



**DW**

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# Agenda

- Star Schema
- Use Alteryx (fill dimension tables with data)



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## **Important Concept**

Single version of truth with multiple visions



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## Single version of truth

is a technical concept describing the **Data Warehousing**

Our aim is to store all of an organization's data in a **consistent and non-redundant form**, So that all department in the organization can see the same version of data (**single version of truth**)

**But this is not enough !!!**



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## **Single version of truth with multiple visions (dimensions)**

Each department should view this single version of data from its **point of view (vision)** in order to do there own analysis and benefit from this data



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## Single version of truth with multiple visions (dimensions)

To achieve this concept, we need **multidimensional schema** to **analyze** data in **multiple visions** (dimension)

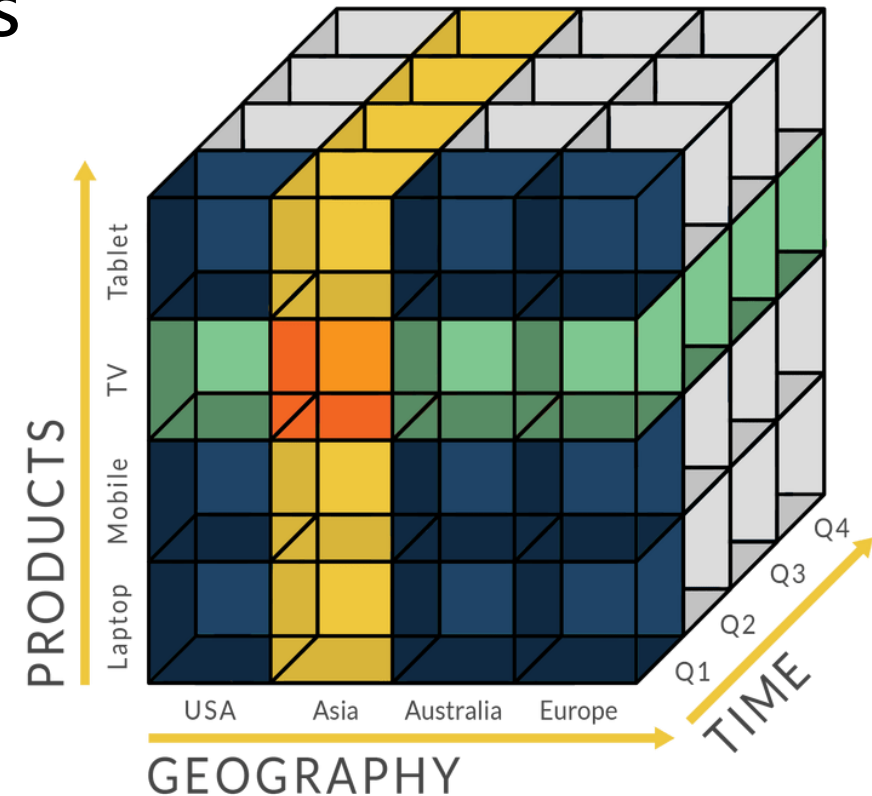
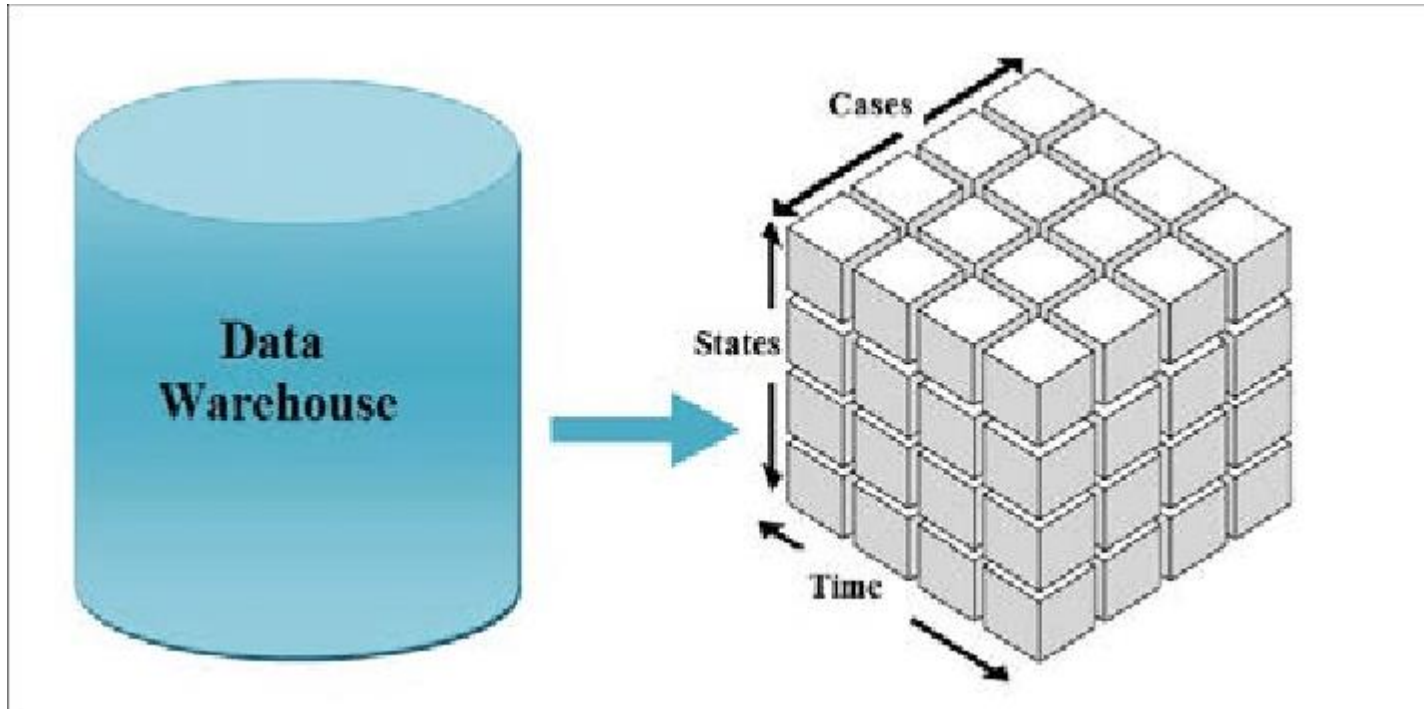
**Data Cube:** is a multidimensional schema enables data to be modeled and viewed in multiple dimensions



