TECHMA ZONE SQL TASK:

NAME: M HUZAIFA IMRAN

BATCH:DS B32

Q1

1.1 Low Stock (Top 10 products closest to being out of stock)

select productCode,

round(sum(QuantityOrdered)*1.0 / (select quantityOrdered from products p where p.productCode=od.productCode),2) as Lowstockratio

from orderdetails as od

group by productCode

order by Lowstockratio DESC

LIMIT 10

	productCode	Lowstockratio
1	S18_3232	78.61
2	S32_1374	50.7
3	S12_2823	48.95
4	S18_2432	45.36
5	S24_1578	41.32
6	S18_2238	41.08
7	S700_3962	40.73
8	S18_3140	40.14

1.2 Product Performance (Top 10 best-selling products by revenue)

SELECT productCode,

sum(quantityOrdered * priceEach) as totalsales

from orderdetails

group by productCode

order by totalsales DESC

limit 10

	productCode	totalsales
1	S18_3232	276839.98
2	S12_1108	190755.86
3	S10_1949	190017.96
4	S10_4698	170686.0
5	S12_1099	161531.48
6	S12_3891	152543.02
7	S18_1662	144959.91
8	S18_2238	142530.63

1.3 Priority Products for Restocking (Products that are in both lists)

WITH LowStock AS (

  SELECT

    productCode

  FROM orderdetails od

  GROUP BY productCode

ORDER BY SUM(quantityOrdered) * 1.0 / (SELECT quantityInStock FROM products p WHERE p.productCode = od.productCode) DESC

    LIMIT 10

),

TopPerformance AS (

    SELECT

        productCode

    FROM orderdetails

    GROUP BY productCode

    ORDER BY SUM(quantityOrdered * priceEach) DESC

    LIMIT 10

)

SELECT

    productCode

FROM LowStock

WHERE productCode IN (SELECT productCode FROM TopPerformance);

Q2

2.1 Customer Profits

select o.customerNumber,

sum(od.quantityOrdered * (od.priceEach - p.buyPrice)) AS profit

from orderdetails as od

join products p on od.productCode=p.productCode

join orders as o on od.orderNumber=o.orderNumber

group by o.customerNumber;

	customerNumber	profit
1	103	10063.8
2	112	31312.72
3	114	70311.07
4	119	60875.3
5	121	41391.52
6	124	236769.39
7	128	27728.34
8	129	28092.43
9	131	58669.1
10	141	326519.66

2.2 Top 5 VIP Customers

```sql
with CustomerProfit as (

select o.customerNumber,

sum(od.quantityOrdered * (od.priceEach - p.buyPrice)) AS profit

from  orderdetails as od

join products p on od.productCode=p.productCode

join orders as o on od.orderNumber=o.orderNumber

group by o.customerNumber

)

SELECT

    c.contactLastName,

    c.contactFirstName,

    c.city,

    c.country,

    cp.profit

FROM CustomerProfit cp

JOIN customers c ON cp.customerNumber = c.customerNumber

ORDER BY cp.profit DESC

LIMIT 5;
```

	contactLastName	contactFirstName	city	country	profit
1	Freyre	Diego	Madrid	Spain	326519.66
2	Nelson	Susan	San Rafael	USA	236769.39
3	Young	Jeff	NYC	USA	72370.09
4	Ferguson	Peter	Melbourne	Australia	70311.07
5	Labrune	Janine	Nantes	France	60875.3

2.3 Least Engaged Customers

with customerprofits as (select o.customerNumber,

sum(od.quantityOrdered * (od.priceEach - p.buyPrice)) as profit

from orderdetails od

join products p on od.productCode=p.productCode

join orders o on od.orderNumber=o.orderNumber

group by o.customerNumber

)

SELECT

   c.contactLastName,

   c.contactFirstName,

   c.city,

   c.country,

   cp.profit

FROM customerprofits cp

join customers c on cp.customerNumber=c.customerNumber

order by cp.profit   ASC

limit 5

	contactLastName	contactFirstName	city	country	profit
1	Young	Mary	Glendale	USA	2610.87
2	Taylor	Leslie	Brickhaven	USA	6586.02
3	Ricotti	Franco	Milan	Italy	9532.93
4	Schmitt	Carine	Nantes	France	10063.8
5	Smith	Thomas	London	UK	10868.04

3 Average LTV

WITH CustomerProfits AS (

   SELECT

     o.customerNumber,

     SUM(od.quantityOrdered * (od.priceEach - p.buyPrice)) AS profit

   FROM orderdetails od

   JOIN products p ON od.productCode = p.productCode

   JOIN orders o ON od.orderNumber = o.orderNumber

   GROUP BY o.customerNumber

)

SELECT

   ROUND(AVG(profit), 2) AS averageLTV

FROM CustomerProfits;

	averageLTV
1	39039.59