

-- ## SECTION 1: OVERVIEW OF THE DATA ## --

-- Q1. Check the cardinality of following columns (Counts)

-- 1. Different type of paints provided by the company.

```
SELECT COUNT(DISTINCT(Item_Category)) Category_count FROM Item;
```

-- 2. Different Coupon Types that are offered

```
SELECT COUNT(DISTINCT couponType) Coupon_Count FROM CouponMapping ;
```

-- 3. States where the company is currently delivering its products and services.

```
SELECT COUNT(DISTINCT State) City_Count FROM City;
```

-- 4. Different Order Types.

```
SELECT COUNT(DISTINCT OrderType) OrderType_Count FROM CustomerTransactionData;
```

-- Q2. Identify total number of sales (transactions) happened by

-- 1. Yearly basis

```
SELECT YEAR(PurchaseDate) Year,  
COUNT(Trans_Id) AS Total_Trans  
FROM CustomerTransactionData  
GROUP BY YEAR(PurchaseDate);
```

-- 2. Quarterly basis

```
SELECT DATEPART(QUARTER, PurchaseDate) Quarter,  
COUNT(Trans_Id) AS Total_Trans  
FROM CustomerTransactionData  
GROUP BY DATEPART(QUARTER, PurchaseDate);
```

-- 3. Yearly and Monthly basis

```
SELECT DATEPART(YEAR, PurchaseDate) Year,  
DATEPART(MONTH, PurchaseDate) Month,  
COUNT(Trans_Id) AS Total_Trans  
FROM CustomerTransactionData  
GROUP BY DATEPART(YEAR, PurchaseDate), DATEPART(MONTH, PurchaseDate);
```

-- Q3. Identify the total purchase order by

-- 1. Product category

```
SELECT I.Item_Category,  
SUM(PurchasingAmt) AS Total_Sales  
FROM CustomerTransactionData AS C  
JOIN  
Item AS I  
ON C.item_id = I.item_id  
GROUP BY I.Item_Category;
```

-- 2. Yearly and Quarterly basis

```
SELECT DATEPART(YEAR, PurchaseDate) Year,  
DATEPART(QUARTER, PurchaseDate) Month,  
round(SUM(PurchasingAmt), 0) AS Total_Sales  
FROM CustomerTransactionData
```

```
GROUP BY DATEPART(YEAR, PurchaseDate), DATEPART(QUARTER, PurchaseDate);
```

```
-- 3. Order Type
```

```
SELECT OrderType,  
round(SUM(PurchasingAmt), 0) AS Total_Sales  
FROM CustomerTransactionData  
GROUP BY OrderType;
```

```
-- 4. City Tier
```

```
SELECT CityTier,  
round(SUM(PurchasingAmt), 0) AS Total_Sales  
FROM CustomerTransactionData AS CT  
JOIN Customer AS C  
ON C.Customer_Id = CT.Cust_Id  
JOIN City  
ON City.City_Id = C.City_Id  
GROUP BY CityTier;
```