Assembling

components
cost
delivery - cost

Supplier area — Supplier region — Supplier — code

4m — year
m — 2m — 6m

type
Component Features
Type
Resolution *
memory capacity *
type *
access-type *

Sales

prod - cost
selling - price
PC - sold
defective

#shops — retailer

Config
HD
CPU
RAM
graph
supplier

m
2m — 3m
year

Data warehouse design (PC store)

Assembling(<u>timeIdA</u>, <u>componentId</u>, #components, cost, delivery_cost)
TimeAss(<u>timeIdA</u>, m, 2m, 4m, 6m, year)
Component(<u>componentId</u>, code, component_type, memory_capacity*, type*, access_time*,
resolution*, supplName, supplier_region, supplier_area)

Sales(<u>confId</u>, <u>retId</u>, <u>timeIdS</u>, production_cost, selling_price, #PC_sold, #defective_PC_returned)
Configuration(<u>confId</u>, RAM_code, HD_code, CPU_code, graphicBoard_Code, RAM_supplier,
HD_supplier, CPU_supplier, graphicBoard_supplier) (or *_code as ids)
Supplier(<u>suppId</u>, nameS)
Retailer(<u>retId</u>, nameR, #shops)
TimeSales(<u>timeIdS</u>, m, 2m, 3m, year)

d) Considering only 2002, for each configuration whose RAM has been bought from the
"IntelligenceDevice" supplier, select the percentage of defective products with respect to the
total number of sold products.

SELECT year, SUM(#defective_PC_returned)*100/SUM(PC_sold)
FROM TimeSales t, Sales S, Configuration C, Supplier CS
WHERE t.timeIdS=S.timeIdS AND C.RAM_supplier = S.suppId AND C.confId=S.confId AND
year='2002' AND CS.nameS="IntelligenceDevice"
GROUP BY confId;

e) Considering only 2007 and RAM components, for each four-month period select the total cost
(component cost + delivery cost) and the cumulative cost since the beginning of the year,
separately for each geographical area and RAM type

SELECT 4-M, component_type, supplier_area, SUM(cost)+SUM(delivery_cost),
SUM(SUM(cost)) OVER (PARTITION BY component_type, supplier_area, year ORDER BY
4-m ROWS UNBOUNDED PRECEDING DESC)
FROM TimeAss t, Assembling A, Component C
WHERE t.timeIdA=A.timeIdA AND C.componentId=A.componentId AND year = '2007' AND
component_type='RAM'
GROUP BY 4-M, year, component_type, supplier_area;

h) Considering only suppliers from which, in 2003, more than 100 000 components have been bought in total, select for each supplier and each component type the number of pieces bought and the total cost in the second two-month period of 2003.


```sql
SELECT supplName, type, SUM(#components), SUM(cost)+SUM(delivery_cost)
FROM TimeAss t, Assembling A
WHERE t.timeIdA=A.timeIdA AND year = '2003'  AND 2M = '2-2003'
AND supplName IN (SELECT supplName
                  FROM Assembling A2
                  WHERE year='2003'
                  GROUP BY supplName
                  HAVING SUM(#components)>100000)
GROUP BY supplName, component_type;
```