Problem 4:

The query of the module 2 assignment:

select Name, Zip, CalQuarter, sum(ExtCost) as tot\_cost, count(\*) as Cnt

from inventory\_fact i, cust\_vendor\_dim c, date\_dim d

where TransTypeKey = 5 and d.Calyear BETWEEN 2011 AND 2012

AND i.CustVendorKey = c.CustVendorKey AND i.DateKey = d.DateKey

group by CUBE(c.Name, Zip, d.CalQuarter);

Notes to the rewriting:

 Rewriting with the union of the two views is possible – the first view contributes the data of 2011, the

second view the data of 2012. Futhermore

o Selection criteria on the transtypekey in the where clause match exactly.

o Grouping attributes match because

datekey  calquarter and custvendorkey  name, zip

o aggregation sum(ExtCost) matches with sum(ExtCost) in the views

o aggregation count(\*) matches with count(\*) in the view definition.

 The grouping with aggregation and cube operator has to be done again on the required level (name, zip

calquarter). The number of transactions results from the sum of the number of transactions retrieved in

the views.

SQL:

SELECT Name, Zip, CalQuarter,

SUM(totalextcost) as tot\_cost, SUM(notrans) as Cnt

FROM (

SELECT name, zip, calquarter, totalextcost, notrans

FROM SalesByVendorDateKeyMV2011 v11, cust\_vendor\_dim cv, date\_dim d

WHERE cv.custvendorkey = v11.custvendorkey AND d.datekey = v11.datekey

UNION

SELECT name, zip, calquarter, totalextcost, notrans

FROM SalesByVendorDateKeyMV2012 v12, cust\_vendor\_dim cv, date\_dim d

WHERE cv.custvendorkey = v12.custvendorkey AND d.datekey = v12.datekey )

GROUP BY CUBE(name, zip, calquarter);

Results screenshot (305 result rows):

