### IST 722 Data Warehouse Project

# FudgeInc.





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# Objective and Outline of this Project.

We will be answering the questions below for this presentation:

- Why a merger?
  - Why we are integrating two corporations together.
- What kind of Data warehouse and why?
- What is our Business process?
  - OLAP Cube
- How we are planning to drill down (depth) and which tool we used?
  - SSAS, PowerBI (Visual Analytics)
- The end goal recommendation to stakeholders to improve sales
  - This will include: market analytics, and customer behavior insights.



# About FudgeInc.

FudgeInc. is a conglomerate that has two subsidiary companies.

#### Fudgemart:

- Operates in the online realm like Amazon and Walmart.
- Holds database comprising of key elements such as customers, products, and vendors.
- Database name: Fudgemart\_v3

### Fudgeflix:

- An online platform offering DVD by mail and video on demand service.
- Comparable with Amazon instant video or Netflix.
- Database name: Fudgeflix\_v3







# **Explaining the Dataset**

#### Key tables for FudgeMart:

- Customers and their personal details.
- Product details with customer reviews.
- Order details capturing item-specific information.
- Vendor information and more.

#### Key Tables for FudgeFlix:

- Customer account and billing details.
- Movie and series titles along with genre information.
- Cast and crew information for titles.
- Subscription plans, from monthly to yearly.

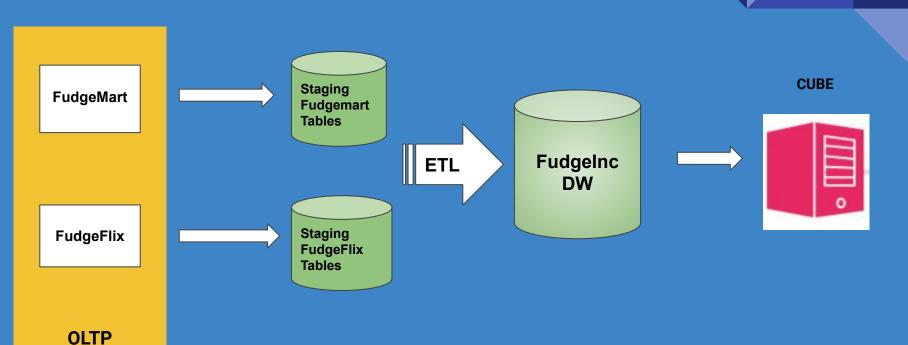
#### Important rows and their counts:

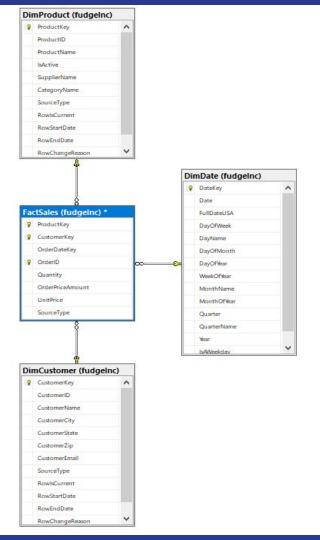
Order Id - fm\_orders - Customer Order Details - 3516 rows Customer ID - fm\_customers, Customer Personal Details - 25 rows ProductID - fm\_products, Product Details - 53 rows



### **Data Warehouse Architecture**

**Data Source** 





## Star Schema

Fact table: FactSales

Dimension tables: DimProduct, DimDate, DimCustomer.

Advantages:

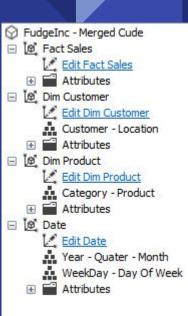
Performance:
This star schema improves performance

Simplicity: Easy to understand and write queries for.

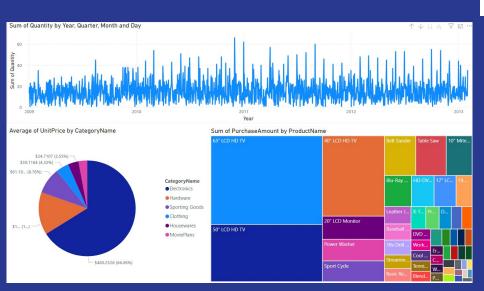
### **OLAP Cube**

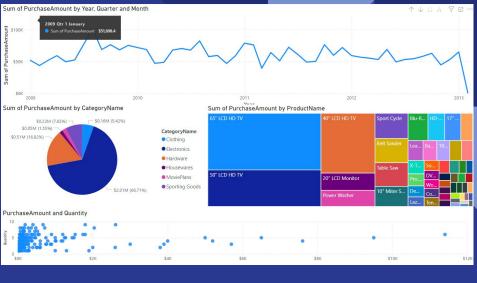
### Why a OLAP Cube??

- Serves a Multidimensional platform which helps to combine data into organized structures making it easy for analysis
- Fast Performance in terms of Query helping in aggregating data quickly.
- Hierarchical Relationships making it easy for users to navigate intuitively.

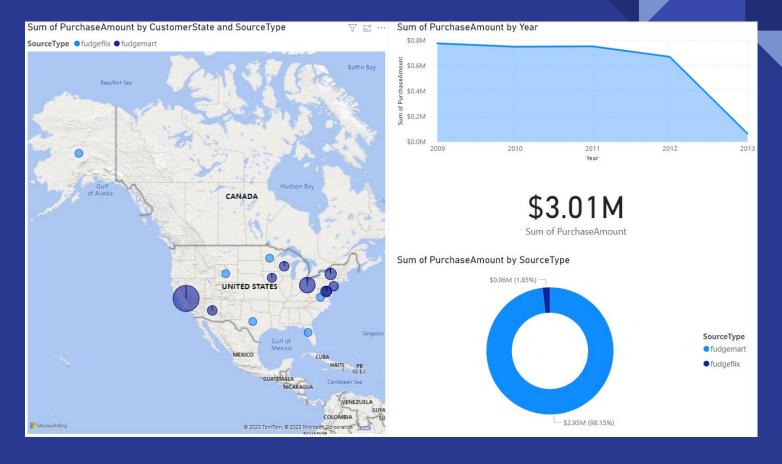


## Power BI





## Power BI



## Recommendations

Based on OLTP

 The OLTP Sources - especially FudgeMart must improve their customer city conventions.

We can notice that city "Cleves" is mapped in Germany. There is no indication whether customers are worldwide or exclusive to the USA.



### Based on Visual Analytics

 We could see the overall sales revenue shows a downward trend over the years. FudgeInc has to optimize the pricing strategy. Strategies like focus on high demand products, discontinuing underperforming ones and understanding the market trends might help.



 We observe a downward trend on sales during Q4. Solution is to try marketing discounts, promotions and advertising strategies.
 Like Holiday themed products/bundles, Early bird promotions etc.



 States like Texas, Minnesota, Alaska, Wyoming, Virginia and Florida have major sales source as "FudgeFlix". Campaigns can be targeted like bundling retail products with movie.
 Example: Discount on movie plans if customer buys retail products.

• Electronics is the major selling category, and items related to TV are highest selling in this category. We can expand TV offerings to different sizes, models and features.



# Thank You