



DFF - Data Warehouse Implementation

ISTM 637 -601: Group 5



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Q1. How are the average sales of a product changing by store from 1995 to 1997?

Q2. What are the total sales of various food items on New Year's Eve over the years?

Q3. What is the sale trend of different kinds of alcoholic beverages over holiday weeks?

Q4. Which are the most profitable (top 5) brands at a particular store?

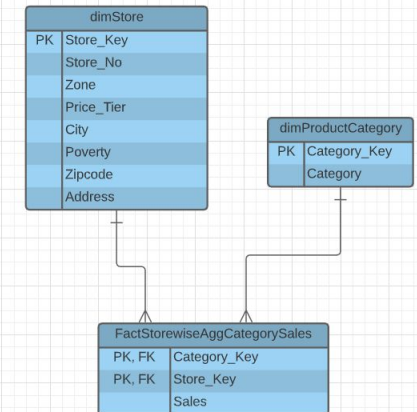
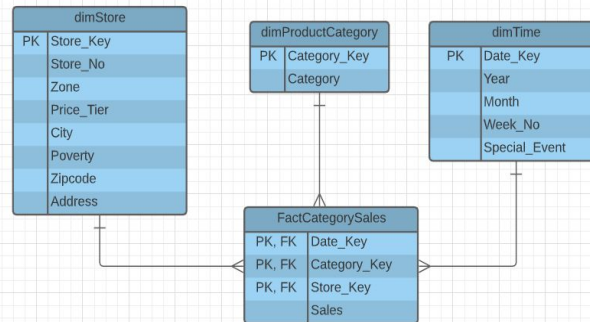
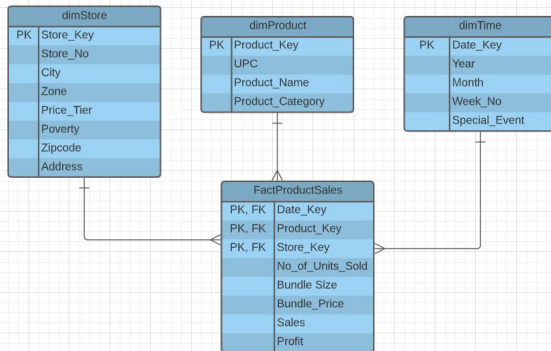
Q5. Which are the best performing stores for jewelry sales where more than 10% of the visitors are below poverty line?

Schema and ETL strategies



TEXAS A&M
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Schema



.CSV
.txt
.xls
DFF Source Data



Staging Area Tables

Extraction



Data Cleaning -

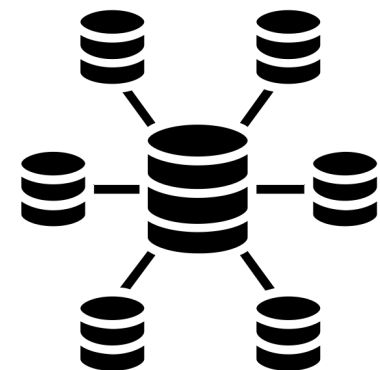
- Removing blanks
- Removing invalid data

Data Transformation -

- Data conversion
- Derived Columns
- Surrogate Keys
- Unpivoting
- Aggregation



Transformation



Fact Tables and Dimension Tables loaded in the Data Warehouse from final staging

Loading

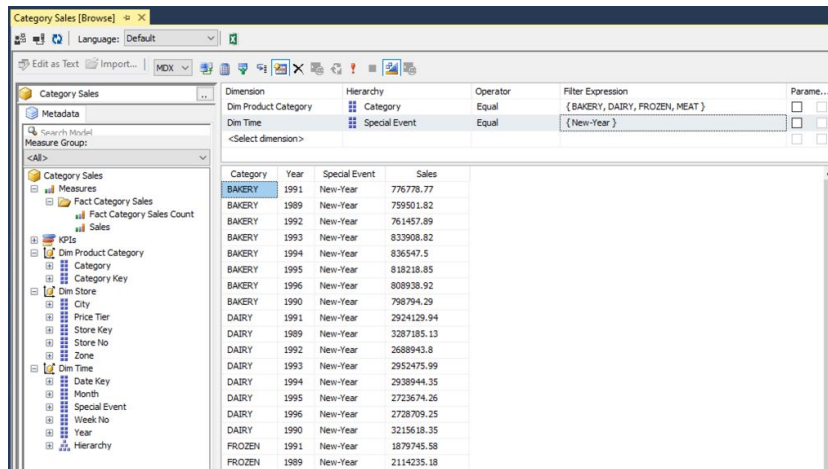
| Business Question | Reporting Tool Used |
|-------------------|---------------------|
| Question 1 | SSRS |
| Question 2 | SSAS |
| Question 3 | SSRS+SSAS |
| Question 4 | Tableau |
| Question 5 | Power BI |

Demos

1. SSRS -

<http://infodata16.mbs.tamu.edu/ReportServer?%2fSection601Group5-SSRS&rs:Command=ListChildren>

2. SSAS -



| Category | Year | Special Event | Sales |
|----------|------|---------------|------------|
| BAKERY | 1991 | New-Year | 776778.77 |
| BAKERY | 1989 | New-Year | 759501.82 |
| BAKERY | 1992 | New-Year | 761457.89 |
| BAKERY | 1993 | New-Year | 833908.82 |
| BAKERY | 1994 | New-Year | 836547.5 |
| BAKERY | 1995 | New-Year | 818218.85 |
| BAKERY | 1996 | New-Year | 808938.92 |
| BAKERY | 1990 | New-Year | 798794.29 |
| DAIRY | 1991 | New-Year | 2924129.94 |
| DAIRY | 1989 | New-Year | 3287185.13 |
| DAIRY | 1992 | New-Year | 2688943.8 |
| DAIRY | 1993 | New-Year | 2952475.99 |
| DAIRY | 1994 | New-Year | 2938944.35 |
| DAIRY | 1995 | New-Year | 2723674.26 |
| DAIRY | 1996 | New-Year | 2728709.25 |
| DAIRY | 1990 | New-Year | 3215618.35 |
| FROZEN | 1991 | New-Year | 1879745.58 |
| FROZEN | 1989 | New-Year | 2114235.18 |

3. SSRS on top of SSAS -

<http://infodata16.mbs.tamu.edu/ReportServer?%2fSection601Group5-SSAS-SSRS&rs:Command=ListChildren>

4. Tableau -

https://public.tableau.com/profile/karan.rakesh.gupta#!/vizhome/Q4_16058056131310/Sheet2?publish=yes

5. Power BI -

<https://app.powerbi.com/view?r=eyJrljojNzliNDg0OWQfNzJmNy00M2Y2LWFmNGltODE2NjVjMjI3MjBjIiwidCI6IjY4ZjM4MWUzLTQ2ZGEtNDdiOS1iYTU3LTZmMzlyYjhmMGRhMSIsImMiOiN9>