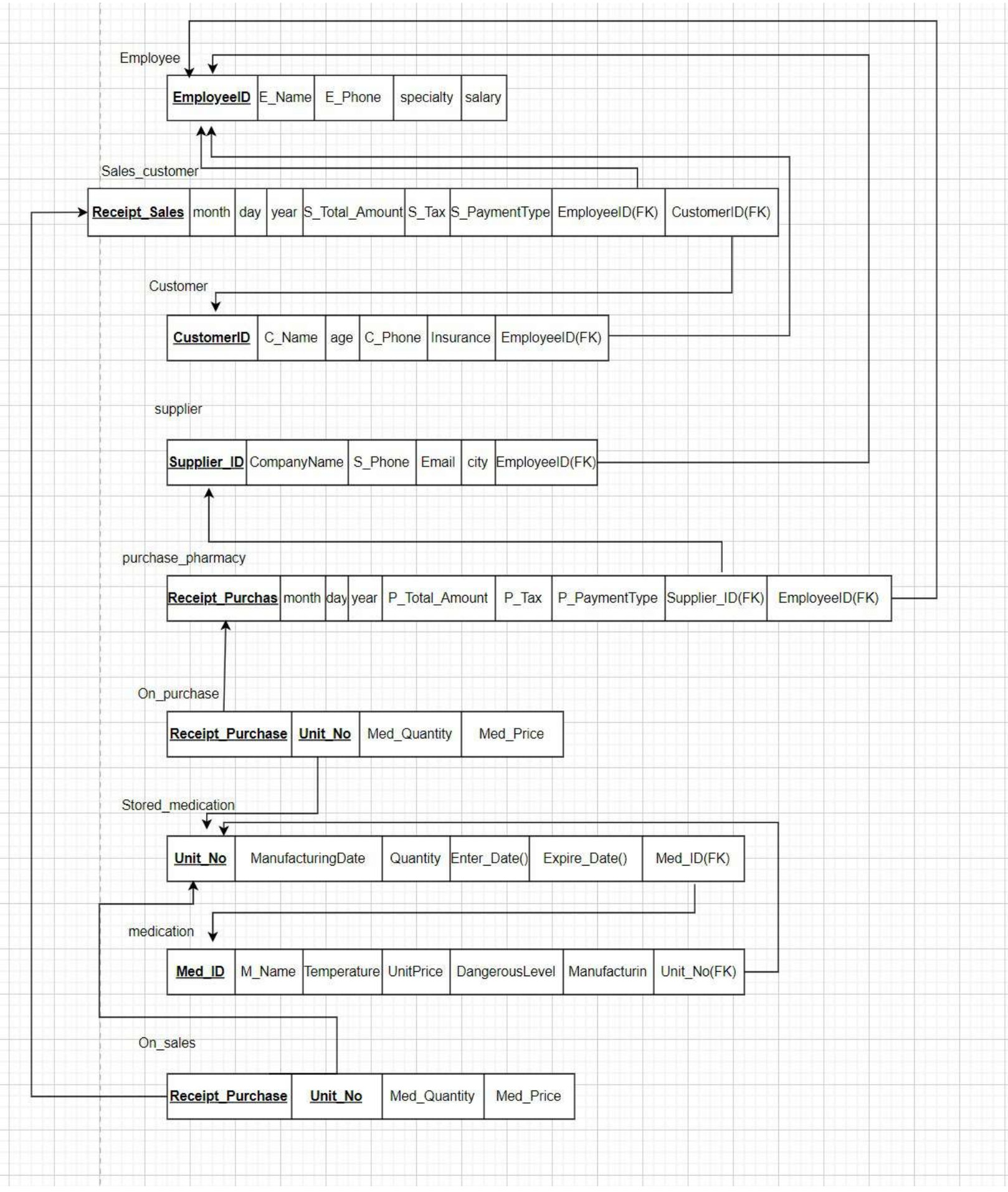
Abdullah Fayez Alshehri 2240044

Osama Ali Alghamdi 2240206

ER-Model


Customer
- CustomerID
- C_Name
- Age
- C_Phone
- Insurance
Sales_Customer
- Recipt_Sales
- S_Date()
- S_Total_Amount
- S_Tax
- S_PaymentType
Employee
- EmployeeID
- E_Name
- E_Phone
- Specialty
- Salary
On_Sales
- Med_Quantity
- Med_Price
Stored_Medication
- Unit_No
- ManfacturingDate
- Quantity
- Enter_Date()
- ExpiryDate()
Purchase_Pharmacy
- Recipet_Purchase
- P_Date()
- P_Total_Amount
- P_Tax
- P_PaymentType
- Med_Quantity
- Med_Price
On_Purchase
Medication
- Med_ID
- M_Name
- Temperature
- UnitPrice
- DangerousLevel
- Manfacturing
Supplier
- Supplier_ID
- CompanyName
- S_Phone
- Email
- City

Relation-Model



Normalization

UNF :

((EmployeeID# , E_Name , E_Phone , Specialty , Salary ((receipt_sales # , S_month , S_day , S_year , S_total_amount , S_tax , S_paymentType , med_quantity , med_price)((CustomerID# , C_Name , Age , C_Phone , Insurance)(SupplierID# , CompanyName , S_Phone , Email ,City)(Receipt_purchase#, P_month, P_day, year , P_total_amount , P_tax ,P_paymentType , med_quantity , med_price unit_No# , manufacturingDate , quantity , enter_Date , expire_Date , med_quantity , med_price)(med_ID #, name , temperature , unitPrice , dangerLevel , manufacturing))

1NF :

Employee (EmployeeID# , E_Name , E_Phone , Specialty , Salary)

Sales_Customer (receipt_sales # , S_month , S_day , S_year , S_total_amount , S_tax , S_paymentType , med_quantity , med_price)

Customer (CustomerID# , C_Name , Age , C_Phone , Insurance)

Supplier (SupplierID# , CompanyName , S_Phone , Email ,City)

Purchase_pharmacy (Receipt_purchase#, P_month, P_day, year , P_total_amount , P_tax ,P_paymentType , med_quantity , med_price)

Stored_medication (unit_No# , manufacturingDate , quantity , enter_Date , expire_Date , med_quantity , med_price)

Medication (med_ID #, name , temperature , unitPrice , dangerLevel , manufacturing)

2NF :

Employee (EmployeeID# , E_Name , E_Phone , Specialty , Salary)

Sales_Customer (receipt_sales # , S_month , S_day , S_year , S_total_amount , S_tax , S_paymentType , med_quantity , med_price)

Customer (CustomerID# , C_Name , Age , C_Phone , Insurance)

Supplier (SupplierID# , CompanyName , S_Phone , Email ,City)

Purchase_pharmacy (Receipt_purchase#, P_month, P_day, year , P_total_amount , P_tax ,P_paymentType , med_quantity , med_price)

Stored_medication (unit_No# , manufacturingDate , quantity , enter_Date , expire_Date , med_quantity , med_price)

Medication (med_ID #, name , temperature , unitPrice , dangerLevel , manufacturing)

3NF :

Employee (EmployeeID# , E_Name , E_Phone , Specialty , Salary)

Sales_Customer (receipt_sales # , S_month , S_day , S_year , S_total_amount , S_tax , S_paymentType , med_quantity , med_price)

Customer (CustomerID# , C_Name , Age , C_Phone , Insurance)

Supplier (SupplierID# , CompanyName , S_Phone , Email ,City)

