# Question 2 Answer:

## Part 1: selecting the products who sold at least 1000 last year

create view condition as

select ORDER\_ITEM.ORDER\_ID as ORDER\_ID, PRODUCT\_ID, QUANTITY from ORDER\_ITEM, ORDER\_HEADER

where ORDER\_ITEM.ORDER\_ID=ORDER\_HEADER.ORDER\_ID

and ORDER\_DATE > 20150201;

create view pair as

select REPLACEMENT\_PRODUCT\_ID, PRODUCT\_ID from PRODUCT

where PRODUCT\_ID in (select PRODUCT\_ID from condition)

and REPLACEMENT\_PRODUCT\_ID IS NOT NULL;

create view updated as

select REPLACEMENT\_PRODUCT\_ID as PRODUCT\_ID, QUANTITY from pair, condition

where pair.PRODUCT\_ID=condition.PRODUCT\_ID

union all

select PRODUCT\_ID, QUANTITY from condition

where PRODUCT\_ID not in (select PRODUCT\_ID from pair);

create view want as

select PRODUCT\_ID from (

select PRODUCT\_ID, sum(QUANTITY) as lastyear from updated

group by PRODUCT\_ID

)

where lastyear>= 1000;

## Part 2: get the total for all the products that meet the requirement

create view choose as

select PRODUCT\_ID from pair

where REPLACEMENT\_PRODUCT\_ID in want

union

select PRODUCT\_ID from want;

create view every as

select PRODUCT\_ID, QUANTITY from ORDER\_ITEM

where PRODUCT\_ID in choose;

create view cl as

select REPLACEMENT\_PRODUCT\_ID as PRODUCT\_ID, QUANTITY from pair, every

where every.PRODUCT\_ID=pair.PRODUCT\_ID

union all

select PRODUCT\_ID, QUANTITY from every

where PRODUCT\_ID not in (select PRODUCT\_ID from pair);

select PRODUCT\_ID, sum(QUANTITY) from cl

group by PRODUCT\_ID;

Question 3 Database:

I will choose MySQL as the DB with 3 tables:

|  |  |  |
| --- | --- | --- |
| Table | Column | Notes |
| SUPPLIER | SUPPLIER\_ID \* | Primary Key |
| … | Other information such as name, contact number, etc. |
| … |

|  |  |  |
| --- | --- | --- |
| Table | Column | Notes |
| PRODUCT | PRODUCT\_ID\* | Primary Key |
| QUANTITY | Inventory that updates in real time and everyday the same time pulling from table SUPPLIER\_PRODUCT |
| … | Other information such as name, brand, etc. |
| … |

|  |  |  |
| --- | --- | --- |
| Table | Column | Notes |
| SUPPLIER\_PRODUCT | SUPPLIER\_ID\* | Primary Key is (SUPPLIER\_ID, PRODUCT\_ID)  SUPPLIER\_ID references SUPPLIER. SUPPLIER\_ID PRODUCT\_ID references PRODUCT.PRODUCT\_ID |
| PRODUCT\_ID\* |
| QUANTITY | Inventory feeds updated daily |