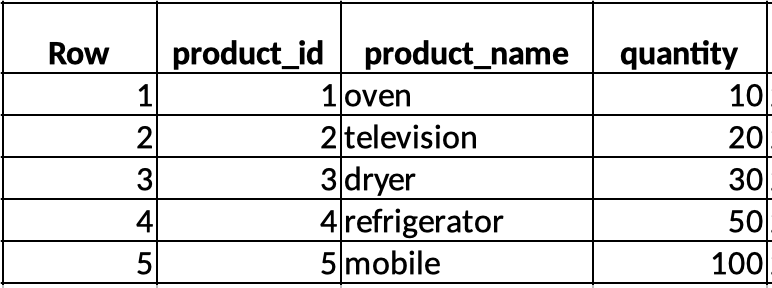
Question no 5 Implement a test SCD2 table in BQ, explain about the SCD2 tables

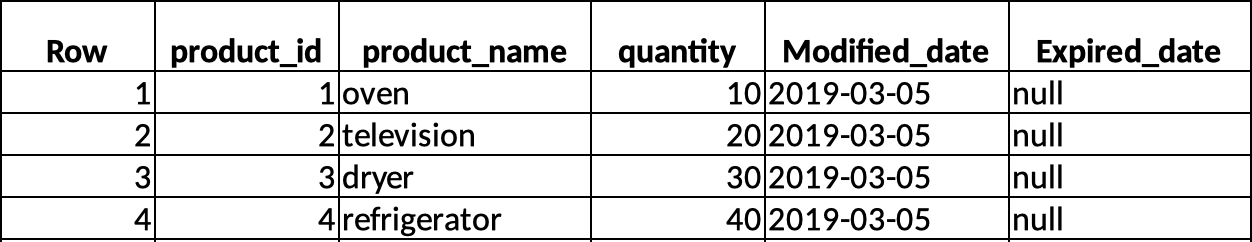
So based in this [article](https://medium.com/happiestneurons/slowly-changing-dimension-type-2-scd2-in-big-query-95330ce31625), there are 2 type of SCD. SCD type 2 : Maintains dimension history by creating newer ‘versions’ of a dimension record whenever its source changes. SCD2 does not delete or modify existing data. Basically when the source data changes you expire the existing record in the dimension table via an indicator (boolean or date or any standard technique of marking a record as expired by setting a flag)

Simple explain of SCD type 2 is for illustration there are 2 table product and staging\_product in bigquery. So we want insert new data from staging\_product table to product table. After insert new data, product table insert new record

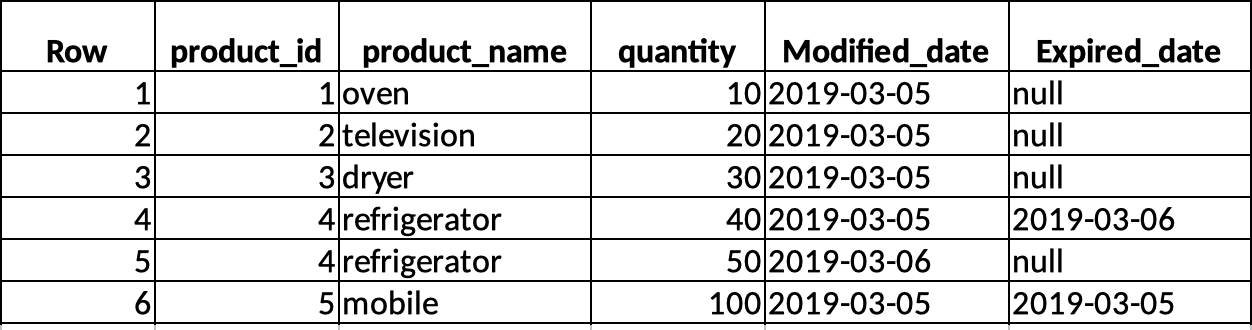
Product\_staging table



Product table before merge



Product table after merge



The query is bellow :

MERGE INTO

`aerial-anagram-273815.merge\_table.product`

USING

(

#the base staging data.

SELECT

`aerial-anagram-273815.merge\_table.product\_staging`.product\_id AS join\_key,

`aerial-anagram-273815.merge\_table.product\_staging`.\*

FROM

`aerial-anagram-273815.merge\_table.product\_staging`

UNION ALL

#generate an extra row FOR changed records.

#the NULL join\_key forces records down the INSERT path.

SELECT

NULL,

`aerial-anagram-273815.merge\_table.product\_staging`.\*

FROM

`aerial-anagram-273815.merge\_table.product\_staging`

JOIN

`aerial-anagram-273815.merge\_table.product`

ON

`aerial-anagram-273815.merge\_table.product\_staging`.product\_id = `aerial-anagram-273815.merge\_table.product`.product\_id

WHERE

( `aerial-anagram-273815.merge\_table.product\_staging`.quantity <> `aerial-anagram-273815.merge\_table.product`.quantity

AND `aerial-anagram-273815.merge\_table.product`.expired\_date IS NULL)) sub

ON

sub.join\_key = `aerial-anagram-273815.merge\_table.product`.product\_id

WHEN MATCHED AND sub.quantity <> `aerial-anagram-273815.merge\_table.product`.quantity THEN UPDATE SET expired\_date = CURRENT\_DATE()

WHEN NOT MATCHED

THEN

INSERT

( product\_id,

product\_name,

quantity,

modified\_date,

expired\_date )

VALUES

( sub.product\_id, sub.product\_name, sub.quantity, CURRENT\_DATE(), NULL );