Purchase_pharmacy (Receipt_purchase#, P_month, P_day, year , P_total_amount , P_tax ,P_paymentType , med_quantity , med_price)

Medication (med_ID #, name , temperature , unitPrice , dangerLevel , manufacturing)

Stored_medication (unit_No# , manufacturingDate , enter_Date , expire_Date)

Stored_medication_inventory (unit_No# , med_quantity , med_price)

Funcation Dependencies

EmployeeID →E_Name , E_Phone , Specialty , Salary

Receipt_Sales → S_month , S_day , S_year , S_total_amount , S_paymentType , S_tax

CustomerID→ C_Name , Age , C_Phone , Insurance

SupplierID → CompanyName , S_Phone , Email , City

Receipt_Purchase → P_month , P_day , P_year , P_total_amount , P_paymentType , P_tax

med_ID → M_Name , temperature , unitPrice , dangerLevel , manufacturing

unit_No → manufacturingDate , enter_Date , expire_Date

Create The Tables :

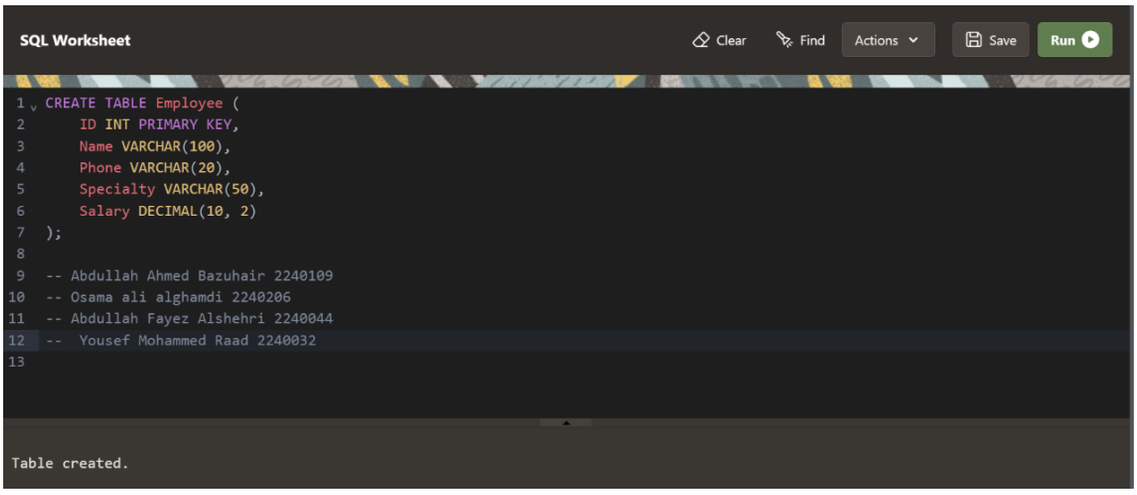
Our Program Contains 7 Tables (Before Normalized) :

- Employee
- Customer
- Sales_Customer
- Supplier
- Purchase_Pharmacy
- Medication
- Stored_Medication

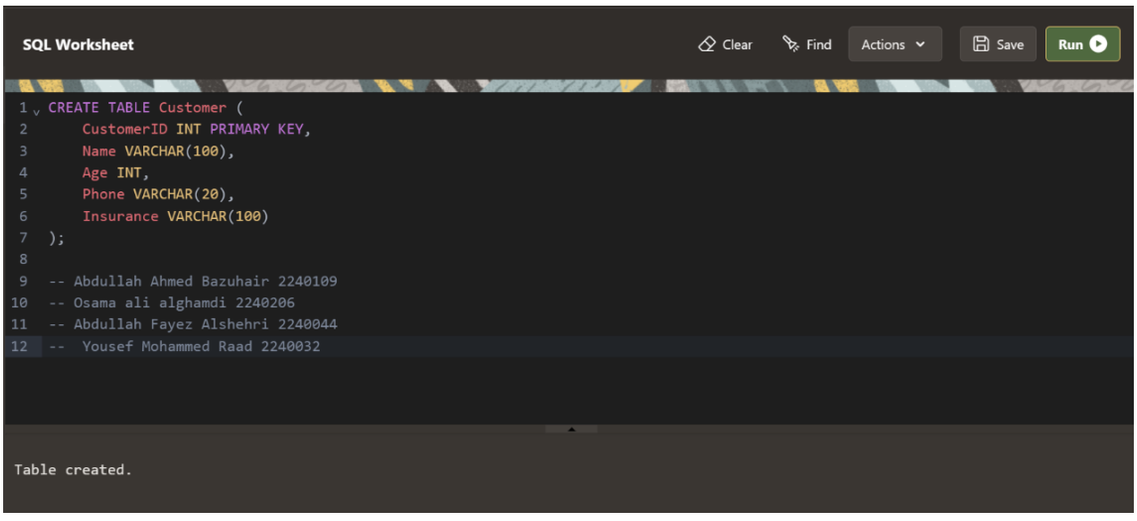
Our Program Contains 8 Tables (After Normalized) :

- Employee
- Customer
- Sales_Customer
- Supplier
- Purchase_Pharmacy
- Medication
- Stored_Medication
- Stored_Medication Inventory

