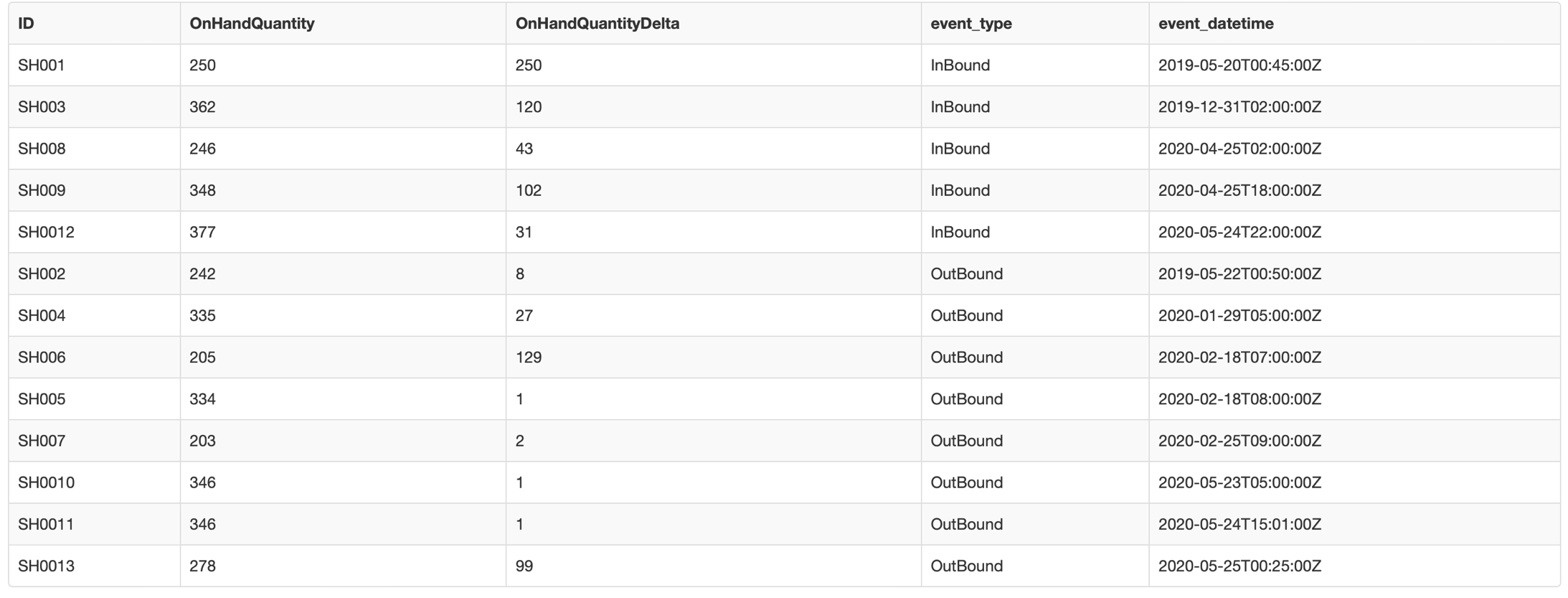
**Breakdown of the query**

1. Quick view of data

select \* from warehouse

order by event\_type, event\_datetime;



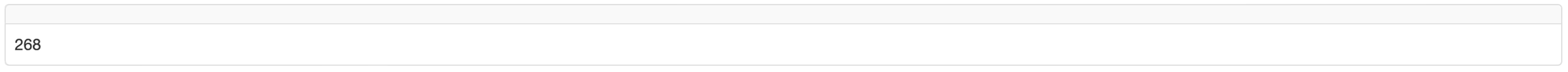
1. Calculate total sold items

declare @totalSales as varchar(1000)

set @totalSales = (select sum(onhandquantitydelta) from warehouse

where event\_type = 'OutBound');

select @totalSales;



1. Show the inventory count by date (result of the inner query of the cte)

declare @currentdate as date

set @currentdate = '2020-05-25'; (this date is to be replaced by future date)

select \*

,datediff(day, convert(DATE,event\_datetime),@currentdate) as days\_inventory\_stay\_in\_wh

