**Problem3 : Module 3**

The most detailed grain is the combination of individual supplier, individual product, and date.

* 350 Franchise Rows,200 Franchise Postal Codes : Total = 350
* 20 ServiceCategory Row,1 Special Event Row Total = 21
* Days per year: 365, Total = 365
* 50000 Member Rows, 150 Member Rows\*200 Franchises , 10 MemberType ,500 Member Zip Codes Rows ,Total = 50000 + 150\*200 = 80000
* 500 Merchandise Rows, Total= 500
* 100,000 Service Purchase Rows,(300\*200) Special Events Purchase,450,000 Contains Rows
* Total Fact Table Size Increase = 100000+ 450000+60000 = 610000
* Sparsity estimate:
  + 1 - ( fact table size / product of dimensions )
  + (1 – ( 610000 / (350\*21\*500\*365\*80000) ) = 0.99999999431
  + The data cube has less than 1% non zero cells.