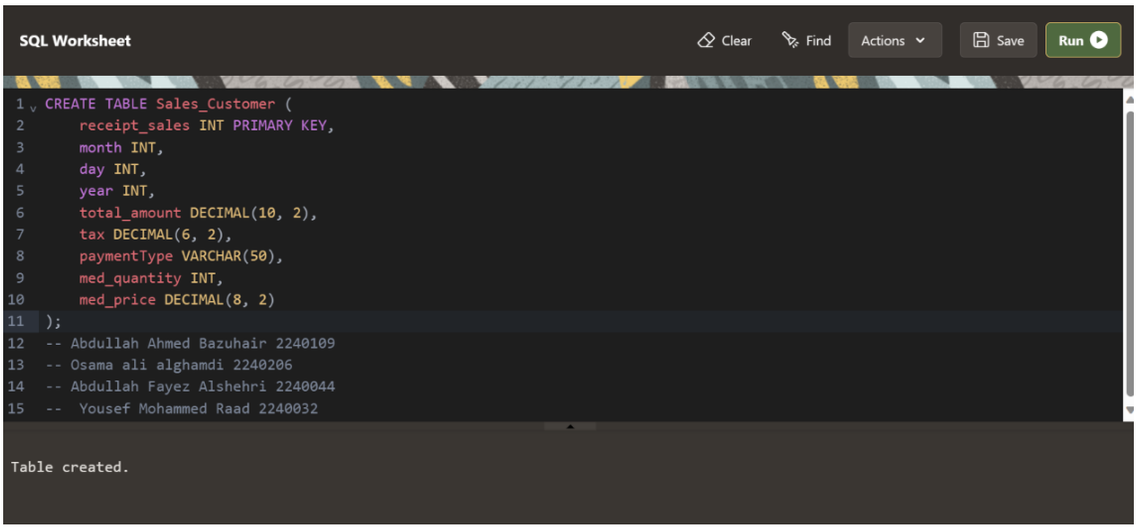
Create Table : Employee



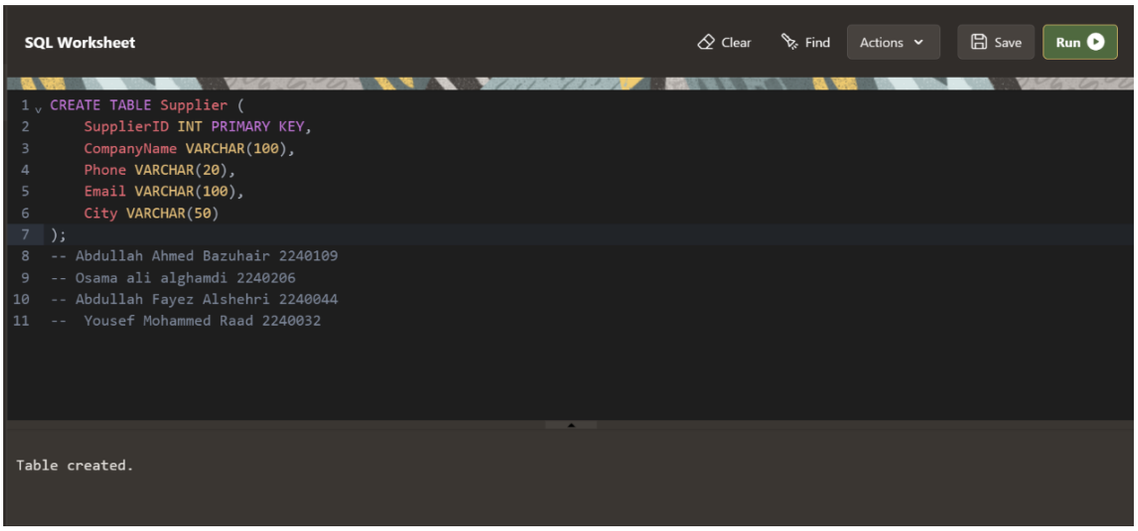
Create Table : Customer



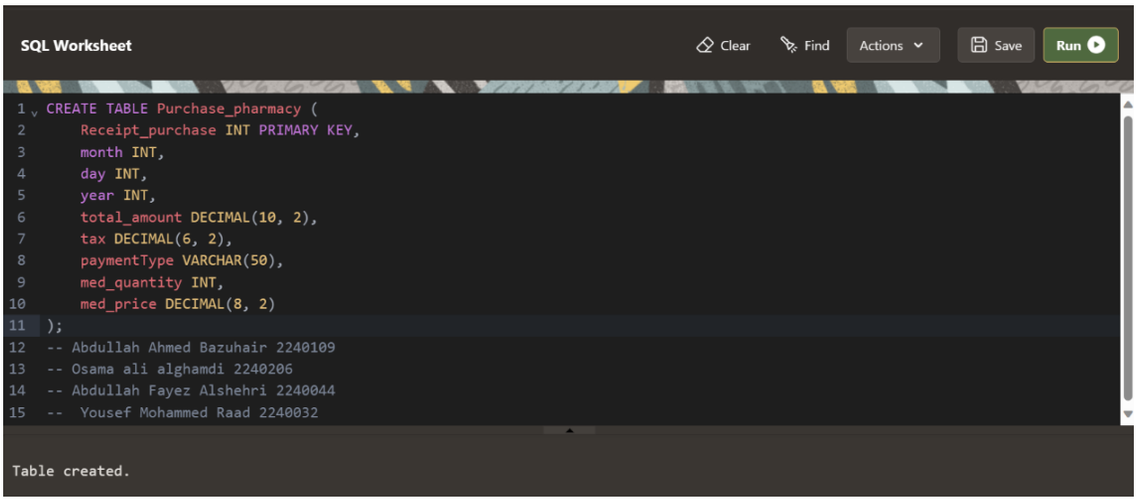
Create Table : Sales_Customer



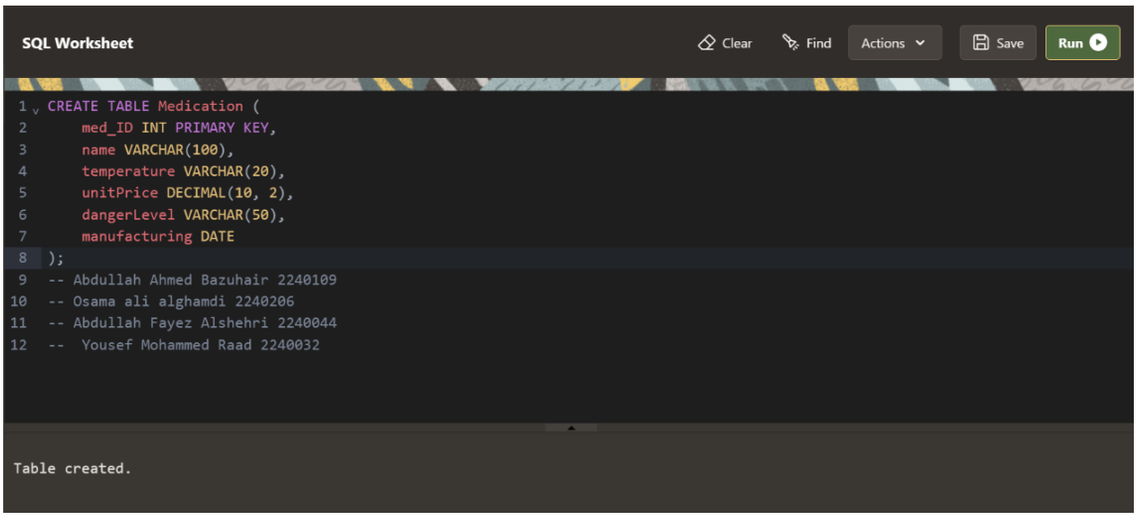
Create Table : Supplier



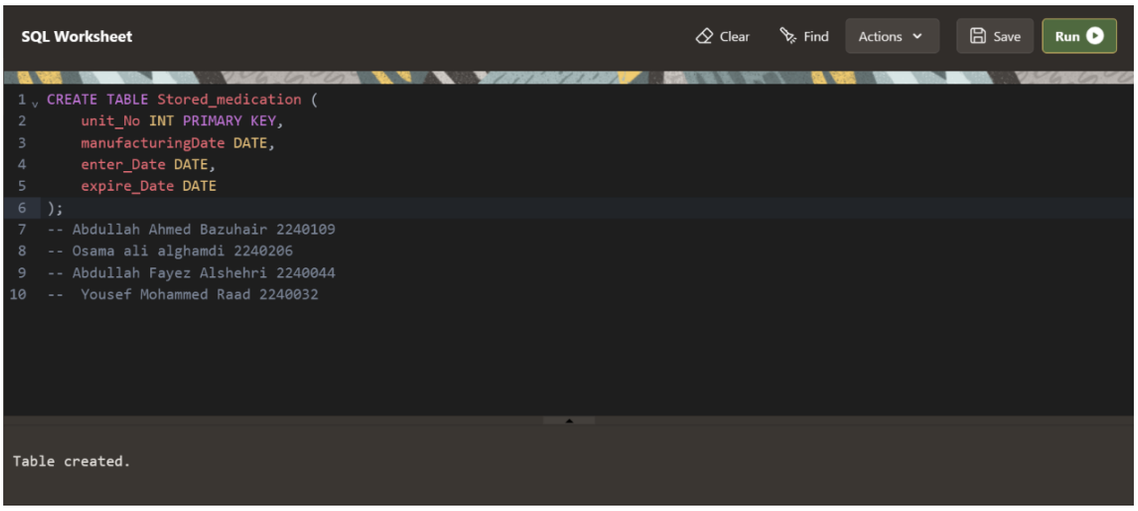
Create Table : Purchase_Pharmacy



