MYSQL QUERY FOR

FP20 April inventory management challenge

**Stock Analysis& inventory levels**

**1 -- Product category with the highest stock quantity**

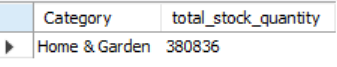
select Category, sum(Stock\_Quantity) as total\_stock\_quantity

from inventory\_data

group by Category

order by total\_stock\_quantity desc

limit 1;

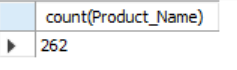


**2 -- NO product have stock quantity below their reorder point**

select count(Product\_Name)

from inventory\_data

where Stock\_Quantity< Reorder\_Point;

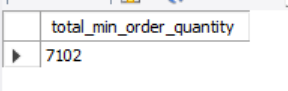


**3 -- Total Min quantity required to restock all products below the reorder point**

select sum(Min\_Order\_Quantity) as total\_min\_order\_quantity

from inventory\_data

where Stock\_Quantity< Reorder\_point;



**Supplier & Restocking Performance**

**4 -- Suppliers with the highest average lead time**

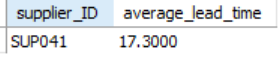
select supplier\_ID, avg(Lead\_Time\_Days) as average\_lead\_time

from inventory\_data

group by Supplier\_ID

order by average\_lead\_time desc

limit 1;



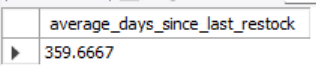
**5--What is the average time since the last restock for products marked as "Out of Stock"?**

SELECT AVG(DATEDIFF(CURDATE(), last\_restock\_date)) AS average\_days\_since\_last\_restock

FROM inventory\_data

WHERE stock\_quantity = 'Out of Stock'

LIMIT 200;



**6--Identify the months when the highest number of products were restocked - are there any seasonal trends**

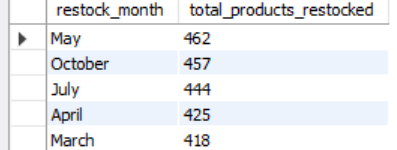
SELECT monthname(Last\_Restock\_Date) AS restock\_month,

COUNT(product\_id) AS total\_products\_restocked

FROM inventory\_data

GROUP BY monthname(Last\_Restock\_Date)

ORDER BY total\_products\_restocked DESC;



Cost & Pricing Analysis

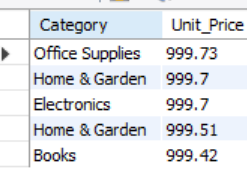
7--the top 5 most expensive products (by unit price) and their categories

select Category,Unit\_Price

from inventory\_data

order by Unit\_Price desc

limit 5;



**8--product category has the fastest turnover based on stock quantity and lead time**

SELECT Category,

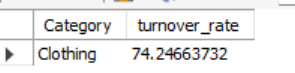
AVG( Stock\_Quantity/ Lead\_Time\_Days) AS turnover\_rate

FROM inventory\_data

GROUP BY Category

ORDER BY turnover\_rate DESC

LIMIT 1;



**Warehouse & Geographic insights**

**9--Which warehouse location has the highest number of products stored?**

SELECT warehouse\_location,

COUNT(product\_id) AS total\_products

FROM inventory\_data

GROUP BY warehouse\_location

ORDER BY total\_products DESC

LIMIT 1;

**10 --country with the most stocked items**

SELECT country,

SUM(stock\_quantity) AS total\_stock

FROM inventory\_data

GROUP BY country

ORDER BY total\_stock DESC

LIMIT 1;



**11 --top 3 counties with the highest stocked quantities by product categories**

SELECT Country, Category,

SUM(stock\_quantity) AS total\_category\_stock

FROM inventory\_data

GROUP BY Country,Category

ORDER BY total\_category\_stock DESC

LIMIT 3;