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## Single version of truth with multiple visions (dimensions)

**Data Cube:** is a multidimensional schema enables data to be modeled and viewed in multiple dimensions



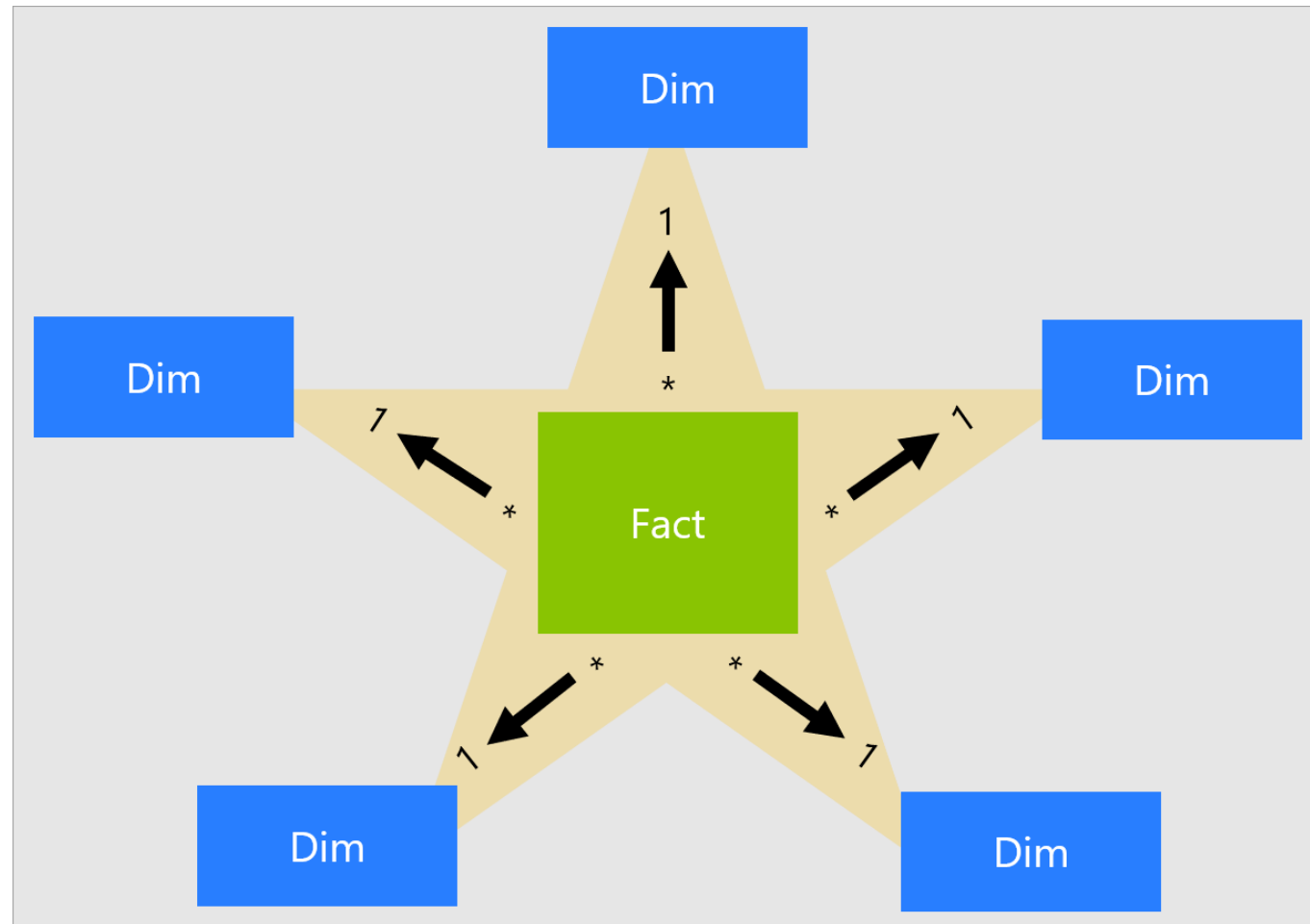