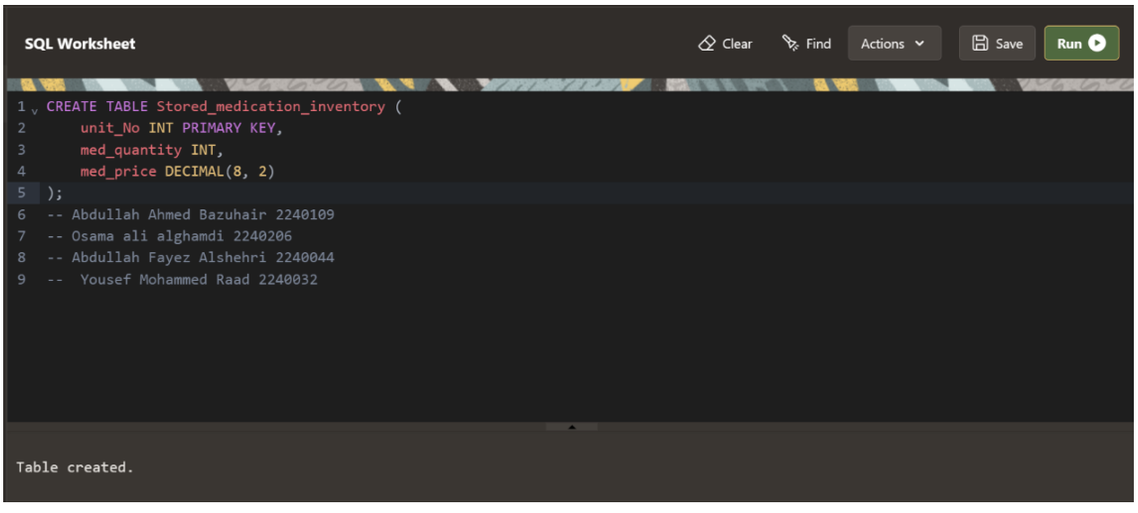
Create Table : Medication



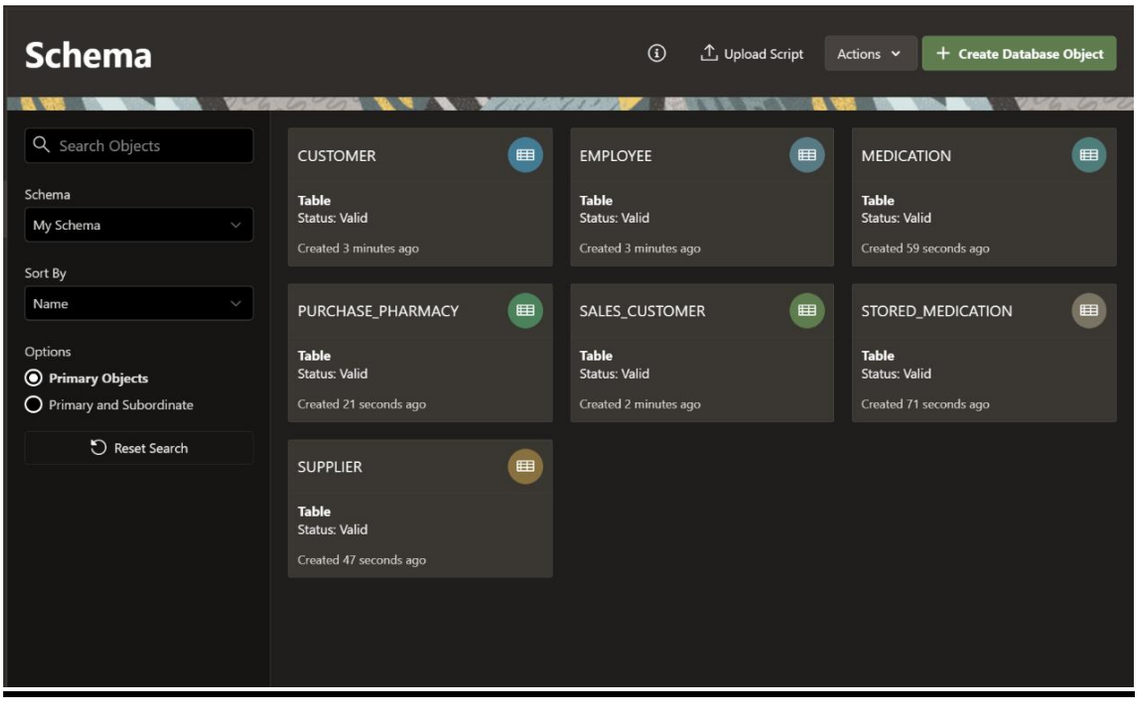
Create Table : Stored_Medication



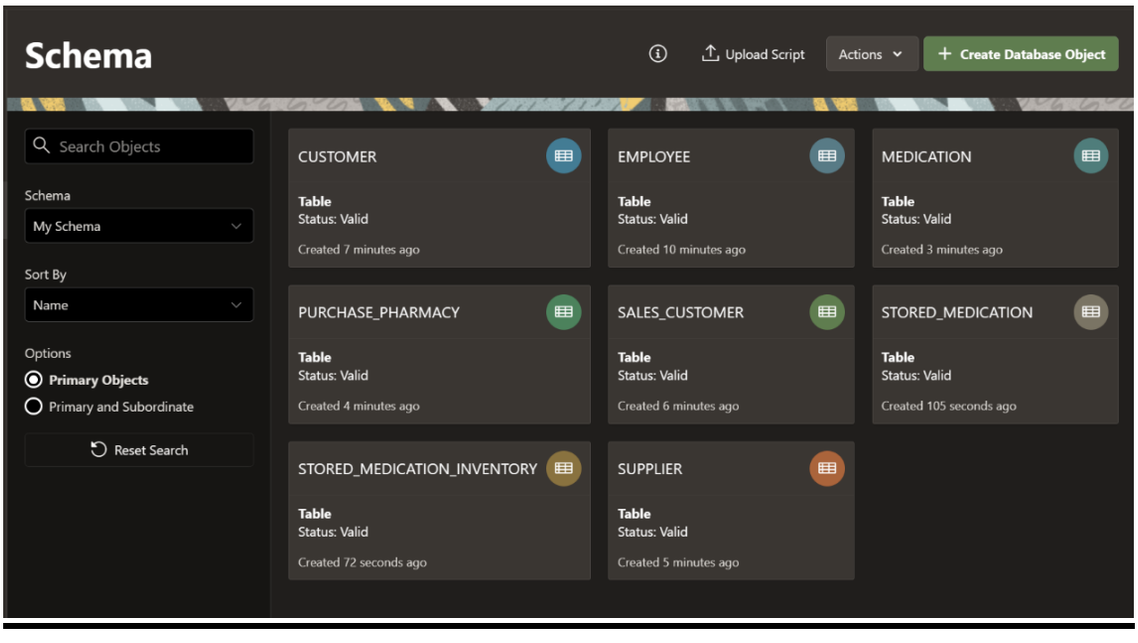
Create Table : Stored_Medication Inventory



Our Schema (Brfore Normalizition) :



Our Schema (After Normalizition) :



Insert Values Inside The Tables :

