

```
CREATE TABLE PURCHASE_ORDER_HEADER (  
    PurchaseHdrNo INTEGER PRIMARY KEY,  
    CustomerName VARCHAR(255) NOT NULL,  
    SubTotal DECIMAL(10,2),  
    OrderDate DATE,  
    ShipDate DATE  
);
```

-- Creating PURCHASE_ORDER_DETAIL table

```
CREATE TABLE PURCHASE_ORDER_DETAIL (  
    PurchaseHdrDtIlnNo INTEGER PRIMARY KEY,  
    PurchaseHdrNo INTEGER,  
    ProductName VARCHAR(255) NOT NULL,  
    OrderQty INTEGER NOT NULL,  
    UnitPrice DECIMAL(10,4),  
    FOREIGN KEY (PurchaseHdrNo) REFERENCES PURCHASE_ORDER_HEADER(PurchaseHdrNo)  
);
```

```
INSERT INTO PURCHASE_ORDER_HEADER (PurchaseHdrNo, CustomerName, SubTotal,  
OrderDate, ShipDate)
```

```
VALUES
```

```
(1, 'Australia Bike Retailer', 22516.72, '2011-12-23', '2011-12-14'),
```

```
(2, 'Allenson Cycles', 50860.43, '2013-12-24', '2013-12-15'),
```

```
(3, 'Chicago Rent-All', 12425.18, '2011-12-24', '2011-12-15'),
```

```
(4, 'Compete Enterprises, Inc', 327.71, '2011-12-24', '2011-12-15'),
```

```
(5, 'Greenwood Athletic Company', 44542.05, '2015-01-25', '2015-01-16');
```

```
INSERT INTO PURCHASE_ORDER_DETAIL (PurchaseHdrDtlnNo, PurchaseHdrNo, ProductName,
OrderQty, UnitPrice)
```

```
VALUES
```

```
(1, 1, 'Touring Pedal', 550, 62.9895),
(2, 2, 'LL Mountain Seat/Saddle', 550, 21.0945),
(3, 2, 'ML Mountain Seat/Saddle', 550, 30.4395),
(4, 2, 'HL Mountain Seat/Saddle', 550, 40.9395),
(5, 3, 'Front Brakes', 100, 82.8345),
(6, 3, 'Rear Brakes', 50, 82.8345),
(7, 4, 'LL Mountain Tire', 10, 32.7705),
(8, 5, 'ML Road Pedal', 500, 48.2895),
(9, 5, 'LL Road Tire', 550, 37.086);
```

1. Make a query that shows the top 3 highest order by customers. The query should have the following columns:

a.Customer Name

b.Order Quantity.

Ans:

```
SELECT TOP 3 h.CustomerName, SUM(d.OrderQty) AS TotalOrderQty
FROM PURCHASE_ORDER_HEADER h
JOIN PURCHASE_ORDER_DETAIL d ON h.PurchaseHdrNo = d.PurchaseHdrNo
GROUP BY h.CustomerName
ORDER BY TotalOrderQty DESC;
```

2. Make a query that delete the 'Rear Brakes' Product Name under the order of customer 'Chicago Rent-All' with order date '12/24/2011'. Please take note that the subtotal = $\text{Sum}(\text{OrderQty} * \text{UnitPrice})$. If there are anomalies happened (insert, update and delete) the subtotal should be recalculated. So, you have to update the subtotal after the deletion of 'Rear Brakes'.

Ans:

```
DELETE FROM PURCHASE_ORDER_DETAIL
```

```
WHERE PurchaseHdrNo = (
```

```
    SELECT PurchaseHdrNo FROM PURCHASE_ORDER_HEADER
```

```
    WHERE CustomerName = 'Chicago Rent-All'
```

```
    AND OrderDate = '2011-12-24'
```

```
)
```

```
AND ProductName = 'Rear Brakes';
```

```
UPDATE PURCHASE_ORDER_HEADER
```

```
SET SubTotal = (
```

```
    SELECT SUM(OrderQty * UnitPrice)
```

```
    FROM PURCHASE_ORDER_DETAIL
```

```
    WHERE PurchaseHdrNo = PURCHASE_ORDER_HEADER.PurchaseHdrNo
```

```
)
```

```
WHERE CustomerName = 'Chicago Rent-All'
```

```
AND OrderDate = '2011-12-24';
```

--- COALESCE Included for the null to display 0.

```
DELETE FROM PURCHASE_ORDER_DETAIL
```

```
WHERE PurchaseHdrNo = (
```

```

SELECT PurchaseHdrNo FROM PURCHASE_ORDER_HEADER
WHERE CustomerName = 'Chicago Rent-All'
AND OrderDate = '2011-12-24'
)
AND ProductName = 'Rear Brakes';

UPDATE PURCHASE_ORDER_HEADER
SET SubTotal = (
    SELECT COALESCE(SUM(OrderQty * UnitPrice), 0)
    FROM PURCHASE_ORDER_DETAIL
    WHERE PurchaseHdrNo = PURCHASE_ORDER_HEADER.PurchaseHdrNo
)
WHERE CustomerName = 'Chicago Rent-All'
AND OrderDate = '2011-12-24';

```

3. Make a query that shows the Total Sales per Year. Sort the query by Year. The query should have the following columns:

- a. Year
- b. TotalSales

Ans:

```

SELECT
    YEAR(OrderDate) AS Year,
    SUM(SubTotal) AS TotalSales
FROM PURCHASE_ORDER_HEADER
GROUP BY YEAR(OrderDate)

```

ORDER BY Year;

4. Make a query that shows the products shipping date. Sort the query by Product Name and Ship Date in descending order. The query should have the following columns:

a. Product Name

b. Ship Date

Ans:

SELECT

 POD.ProductName,

 POH.ShipDate

FROM PURCHASE_ORDER_DETAIL POD

JOIN PURCHASE_ORDER_HEADER POH

 ON POD.PurchaseHdrNo = POH.PurchaseHdrNo

ORDER BY ProductName DESC, ShipDate DESC;

5. Make a query that shows the line total per order. Sort the query by Order Date in descending order and Product Name in chronological order. The query should have the following columns:

a. Customer Name

b. Order Date

c. Product Name

d. Order Quantity

e. Unit Price

f. Line Total

Ans:

SELECT

```
POH.CustomerName,  
POH.OrderDate,  
POD.ProductName,  
POD.OrderQty,  
POD.UnitPrice,  
(POD.OrderQty * POD.UnitPrice) AS LineTotal  
FROM PURCHASE_ORDER_DETAIL POD  
JOIN PURCHASE_ORDER_HEADER POH  
ON POD.PurchaseHdrNo = POH.PurchaseHdrNo  
ORDER BY POH.OrderDate DESC, POD.ProductName ASC;
```