Dimensional modeling process

The dimensional data model is built based on star schema with a fact table at the center surrounded by a number of dimension tables. The following four-step process is commonly used in dimensional modeling design:

1. Select the business process
2. Declare the grain
3. Identify the dimensions
4. Identify the Fact

Let’s examine each step in the modeling process in greater detail.

1. Select the business process to model – business process is daily activities performed in your company supported by an online transaction system (OLTP) or source system. In this step, we have to gather the requirements from business users to select the business process or source of measurement to model. Good examples of business processes are order processing, shipments, materials purchasing, GL, etc.
2. Declare the grain – after having a business process to model, we need to declare the grain of a business process. Declaring grain means describing exactly what a record in a fact table represents. The grains express the level of detail associating with facts in the fact table.
3. Identify the dimensions – in this step, we add a number of dimensions that represent all possible descriptions that take on single values in the context of each fact in the fact table. Date, time, product, customer, store, etc., are several good examples of common dimensions.
4. Identify the facts – in the last step, we select the numeric facts that will be loaded into the fact table. To identify the facts, we need to find the KPIs of the business process or find out what we are trying to measure.

**EXERCISE 1**

Scenario

Industry: Automobile manufacturing

Company: Millennium Motors

Value chain focus: Sales

Sample business questions:

What are the top 10 selling car models this month?

How do this month’s top 10 selling models compare to the top 10 over the last six months?

Show me dealer sales by region by model by day

What is the total number of cars sold by month by dealer by state?

List facts and dimensions

**EXERCISE 1 SOLUTION**

Facts

Sales revenue

Quantity sold

Dimensions

Model name

Month

Dealer name

Region

State

Date













