# Assignment Number 1: ( 18K0947, Rehmat Ali Sayany )

I am using Snowflake Schema Because I have multiple level of dimension table for example Franchise Dimension table has Region Dimension Table and Region Dimension has Location Dimension Table.

**Answer 1 :**

**Dimensions Tables:**

1. Merchandise
2. Member Type
3. Location
4. Timestamp
5. Service Category
6. Region
7. Franchise
8. Member
9. Merchandise

**Fact Table:**

1. Merchandise Sale
2. Service Purchase

**Answer 2 :**

**The measure Aggregation Properties:**

Quantity : Additive Measure across all dimesion

Price : Semi Additive

**Answer 6 :**

**Merchandise Table (FACT TABLE )**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sale\_ID | Mercahnt  \_ID | Member  \_ID | Member\_Type\_ID | Location\_ID | Date\_ID | Franchise\_ID | Qty | Price | Member\_Type Price |
| 1 | MC1 | 1111 | M1 | 1 | 1 | F1 | 2 | $3 | $1000 |
| 2 | MC2 | 1111 | M1 | 1 | 1 | F1 | 1 | $200 | $1000 |
| 3 | MC4 | 2222 | M2 | 2 | 4 | F2 | 1 | $40 | $800 |
| 4 | MC3 | 2222 | M3 | 2 | 4 | F2 | 1 | $100 | $300 |
| 5 | MC4 | 3333 | M3 | 3 | 5 | F3 | 1 | $30 | $300 |

**Service Purchase ( FACT TABLE )**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Service\_Purchase\_ID | Date\_ID | Member\_ID | Franchise\_ID | Service\_category\_ID | Price |
| 1 | 4 | 1111 | F1 | SC1 | $15 |
| 2 | 5 | 2222 | F2 | SC2 | $75 |
| 3 | 6 | 4444 | F3 | SC3 | $150 |
|  |  |  |  |  |  |

**Time Stamp (Dimension)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| DateID | day | WeekNo | Month | Year |
| 1 | 10 | 2 | Feb | 2013 |
| 2 | 11 | 2 | Feb | 2013 |
| 3 | 12 | 2 | Feb | 2013 |
| 4 | 13 | 2 | Feb | 2013 |
| 5 | 14 | 2 | Feb | 2013 |
| 6 | 15 | 2 | Feb |  |

**Location (Dimension )**

|  |  |
| --- | --- |
| Location\_ID | ZIP |
| 1 | 98011 |
| 2 | 80112 |
| 3 | 45327 |
| 4 | 45236 |
| 5 | 801111 |

**Member Type (Dimension)**

|  |  |
| --- | --- |
| Member\_Type\_ID | Member\_Type\_Name |
| M1 | Platinum |
| M2 | Gold |
| M3 | Value |
|  |  |

**Members (Dimension)**

|  |  |  |  |
| --- | --- | --- | --- |
| Member\_ID | Member\_Name | Email | Member\_Date |
| 1111 | Joe | joe@serv1.com | 1-Feb-2009 |
| 2222 | Mary | mary@serv2.com | 1-Jan-2010 |
| 3333 | Sue | sue@serv3.com | 3-Mar-2011 |
| 4444 | George | george@serv4.com |  |

**Merchandise ( Dimension)**

|  |  |  |
| --- | --- | --- |
| Merchant\_ID | Mercahnt\_Name | Merchant\_Type |
| MC1 | Wilson balls | Balls |
| MC2 | Wilson racket | Racket |
| MC3 | Adidas shoes | Shoes |
| MC4 | Racket stringing | Racket stringing |

**Franchise (Dimension)**

|  |  |  |
| --- | --- | --- |
| FranchiseID | Region\_ID | ModalType |
| F1 | 1 | Full |
| F2 | 2 | Medium |
| F3 | 3 | Limited |

**Region (Dimension)**

|  |  |  |
| --- | --- | --- |
| Region\_ID | Region\_Name | Location\_ID |
| 1 | Northwest | 1 |
| 2 | Mountain | 5 |
| 3 | Central | 4 |

**Service Category (dimension)**

|  |  |
| --- | --- |
| **Service\_Category\_ID** | **Service\_Category\_Name** |
| SC1 | Ball Machine |
| SC2 | Private Lesson |
| SC3 | Adult Class |
| SC4 | Child Class |

**Answer 5 :**

**Service Purchase Fact**

Service\_Purchase\_ID (PK)

Date\_ID (FK)

Member\_ID (FK)

Franchise\_ID (FK)

Service\_category\_ID (FK)

Price

**Region**

Region\_ID (PK)

Region\_Name

Location\_ID (FK)

Multi Level

**TimeStamp**

Date\_ID

day

Week

Month

Year

**FACT TABLE MERCHANSE SALE**

Sale\_ID (PK)

Merchant\_ID (FK)

Member\_ID (FK)

Member\_Type\_ID (FK)

Location\_ID (FK)

Date\_ID (FK)

Franchise\_ID (FK)

Quantity

Price

MemberTypePrice

**Franchise**

FranchiseID

Region\_ID (FK)

ModalType

**Service Category**

Service\_category\_ID

Servie CategoryName

**Location**

Location\_ID (PK)

ZIP

**Merchandise**

Merchant\_ID (PK)

Mercahnt\_Name

Merchant\_Type

**Member Type**

Member\_Type\_ID (PK)

Member\_Type\_Name

**Member**

Member\_ID (PK)

Member\_Name

Email

Member\_Date