Table One : Employee

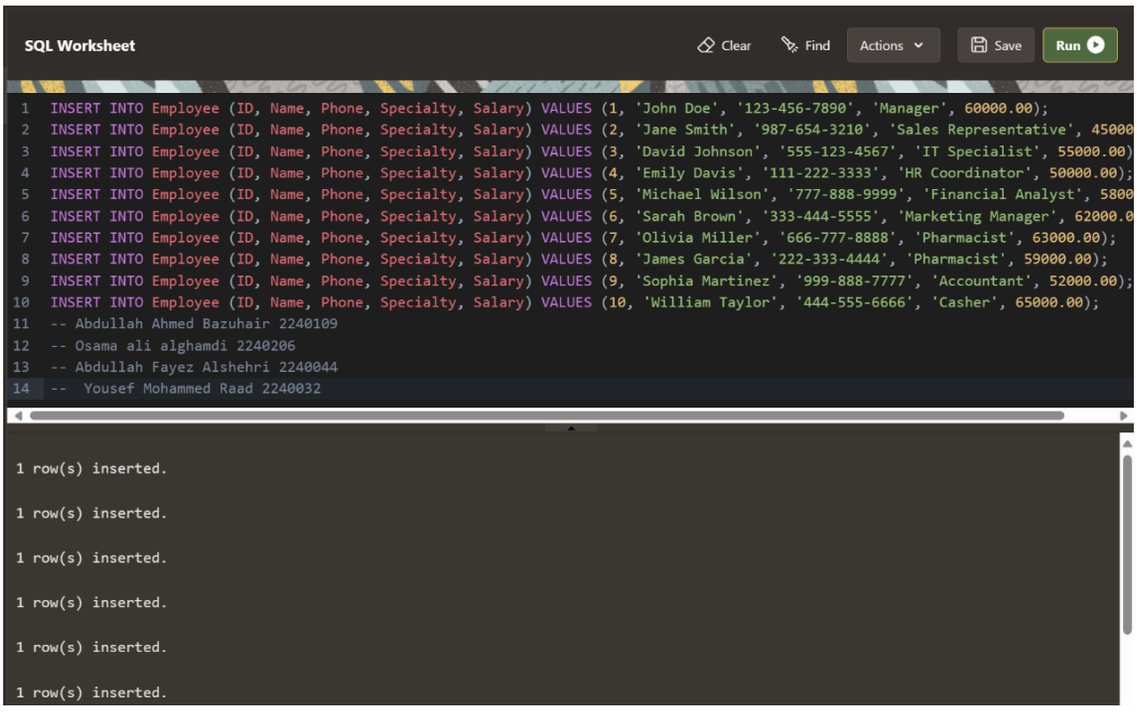


Table Two : Customer

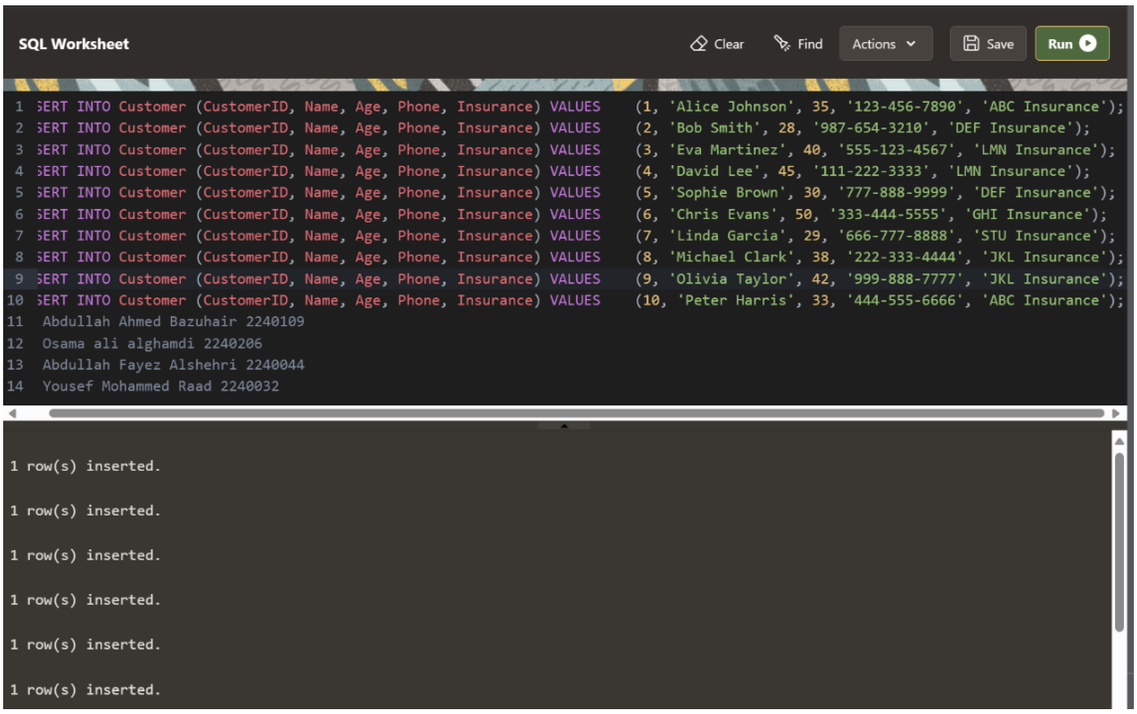


Table Three : Sales_Customer

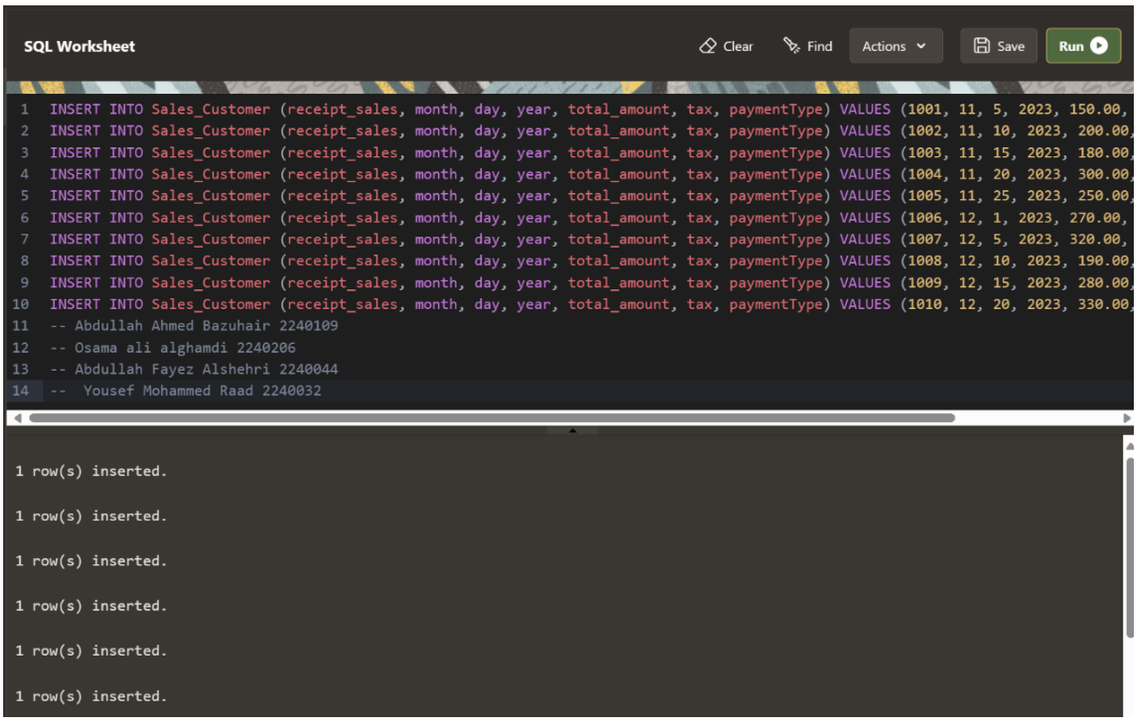


Table Four : Supplier

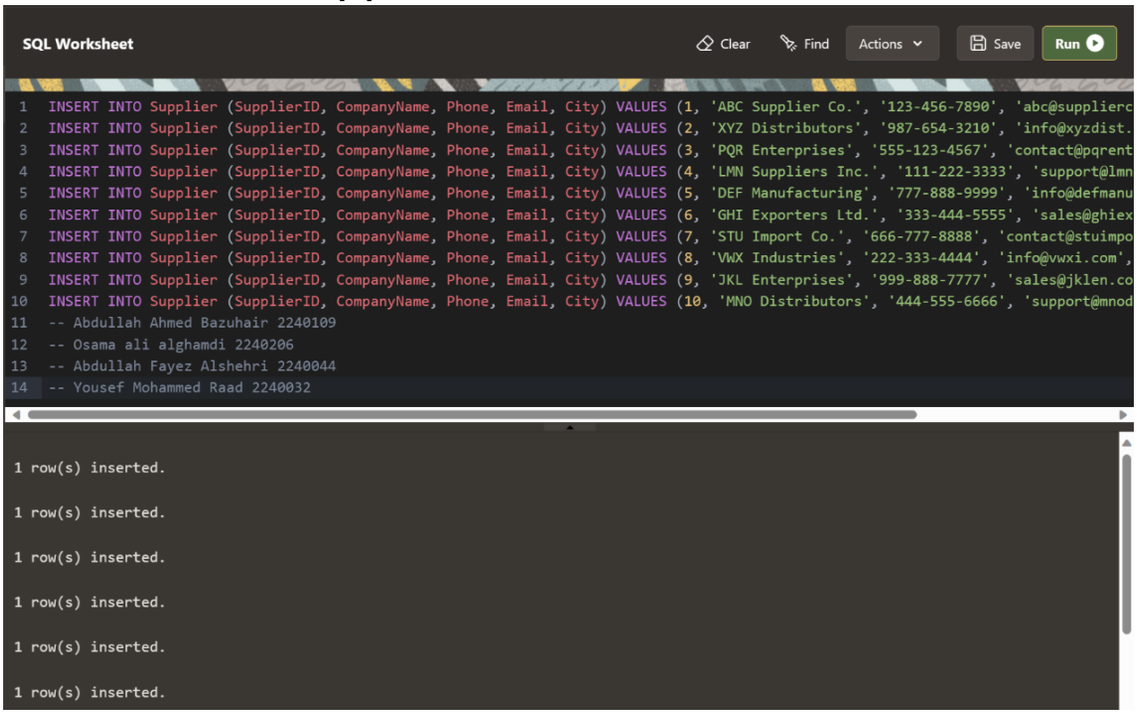


Table Five : Purchase_Pharmacy

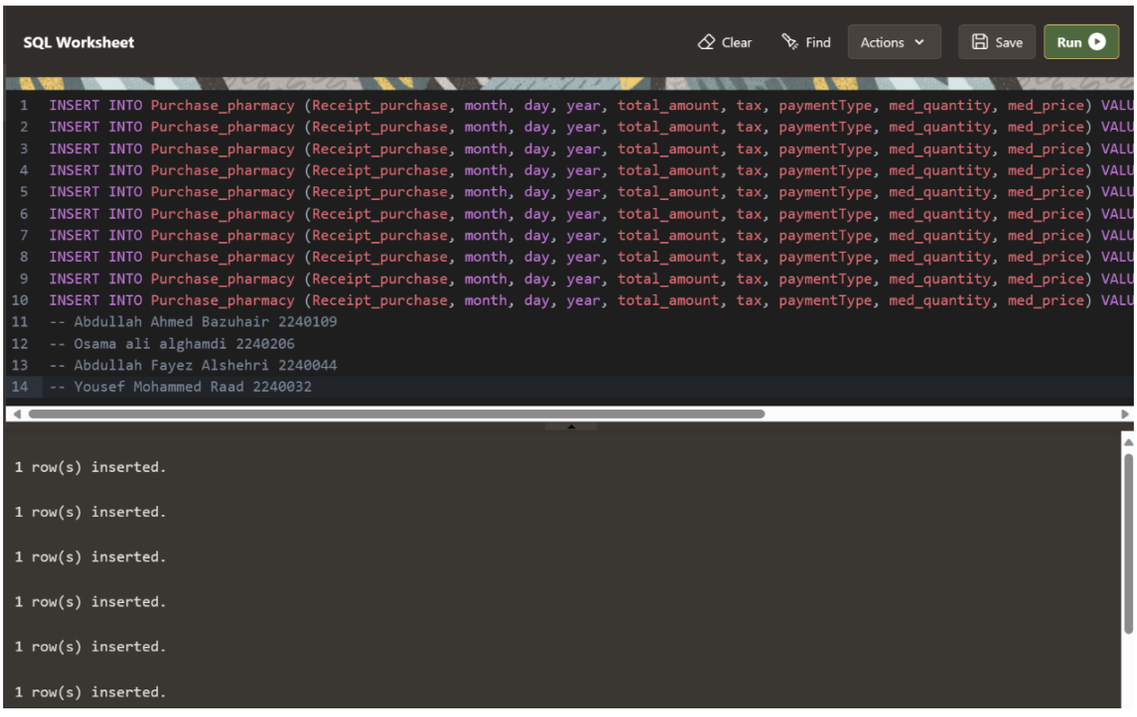


Table Six : Medication

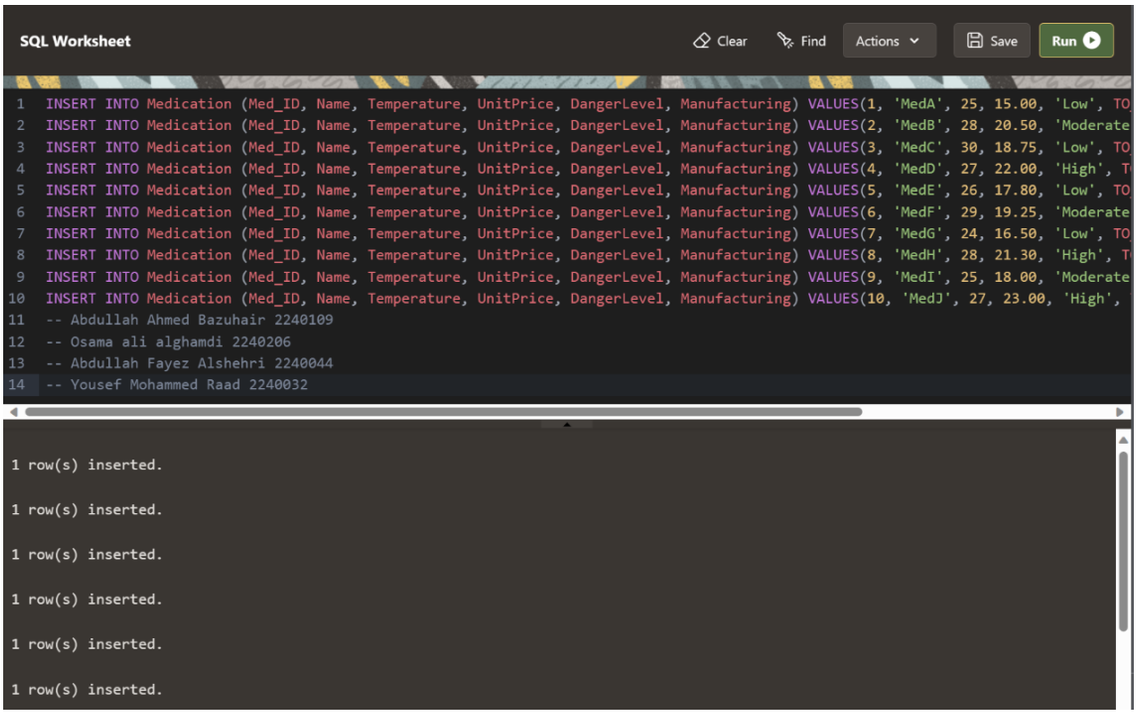


Table Seven : Stored_Medication

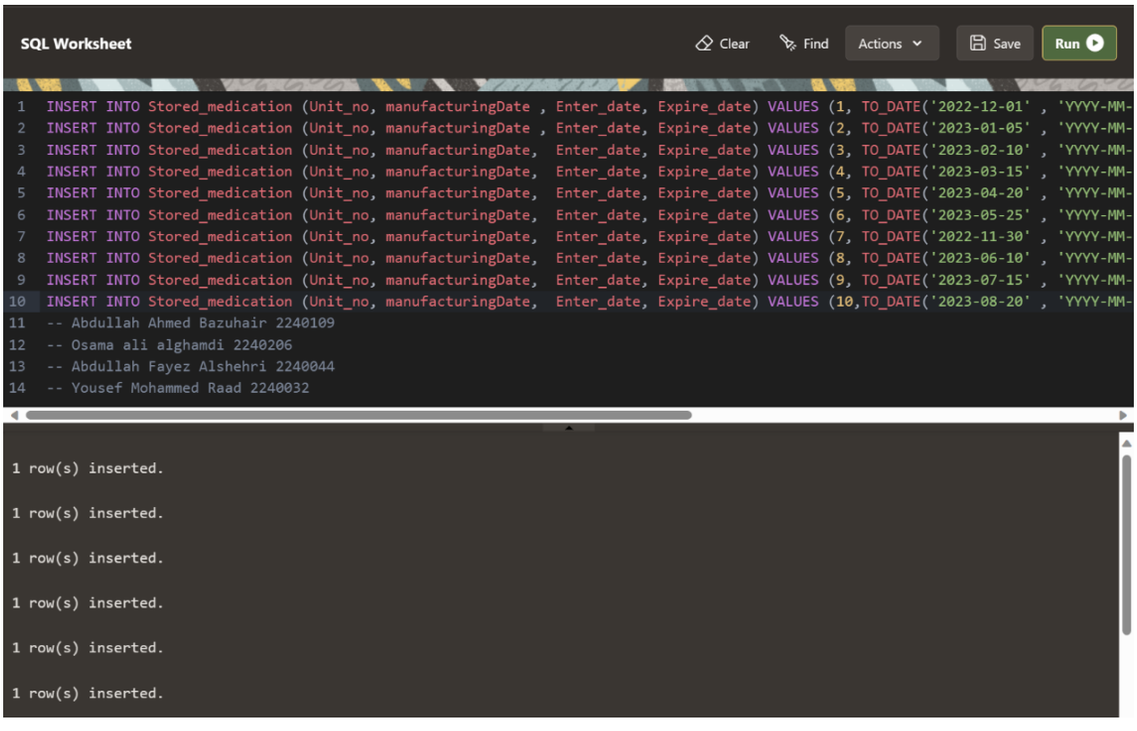
