Day 2

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Create a DBMS using OLTP for ECOMMERCE.

1. **Fetch all customers and display if there are any order names.**
2. **Fetch all the order names placed from a particular location.**
3. **What is the max price of products from a particular category?**
4. **Display any product with the product name like mobile, speaker.**
5. **Create a function that calculates 10% GST from the original price.**
6. **Create a stored procedure that increases all the product prices by 100. Ensure Atomicity.**

Step1: Create Tables

Table 1: Ecom_Customer

```
CREATE TABLE Ecom_Customer (
    CustomerID INT PRIMARY KEY IDENTITY,
    CustomerName NVARCHAR(50),
    City NVARCHAR(50)
);
```

Table 2 : Ecom_Product

```
CREATE TABLE Ecom_Product (
    ProductID INT PRIMARY KEY IDENTITY,
    ProductName NVARCHAR(50),
    Category NVARCHAR(50),
    Price DECIMAL(10, 2)
);
```

Table 3 : Ecom_Order

```
CREATE TABLE Ecom_Order (
    OrderID INT PRIMARY KEY IDENTITY,
    CustomerID INT,
    OrderDate DATE,
    FOREIGN KEY (CustomerID) REFERENCES Ecom_Customer(CustomerID)
);
```

Table 4 : Ecom_OrderDetails

```
CREATE TABLE Ecom_OrderDetails (
    OrderDetailID INT PRIMARY KEY IDENTITY,
    OrderID INT,
    ProductID INT,
    Quantity INT,
    FOREIGN KEY (OrderID) REFERENCES Ecom_Order(OrderID),
    FOREIGN KEY (ProductID) REFERENCES Ecom_Product(ProductID)
);
```

Step 2 : Insert Sample Data

Ecom_Customer

```
INSERT INTO Ecom_Customer (CustomerName, City)
VALUES ('Arun', 'Chennai'),
       ('Bhavani', 'Coimbatore'),
       ('Suresh', 'Madurai'),
       ('Santhosh', 'Tiruchirappalli'),
       ('Kumar', 'Salem');
```

Ecom_Product

```
INSERT INTO Ecom_Product (ProductName, Category, Price)
VALUES ('Mobile', 'Electronics', 15000.00),
       ('Speaker', 'Electronics', 3000.00),
       ('Laptop', 'Computers', 50000.00),
       ('Tablet', 'Computers', 25000.00),
       ('Headphones', 'Accessories', 2000.00);
```

Ecom_Order

```
INSERT INTO Ecom_Order (CustomerID, OrderDate)
VALUES (1, '2024-07-01'),
       (2, '2024-07-02'),
       (3, '2024-07-03'),
       (4, '2024-07-04'),
       (5, '2024-07-05');
```

Ecom_OrderDetails

```
INSERT INTO Ecom_OrderDetails (OrderID, ProductID, Quantity)
VALUES (1, 1, 1),
       (1, 2, 2),
       (2, 3, 1),
       (3, 4, 1),
       (4, 5, 3),
       (5, 1, 2);
```

table Sports_dhanapal.dbo.Ecom_OrderDetails

Step 3: Fetch all customers and display if there are any order names

```
SELECT c.CustomerName, c.City, o.OrderID
FROM Ecom_Customer c
LEFT JOIN Ecom_Order o ON c.CustomerID = o.CustomerID
WHERE o.OrderID IS NOT NULL;
```

145 %

Results | Messages

	CustomerName	City	OrderID
1	Arun	Chennai	1
2	Bhavani	Coimbatore	2
3	Suresh	Madurai	3
4	Santhosh	Tiruchirappalli	4
5	Kumar	Salem	5

Step 4: Fetch all the order names placed from a particular location

```
DECLARE @Location NVARCHAR(50) = 'Chennai';

SELECT c.CustomerName, o.OrderID
FROM Ecom_Customer c
JOIN Ecom_Order o ON c.CustomerID = o.CustomerID
WHERE c.City = @Location;
```

%

Results | Messages

CustomerName	OrderID
Arun	1

Step 5: Find the max price of products from a particular category

```
DECLARE @Category NVARCHAR(50) = 'Electronics';

SELECT MAX(Price) AS MaxPrice
FROM Ecom_Product
WHERE Category = @Category;
```

145 %

Results | Messages

	MaxPrice
1	15000.00

Step 6: Display any product with the product name as like mobile, speaker

```
SELECT *
FROM Ecom_Product
WHERE ProductName IN ('Mobile', 'Speaker');
```

145 %

Results | Messages

	ProductID	ProductName	Category	Price
1	1	Mobile	Electronics	15000.00
2	2	Speaker	Electronics	3000.00

Step 7: Create a function that calculates 10% GST from the original price

```
CREATE FUNCTION CalculateGST (@OriginalPrice DECIMAL(10, 2))
RETURNS DECIMAL(10, 2)
AS
BEGIN
    RETURN @OriginalPrice * 0.10;
END;
```

Pass Some Values into the Function:

```
select dbo.CalculateGST(100);
```

45 %

Results | Messages

	(No column name)
1	10.00

Step 8: Create a stored procedure that increases all the product prices by 100

```
CREATE PROCEDURE IncreaseProductPrices
AS
BEGIN
    UPDATE Ecom_Product
    SET Price = Price + 100;
END;
```

It Increases all the Product Price in Ecom_Product table by 100

```
Exec IncreaseProductPrices

select * from Ecom_Product
```

145 %

Results | Messages

	ProductID	ProductName	Category	Price
1	1	Mobile	Electronics	15100.00
2	2	Speaker	Electronics	3100.00
3	3	Laptop	Computers	50100.00
4	4	Tablet	Computers	25100.00
5	5	Headphones	Accessories	2100.00