**Dimensional Data Model ERD**

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**The data model should include**

1. Designed as a star schema (include comments about any snowflakes you build as to why you built them)

I was thinking of snowflaking the schema with the introduction of a location dimension that will store the address, country, city, postal code and other geographic details for Customer, Store and Reseller Dimension but decided against it for easier storage. Although the query performance will take a small hit; it is a compromise I am willing to make for easier loading in staging tables.

1. Names for all the tables, specifically identifying which are dimensions and which are facts

|  |  |
| --- | --- |
| Dimensions | Facts |
| Dim\_Customer | Fact\_Sales |
| Dim\_Reseller | Fact\_TargetProduct |
| Dim\_Store | Fact\_Target\_Channel\_Reseller\_Store |
| Dim\_Channel |  |
| Dim\_Product |  |
| Dim\_Date |  |

1. Names and data types for all the columns in your tables (make sure the data types are visible and not hidden)

Visio Crow’s foot notation did not allow adding separate column for datatypes hence data types are mentioned in “[ ]” square brackets besides the attributes.

1. Use of Surrogate Keys

All dimension tables make use of Surrogate keys along with the sourceID (natural keys).

1. Primary Key identification

Primary key in Dimension tables are mentioned with Primary Key attribute constraint.

1. Foreign Key identification

All foreign keys referenced to dimensional primary keys are mentioned in fact tables as (FK).

1. Inclusion of Natural (source system) keys

Source Keys(Business/Natural keys) are included where applicable.

1. Relationships lines to logically connect the keys between tables

Lines show connections between facts and dimensions connecting the FK in fact able to respective primary keys in dimension tables.

1. Commentary on each table on what it's for, what the "grain" (one row in the table) is , and why you modeled it how you did

**Tables in Dimension model –**

**Facts and its grain.**

Sales Fact table is designed to show Sales Qty and Sales Amount by Product, by Customer, by Reseller, by Channel and by Store. The lowest grain is the individual sales record for each sale made.

Fact\_TargetProduct is designed to drill down to find the target quantity of products that should be sold on a daily basis in a given year.

Fact\_Target\_Channel\_Reseller\_Store is designed to include the details of target amount of sales done with a granularity of one day in a given year. The grain is set to ‘daily’.

**Following dimensions give details as-**

Date dimension – Tells details about the month year and day of the week etc.

Product – This dimension table gives the context of product details such as product type, category and the grain is product sold in one day by a store.

Customer- Customer details like name, address etc.

Store – Gives details about store number, manager, address etc.

Channel – Type of channel of sale e.g.-Direct/indirect etc.

Reseller – Reseller name, Address, Phone etc.