BBY Grocery Chain Project

# Background:

* + *BBY Grocery chain consists of 830 stores in 74 states*
  + *Distribute products received from certified vendors to stores*
  + *Stores 40 products in 7 departments, such as frozen foods and diary*
  + *Bar codes are scanned directly into the cash registers’ POS System by Sales*

person

* + *Sales Products are promoted via coupons, temporary price reductions, ads, and in store promotions*
  + *Purchasing department received products from vendor*
  + *Salespersons overtime hours are captured in Excel by Sales Manager*
  + *Human Resources Department already provided download CSV files of uncleaned employee misconduct and absence data with many duplications.*

Below are the de-duplication business rules:

* + - *The first entry of the absence data for a day is the right record to be retained*
    - *The last entry of the employee misconduct data for a day is the right record to be retained*
  + *Backup of the Tesca Grocery Chain Transaction Processing System has been provided to you*
  + *Database Administrator has granted full administrative privileges on both Analysis and Relational Database Instances*

# Analytic Requirements:

1. *Need to know what is selling in the stores each day to evaluate product movement, as well as to see how sales are impacted by promotions*
2. *Need to understand the mix of products in a customer’s market basket*
3. *Changes to Point of Sales Device on each channel are recorded to know the frequency of channel POS device replacement*
4. *Need to understand the most ordered products from each Vendor in each store*
5. *The management decided to track changes to vendor information to determine the impact on the delivery services*
6. *Sales Manager is interested to know the effects of product rebranding on Sales*
7. *Human Resources Management needs to know the effects of changes to marital status on*

salesperson’s overtime hours

1. *Needs to perform sales analysis on overall product brand sales and rebrand product sales*
2. *Purchasing Manager needs to know the efficient vendors based on differential days between order date and delivery date*
3. *Sales Manager needs to know what are the most demanding products for each time period of the day*
4. *Employee misconducts analysis is requested by the management as part of the ongoing strategy to improved work ethics and customer satisfaction*
5. *Need to understand Employee Absence trends for performance appraisal and to proactively plan for new employee recruitment to meet the service expectation of Tesca customers*
6. *Management extends the analytic solution to provides the following metrics and financial analysis:*
   * *marginal revenue and marginal production cost based on sales and purchase transactions.*
   * *Year to year, quarter to quarter, month to month revenue and production cost analysis to determine tesca market status and profitability status.*
   * Logistic analysis to provide shortest distance vendor based on purchased product and delivery.

***Deliverables:***

* + *You are required to build an Enterprise Data ware housing that addresses the analytic requirements*
  + *Build Data Mart Cubes for functional areas based on the analytic requirements using SQL Server Analysis services (Using both Multidimensional and Tabular Models)*