

Third Year
Data Warehouse Project
2024

Project Overview:

1. The team size is **3 to 5** students from the **same TA's sections**.
2. Search for any **OLTP** database and study its schema carefully.
3. Define the **KPIs** you want to extract from the source system.
4. Design a dimensional model (**star/galaxy schema**) to get those KPIs.
5. The minimum number of dimensions is **6** and the minimum number of fact tables is **3**.
6. Use **SSIS** to extract the data from the source system and load it to the staging area (**STG**) and then from **STG** to the data warehouse (**DWH**) with the needed transformations.
7. Execute some **analytical queries** on the fact tables to get insights from the data.
8. Finally **deploy** and **schedule** your packages.

Project Deliverables:

1. Cover page containing TA's name and students' names and IDs.
2. Physical model of the source system (the tables from which you will build your model).
3. Dimensional model.
 - a. Define the business processes that you will model.
 - b. Declare the grain of each fact table (simply, describe what a fact table record represents).
 - c. Define the type of each fact table.
 - d. Define the dimensions and the type of each one.
 - e. Define the measures that will appear in the fact tables and the type of each one.
 - f. Physical model of your model (the final star/galaxy schema).
4. Screenshots of the data flow tasks and control flow tasks used for building the DWH. (**Give a meaningful title for each image**)
5. Queries on each fact table to let me understand what this fact table represents and what insights we can get from it, and a screenshot of the result set of each query.
6. Screenshots of the deployed packages in SSIS with their schedule.
7. **[Bonus]** Build an **interactive** dashboard for the DWH using any data visualization tool (Ex: Microsoft Power BI).

Where to submit?

1. Name your document as follows:
DWH_Project_TA_Name_ID1_ID2_ID3.pdf
Ex: DWH_Project_Ahmed_Galal_20200011_20200022_20200033.pdf
2. Upload your document (in **PDF** format) to this Google Form: <https://forms.gle/eyPD3XypE5Z25adKA>

The form will be closed on **Friday, May 17th at 11:59 PM** and the discussion will be during the following week.

Wishing you all the best ♥
Ahmed Galal