,grp = case

when datediff(day, convert(DATE,event\_datetime),@currentdate) <= 90 then 'a\_0-90 days old'

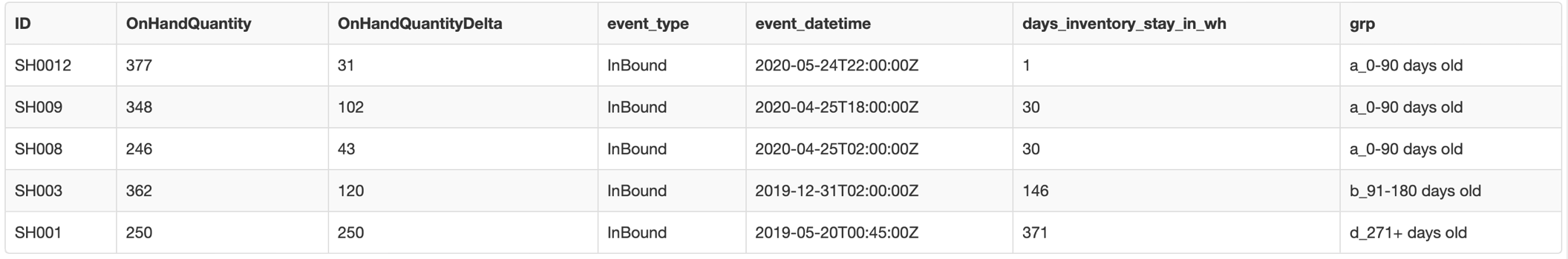
when datediff(day, convert(DATE,event\_datetime),@currentdate) <= 180 then 'b\_91-180 days old'

when datediff(day, convert(DATE,event\_datetime),@currentdate) <= 270 then 'c\_181-270 days old'

else 'd\_271+ days old' end

from warehouse

where event\_type = 'InBound'



1. Show the inventory by period, add columns for the cumulative inventory, inventory from previous and next immediate period for to calculate the remaining inventory in the next step

declare @currentdate as date

set @currentdate = '2020-05-25';

with inventory\_tbl\_cte as (

select grp, sum(onhandquantitydelta) as inbound

from (

select \*

, grp = case

when datediff(day, convert(DATE,event\_datetime),@currentdate) <= 90 then 'a\_0-90 days old'

when datediff(day, convert(DATE,event\_datetime),@currentdate) <= 180 then 'b\_91-180 days old'

when datediff(day, convert(DATE,event\_datetime),@currentdate) <= 270 then 'c\_181-270 days old'

else 'd\_271+ days old' end

from warehouse

where event\_type = 'InBound'

) a

group by grp)

select \*

,lag(inbound) over (order by grp desc) lag

,lead(inbound) over (order by grp desc) lead

,sum(inbound) over (order by grp desc ROWS BETWEEN UNBOUNDED PRECEDING AND CURRENT ROW) cum

from inventory\_tbl\_cte;



1. Do the calculation

declare @totalSales as varchar(1000)

set @totalSales = (select sum(onhandquantitydelta) from warehouse

where event\_type = 'OutBound');

declare @currentdate as date

set @currentdate = '2020-05-25';

with inventory\_tbl\_cte as (

select grp, sum(onhandquantitydelta) as inbound

from (select \*, grp = case

when datediff(day, convert(DATE,event\_datetime),@currentdate) <= 90 then 'a\_0-90 days old'

when datediff(day, convert(DATE,event\_datetime),@currentdate) <= 180 then 'b\_91-180 days old'

when datediff(day, convert(DATE,event\_datetime),@currentdate) <= 270 then 'c\_181-270 days old'

else 'd\_271+ days old' end

from warehouse

where event\_type = 'InBound') a

group by grp)

--use CTE & the totalSales for calculation

select \*,

unused\_inventory = iif(@totalSales > cum, 0, iif(lead is null, inbound, inbound - (@totalSales - lag)))

from (

select \*,

lag(inbound) over (order by grp desc) lag

,lead(inbound) over (order by grp desc) lead

,sum(inbound) over (order by grp desc ROWS BETWEEN UNBOUNDED PRECEDING AND CURRENT ROW) cum

from inventory\_tbl\_cte

) b

order by grp;

