



Assignment No. 024

Tauseef M. Ali Shaikh | 18C063 | TE - CO

Day:

Date:

- Q] Consider a Data Warehouse for a hospital where there are three dimension (a) Doctor (b) Patient (c) Time And two measures i) count ii) charge where charge is the fee that the doctor charges a patient for a visit using the above example describe the following OLAP operations.
- 1) Slice
 - 2) Dice
 - 3) Rollup
 - 4) Drilldown
 - 5) Pivot

⇒ Dimension Table:

- 1) Doctor (DID, name, mob, add, specialisation)
- 2) Patient (PID, name, mob, add)
- 3) Time (TID, day, month, quarter, year)

Fact Table:

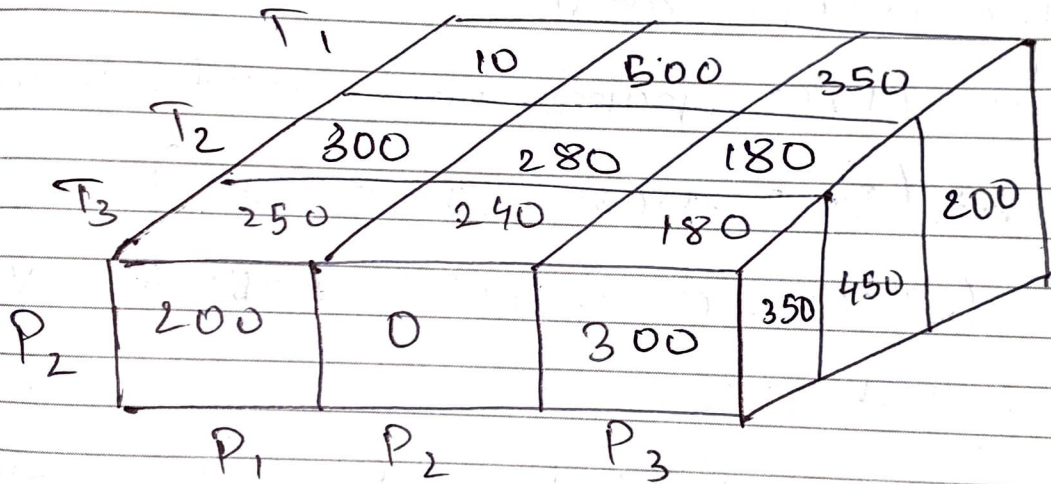
fact-table (DID, PID, TID, count, charge)

		T				
		T ₁	T ₂	T ₃		
D	P ₁	100	250	300	0	500
	P ₂	130	240	280	500	550
	P ₃	125	150	180	170	100
D ₂	P ₁	200	350	400	280	100
D ₂	P ₂	0	360	450	206	100
D ₃	P ₁	180	530	280	400	280

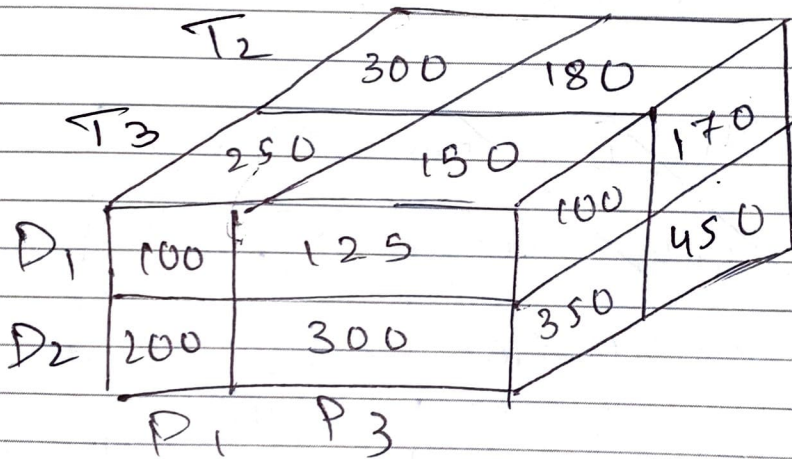
Operation 3:

1) Slice :

Slice on fact table with $DID=1$
this acts the cube at $DID=2$ along
the time & Patient axis it will
display area of cube in which
time on x & patient on y axis



2) Dice: It is a sub cube of main cube. Thus it gets the cube with more than predicate like dice on cube with $DID=2$ & $DID=1$ & $PID=1$ & $PID=3$ & $TID=02$ & 03



3) Roll up: It gives summary based on concept hierarchy. Assuming there exists concept hierarchy in Patient table as state \rightarrow city \rightarrow Location. The roll up will summarize the changes or count in terms of city or further roll up will give changes for a particular state etc!

	T_1	T_2	T_3
P_1	1000	200	180
P_2	130	0	630
P_3	125	300	280

4) Drill Down: It is opposite to roll up that means if currently cube is summarised with also show detailed view.

	T_1	T_2	T_3
D_{11}	50	50	50
D_{12}	25	50	25
D_{13}	25	30	25
D_{21}	200	0	300
D_{31}	200	350	200
D_{32}	80	180	80

P_1 P_2 P_3

5) Pivot: It rotates the cube, sub cube or rolled up or drilled down the cube.

	P_1	P_2	P_3
T_1	0	500	350
T_2	300	280	180
T_3	230	240	150