

Assessment 1 Part B – Data analysis

Weighting – 30%

Referring to the SH schema (ER diagram about tables in the schema available separately), apply the following analysis to the SH DW Schema using **OLAP queries**.

Each query is worth 5 marks.

Note: Remember that you need to prefix the table names with the schema name **SH** (eg. SH.Sales) in your queries.

- Q1 Which 5 countries had the poorest performance in terms of sales in 1999 and 2000?
Display:

COUNTRY_ISO_CODE COUNTRY_NAME SALES\$

- Q2 Show the contribution to monthly profit made by all product categories sold in the first quarter of 1999. Look at the output and make sure there is an understandable order to the result. Display Product Category, Calendar month description and total Sales Amount as in:

PROD_CATEGORY CALENDAR_MONTH SALES\$

(Hint: 15 rows returned)

- Q3 Using the ROLLUP operator, display subtotals of the quantity sold within each product category in various promotions, for all promotions that have occurred. Sub totals should be along the dimension attributes: product category and calendar years. (NOTE: When you copy the output to a word document, the nulls will display as blanks). Display:

PROD_CATEGORY CALENDAR_YEAR PROMO_CATEGORY SALE_QTY

(Hint: 38 rows returned)

- Q4 Change your query in Q3 to use CUBE instead of ROLL UP. What differences do you see in the output — write a brief paragraph, but be specific, about the differences. Display:

PROD_CATEGORY CALENDAR_YEAR PROMO_CATEGORY SALE_QTY

- Q5 Create an aggregated materialised view named “Promotion_Analysis_mv” that presents the product-wise sales analysis for each promotion.

PROMO_ID PROD_ID TOTAL_SALES

- Q6 There exists a materialised view called sh.fweek_pscat_sales_mv in the SH schema. Use this mv and other table(s) to provide some useful information of your choice for management. You may use ROLLUP or CUBE or any other operators.

What to submit

A zip file with:

- A Word or Pdf file containing all your queries and the output from running your queries, and named using both names (name1_name2)
- An SQL script file containing of all your OLAP queries name named using both names (name1_name2_queriesDW.sql). The file should include all your OLAP queries.

When to submit

| Part | Due Date | Weight% |
|---|-----------------------------|---------|
| Part B – Analyse data in a data warehouse | Thursday 14 April, 11:59 PM | 30 |

How to submit

- All assessments should be submitted through Canvas Turnitin.
- All assessments will be assessed through the Turnitin system and in case of plagiarism the University policy against plagiarism will be applied.