CREATE TABLE inventory (

SKU INT,

TransactionType VARCHAR(32),

WarehouseCode VARCHAR(32),

TransactionDate DATE,

Qty INT

)

INSERT INTO

inventory

VALUES

(100, 'IN', 'WH1', '2021-04-30', 100),

(100, 'IN', 'WH2', '2021-04-30', 50),

(101, 'IN', 'WH1', '2021-04-30', 30),

(101, 'IN', 'WH2', '2021-05-01', 25),

(100, 'OUT', 'WH2', '2021-05-02', 30),

(100, 'OUT', 'WH1', '2021-05-02', 20),

(100, 'OUT', 'WH1', '2021-05-04', 50),

(100, 'OUT', 'WH2', '2021-05-04', 20),

(100, 'OUT', 'WH1', '2021-05-05', 25),

(100, 'IN', 'WH2', '2021-05-10', 30),

(100, 'IN', 'WH1', '2021-05-11', 30),

(101, 'OUT', 'WH2', '2021-05-12', 20),

(100, 'OUT', 'WH1', '2021-05-15', 30),

(100, 'IN', 'WH1', '2021-05-16', 30),

(102, 'IN', 'WH1', '2021-05-15', 25),

(102, 'OUT', 'WH1', '2021-05-17', 2),

(102, 'ADJ', 'WH1', '2021-05-18', 5),

(102, 'ADJ', 'WH1', '2021-05-18', -1);

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WITH cte1 AS (

-- điều chỉnh số lượng nhập

SELECT i.\*

, SUM(CASE WHEN TransactionType = 'IN' THEN 1 ELSE 0 END) OVER (PARTITION BY SKU, WarehouseCode ORDER BY TransactionDate) AS grp

FROM inventory AS i

WHERE TransactionType IN ('IN', 'ADJ')

)

, cte2 AS (

SELECT SKU, WarehouseCode, 'IN' AS TransactionType

, MIN(TransactionDate) AS TransactionDate

, SUM(Qty) AS Qty

FROM cte1

GROUP BY WarehouseCode, SKU, grp

UNION -- gộp giao dịch OUT tạo bảng đúng số liệu

SELECT SKU, WarehouseCode, TransactionType, TransactionDate, Qty

FROM inventory

WHERE TransactionType = 'OUT'

)

, cumulative AS ( -- tính toán số lượng IN, OUT tích lũy

SELECT \*

, SUM(CASE WHEN TransactionType = 'OUT' THEN Qty ELSE 0 END) OVER (PARTITION BY SKU, WarehouseCode) AS qty\_out\_final

, SUM(CASE WHEN TransactionType = 'IN' THEN Qty ELSE 0 END) OVER (PARTITION BY SKU, WarehouseCode ORDER BY TransactionDate) AS qty\_in\_so\_far

FROM cte2

)

, report AS( -- tính toán FIFO

SELECT SKU, WarehouseCode, TransactionType, TransactionDate

, qty\_out\_final, qty\_in\_so\_far, Qty

, CASE WHEN qty\_out\_final >= qty\_in\_so\_far THEN 0

WHEN (qty\_in\_so\_far - qty\_out\_final) > Qty THEN Qty

ELSE qty\_in\_so\_far - qty\_out\_final END AS qty\_final

, DATEDIFF(day, TransactionDate, '2021-05-30') + 1 AS aging

FROM cumulative

WHERE TransactionType = 'IN' --and SKU='100' and WarehouseCode='WH1'

--ORDER BY TransactionDate desc, SKU, WarehouseCode

)

SELECT WarehouseCode,SKU,

SUM (qty\_final) as Stock,

SUM (CASE WHEN aging BETWEEN 0 AND 15 THEN qty\_final ELSE 0 END) AS Age\_0\_15,

SUM (CASE WHEN aging BETWEEN 16 AND 20 THEN qty\_final ELSE 0 END) AS Age\_16\_20,

SUM (CASE WHEN aging BETWEEN 21 AND 30 THEN qty\_final ELSE 0 END) AS Age\_21\_30,

SUM (CASE WHEN aging >30 THEN qty\_final ELSE 0 END) AS Age\_Over30

FROM report

GROUP BY WarehouseCode, SKU

ORDER BY WarehouseCode, SKU