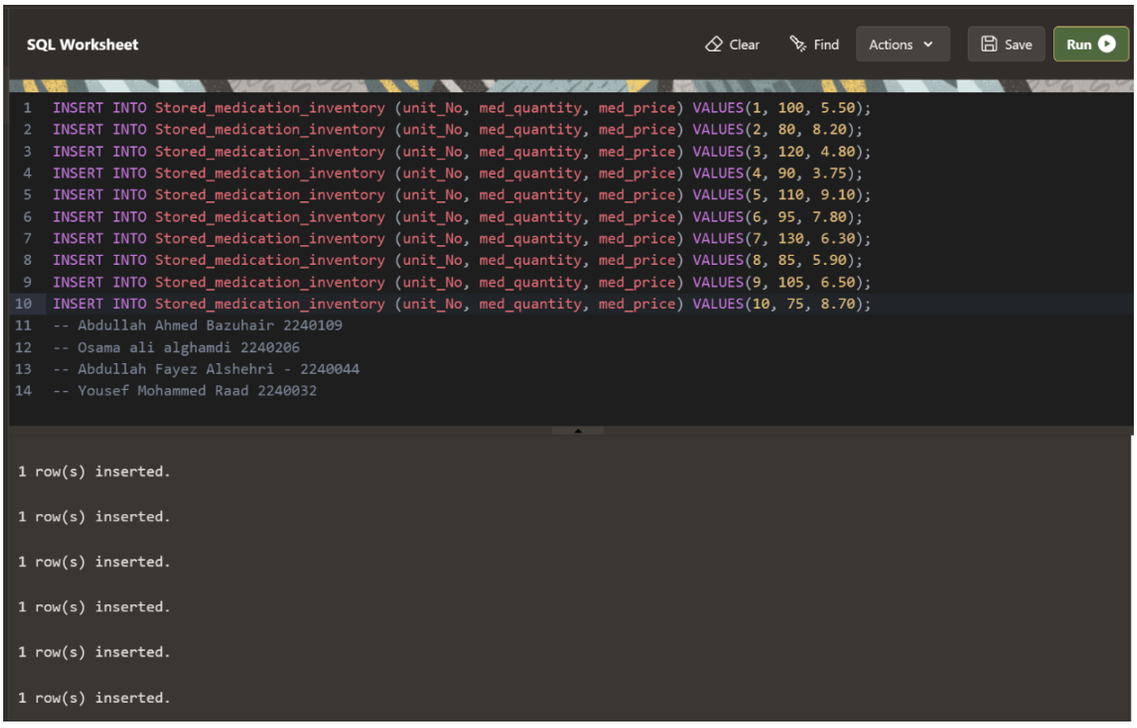


Table Eight : Stored_Medication_Inventory



Query

1) ORDER BY

```
SELECT (Salary) ,Specialty
FROM Employee
ORDER BY Salary


-- Yousef Mohammed Raad - 2240032
-- osama ali alghamdi - 2240206
-- Abdullah Fayez Alshehri - 2240044
-- Abdullah Ahmed Bazuhair -  2240109
```

SALARY	SPECIALTY
45000	Sales Representative
50000	HR Coordinator
52000	Accountant
55000	IT Specialist
58000	Financial Analyst
59000	Pharmacist
60000	Manager
62000	Marketing Manager
63000	Pharmacist
65000	Casher

2) GROUP BY , HAVING ,COUNT

```
SELECT COUNT(CustomerID)  ,  Insurance
FROM Customer
GROUP BY Insurance
HAVING COUNT(CustomerID) > 1 ;



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-- osama ali alghamdi - 2240206
-- Abdullah Fayez Alshehri - 2240044
-- Abdullah Ahmed Bazuhair -  2240109
```

COUNT(CUSTOMERID)	INSURANCE
2	DEF Insurance
2	JKL Insurance
2	LMN Insurance
2	ABC Insurance

Download CSV

4 rows selected.