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**Technically, how to model this multidimensional data?**

## Star Schema

is a multi-dimensional data model used to organize data in a database so that it is easy to understand and analyze







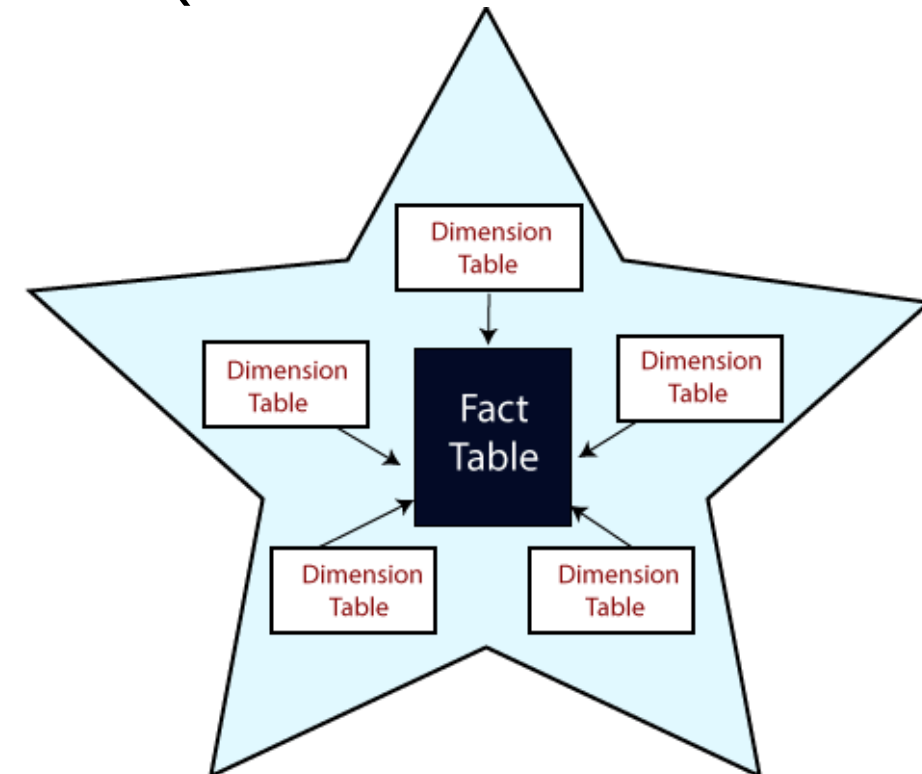
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## Star Schema

