

## **DBW624 – Assignment 4**

### **Business Analytic Application**

Now that we have a complete data warehouse, loaded with data, we are going to build our Business Intelligence (BI) application which will actually answer the business questions below, which were highlighted in Assignment 1.

**Here are the business analytics we will want to perform.**

1. Sales Volumes Analysis by fiscal quarter
  - a. By Store
  - b. By Product
  - c. By Product Group (Age Group)
2. Sales Revenue Analysis by fiscal quarter
  - a. By Store,
  - b. By Product
  - c. By Product Group (Age Group)
3. Sales Profit Analysis by fiscal quarter
  - a. By Store,
  - b. By Product
  - c. By Product Group (Age Group)
4. Product Line Analysis by fiscal quarter, measured by revenue and profit
  - a. Which products have been the most / least successful
  - b. Which product groups have been the most / least successful
  - c. What is the product trends (growth or declining)?
5. Store Analysis by fiscal quarter, measured by revenue and profit
  - a. Which stores are the most / least successful
  - b. What is the growth trends for each store (growth or declining)?
6. Additional Analysis
  - a. Which names have been most successful by volume
  - b. Which gender has been most successful by volume
  - c. Who was the top sales person for the quarter?
  - d. What percentage of sales are cash versus credit card?
  - e. What percentage of sales were using a marketing campaign?
7. Analytics Against Reference Tables
  - a. Which ten cities should we open stores in, based on population?
  - b. Which names should we expect will be the most popular for our personalized products?

**For each of the business questions above, write a SQL query which provides the business answer.**

**What you need to hand in is a copy of your BI application showing both the SQL used to run the required analytic query and the result set.**

**This will be worth 6% of your final mark.**