3) WHERE

```sql
SELECT (Receipt_purchase)  , total_amount , med_quantity , med_price , paymentType
FROM Purchase_Pharmacy
WHERE paymentType = 'Credit Card'



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-- osama ali alghamdi - 2240206
-- Abdullah Fayez Alshehri - 2240044
-- Abdullah Ahmed Bazuhair -  2240109
```

RECEIPT_PURCHASE	TOTAL_AMOUNT	MED_QUANTITY	MED_PRICE	PAYMENTTYPE
2001	350.25	8	42.5	Credit Card
2005	180.5	4	28.5	Credit Card
2010	330	9	36.75	Credit Card
2007	310	8	38.75	Credit Card

Download CSV

4 rows selected.

4,5) Aggregate (COUNT , MAX , MIN , AVG ,SUM)

```sql
SELECT COUNT(receipt_sales) AS Receipt , MAX(total_amount) AS High_Earnings , MIN(total_amount) AS Least_Earnings , AVG(total_amount) AS Average_Earnings , SUM(total_amount) AS Total_Earnings
FROM Sales_Customer;


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-- osama ali alghamdi - 2240206
-- Abdullah Fayez Alshehri - 2240044
-- Abdullah Ahmed Bazuhair -  2240109
```

RECEIPT	HIGH_EARNINGS	LEAST_EARNINGS	AVERAGE_EARNINGS	TOTAL_EARNINGS
10	320	145.25	210.38	2103.8

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SQL Worksheet

```sql
SELECT AVG(Salary) AS Average_Salary   ,
SUM(Salary) AS SUM_Salary
FROM Employee



-- Yousef Mohammed Raad - 2240032
-- osama ali alghamdi - 2240206
-- Abdullah Fayez Alshehri - 2240044
-- Abdullah Ahmed Bazuhair -  2240109
```

AVERAGE_SALARY	SUM_SALARY
56900	569000

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6) Join query

```
SELECT MANUFACTURINGDATE , Expire_date , MED_QUANTITY
FROM Stored_Medication
JOIN Stored_medication_inventory
on Stored_Medication.Unit_no = Stored_medication_inventory.unit_no ;



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-- Abdullah Fayez Alshehri - 2240044
-- Abdullah Ahmed Bazuhair -  2240109
```

MANUFACTURINGDATE	EXPIRE_DATE	MED_QUANTITY
01-DEC-22	01-JAN-24	100
05-JAN-23	01-FEB-24	80
10-FEB-23	01-MAR-24	120
15-MAR-23	01-APR-24	90
20-APR-23	01-MAY-24	110
25-MAY-23	01-JUN-24	95

Download CSV

6 rows selected.

7)

Main Query: which employees have salary greater than "John Doe"

Subquery: what is "John Doe" salary.

```
SELECT Name, Salary
FROM Employee
WHERE Salary >
 (SELECT Salary
 FROM Employee
 WHERE Name = 'John Doe')


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-- Abdullah Fayez Alshehri - 2240044
-- Abdullah Ahmed Bazuhair -  2240109
```

NAME	SALARY
Sarah Brown	62000
Olivia Miller	63000
William Taylor	65000

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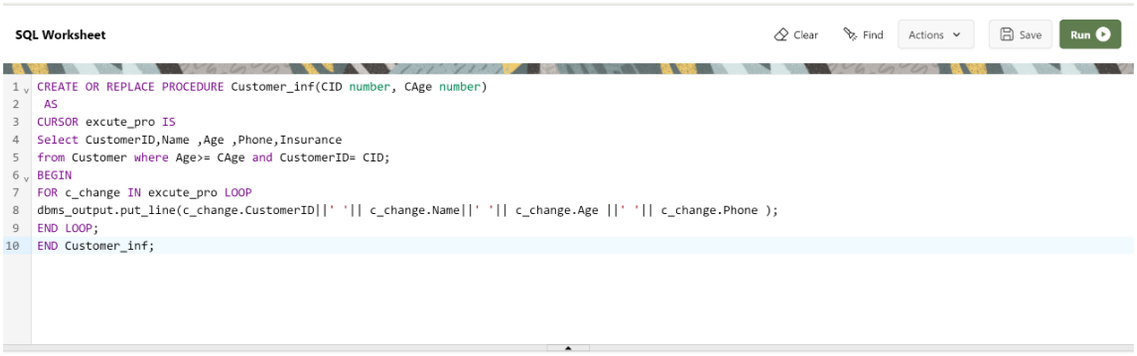
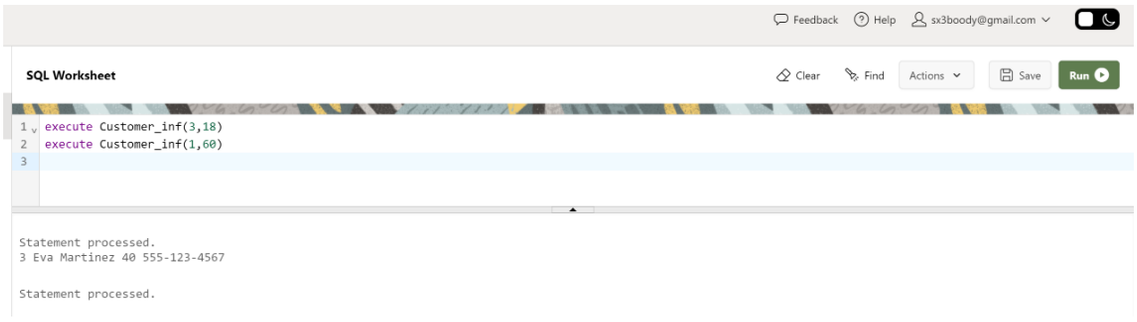
3 rows selected.

Procedure :

A select procedure to see if the customer age achieve the condition by the id :



Execute the procedure



An update procedure to change the phone number

SQL Worksheet

Clear Find Actions Save Run

```
Create or replace procedure updateCustomerphone
(
c_id Customer.CustomerID%TYPE,
c_Phone Customer.Phone%TYPE
)
AS
BEGIN
UPDATE Customer
SET Phone = c_Phone
WHERE CustomerID = c_id;
COMMIT;
END updateCustomerphone;
```

```
Procedure created.
```

Before

SQL Worksheet

Clear Find Actions Save Run

```
SELECT * FROM Customer ;
```

CUSTOMERID	NAME	AGE	PHONE	INSURANCE
1	Alice Johnson	35	123-456-7890	ABC Insurance

Execute the procedure

SQL Worksheet

Clear Find Actions Save Run

```
exec updateCustomerphone(1,'111-111-1111');
```

```
Statement processed.
```

After

SQL Worksheet

Clear Find Actions Save Run

```
select *from Customer ;
```

CUSTOMERID	NAME	AGE	PHONE	INSURANCE
1	Alice Johnson	35	111-111-1111	ABC Insurance