SELECT \* FROM ModuleSQLSep7.online\_retail;

use ModuleSQLSep7 ;

SELECT CustomerID, SUM(Quantity \* UnitPrice) AS total\_order\_value

FROM online\_retail

GROUP BY CustomerID

ORDER BY total\_order\_value DESC;

SELECT CustomerID, COUNT(DISTINCT StockCode) AS unique\_products

FROM online\_retail

GROUP BY CustomerID;

SELECT CustomerID

FROM online\_retail

GROUP BY CustomerID

HAVING COUNT(InvoiceNo) = 1;

SELECT a.StockCode AS Product1, b.StockCode AS Product2, COUNT(\*) AS Frequency

FROM online\_retail a

JOIN online\_retail b ON a.InvoiceNo = b.InvoiceNo AND a.StockCode != b.StockCode

GROUP BY Product1, Product2

ORDER BY Frequency DESC

LIMIT 10;

SELECT CustomerID, purchase\_frequency,

CASE

WHEN purchase\_frequency > 50 THEN 'High'

WHEN purchase\_frequency BETWEEN 20 AND 50 THEN 'Medium'

ELSE 'Low'

END AS frequency\_segment

FROM (

SELECT CustomerID, COUNT(InvoiceNo) AS purchase\_frequency

FROM online\_retail

GROUP BY CustomerID

) AS freq;

SELECT Country, AVG(total\_order\_value) AS average\_order\_value

FROM (

SELECT Country, (Quantity \* UnitPrice) AS total\_order\_value

FROM online\_retail

) AS order\_values

GROUP BY Country

ORDER BY average\_order\_value DESC;

SELECT CustomerID

FROM (

SELECT CustomerID, MAX(InvoiceDate) AS last\_purchase\_date

FROM online\_retail

GROUP BY CustomerID

) AS last\_purchase

WHERE last\_purchase\_date < DATE\_SUB(CURDATE(), INTERVAL 6 MONTH);

SELECT Product1, Product2, COUNT(\*) AS Frequency

FROM (

SELECT a.StockCode AS Product1, b.StockCode AS Product2

FROM online\_retail a

JOIN online\_retail b ON a.InvoiceNo = b.InvoiceNo AND a.StockCode != b.StockCode

) AS product\_pairs

GROUP BY Product1, Product2

ORDER BY Frequency DESC

LIMIT 10;

SET SQL\_SAFE\_UPDATES = 0;

UPDATE online\_retail

SET InvoiceDate = STR\_TO\_DATE(InvoiceDate, '%m/%d/%Y %H:%i')

WHERE InvoiceDate IS NOT NULL;

ALTER TABLE online\_retail

MODIFY COLUMN InvoiceDate DATETIME;

SELECT year, month\_name, SUM(total\_sales) AS total\_sales

FROM (

SELECT YEAR(InvoiceDate) AS year,

MONTHNAME(InvoiceDate) AS month\_name,

(Quantity \* UnitPrice) AS total\_sales

FROM online\_retail

WHERE InvoiceDate IS NOT NULL

) AS monthly\_sales

GROUP BY year, month\_name

ORDER BY year, month\_name;