A star schema is used to de-normalize business data into **dimensions** (like time and product) and **facts** (like transactions in amounts and quantities).

The fact table **connects dimension tables**

fact table contains **Foreign Keys(Dimension Keys)**

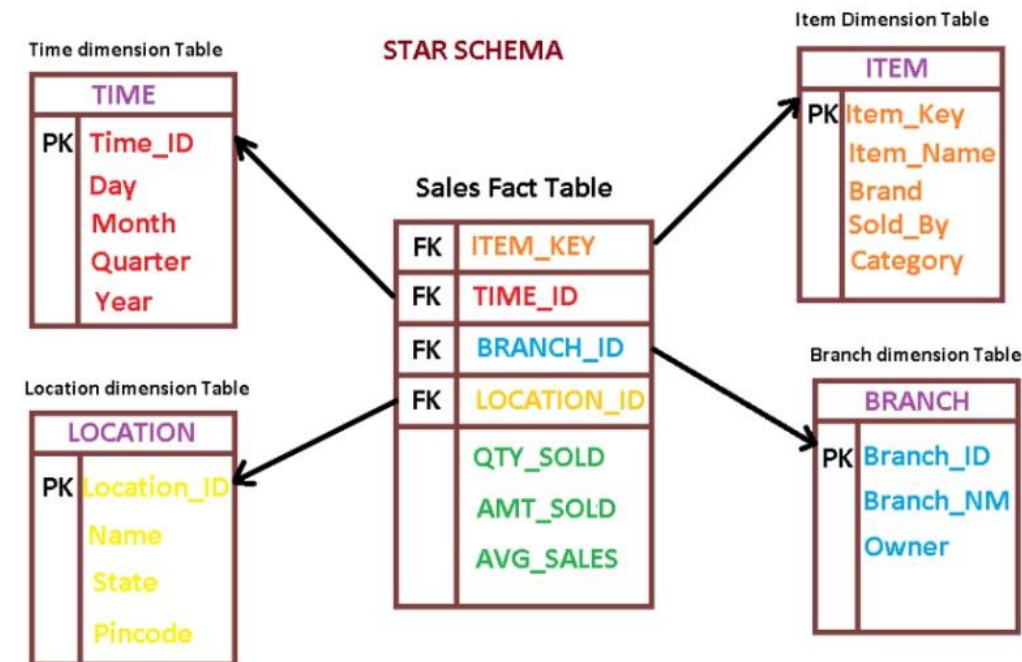




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## Star Schema

**Fact tables** contain numerical data (**measures columns**) and dimension-keys (**Foreign-keys columns**), while **dimension tables** provide information (**descriptive columns**)





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## Using Alteryx

- Create dimensions and fact tables in SQL Server
- Filling Dimension tables with data (New Workflow1.yxmd)
- Data comes from excel data source: [students\\_results.xlsx](#)

Components used in this section will be discussed in **DW (section 5).pdf**

The image features a blue-tinted background showing silhouettes of several groups of business professionals in a modern office environment. They are standing on a reflective floor, and a city skyline is visible in the background. The text "Thank You" is centered in the middle of the image.

Thank You