



GLOBAL SUPERMARKET DATA ANALYSIS

High-Level Design (HLD)



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Project Title	GLOBAL SUPERMARKET DATA ANALYSIS
Technologies	Excel
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Document Version Control

Date Issued	Version	Description	Author
09-Aug-2022	1.0	Complete HLD	Pooja Das

Abstract / Problem Statement

E-commerce (electronic commerce) is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the internet. These business transactions occur either as business-to-business (B2B), business-to-consumer (B2C), consumer-to-consumer or consumer-to-business.

Business Scenario

The Analytics team of an Online E-Commerce Company wants to design a Sales dashboard to analyze the sales based on various product categories. The company wants to add user control for product categories, so users can select a category and can see the trend month-wise and product-wise accordingly.

Given Tasks

- Task 1 - In a word document write the process and data added to the current dataset.
- Task 2 – You can add your data as per your convenience.
- Task 3 - Do the data preparation part.
- Task 4 – Build the dashboards.
- Task 5 – Deploy Dashboard

1 Introduction

1.1 Why this High-Level Design Document?

The purpose of this High-Level Design (HLD) Document is to add the necessary detail to the current project description to represent a suitable model for coding. This document is also intended to help detect contradictions prior to coding and can be used as a reference manual for how the modules interact at a high level.

The HLD will:

- Present all of the design aspects and define them in detail
- Describe the user interface being implemented
- Describe the hardware and software interfaces
- Describe the performance requirements
- Include design features and the architecture of the project

List and describe the non-functional attributes like: o Security

- Reliability
- Maintainability
- Portability
- Reusability
- Application compatibility
- Resource utilization
- Serviceability

1.2 Scope

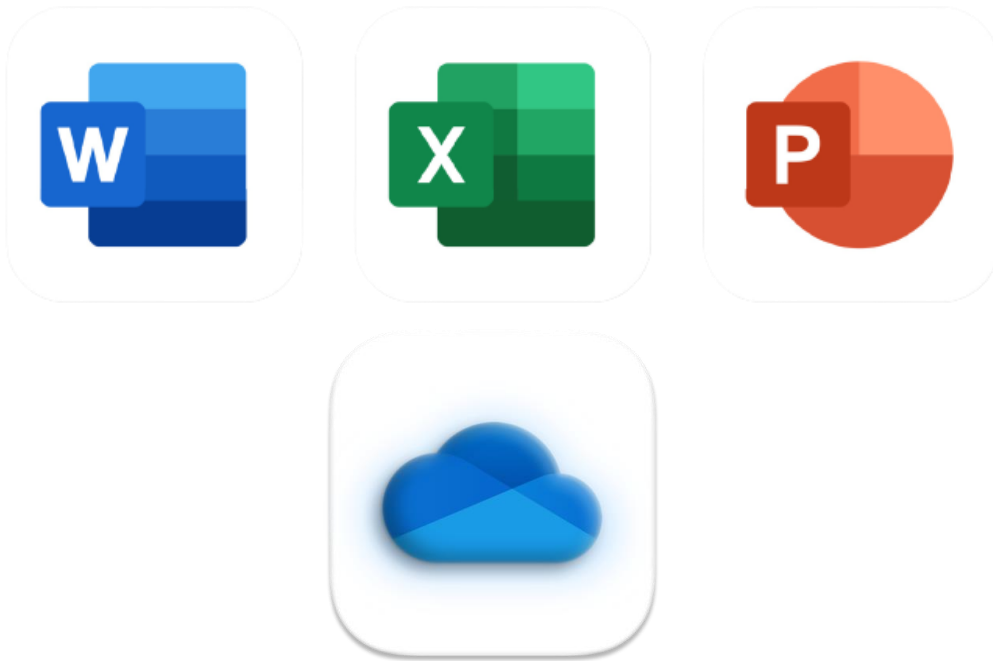
The HLD documentation presents the structure of the system, such as the database architecture, application architecture (layers), application flow (Navigation), and technology architecture. The HLD uses non-technical to mildly-technical terms which should be understandable to the administrators of the system.

High-Level Design (HLD)

2. General Description

2.1 Tools used

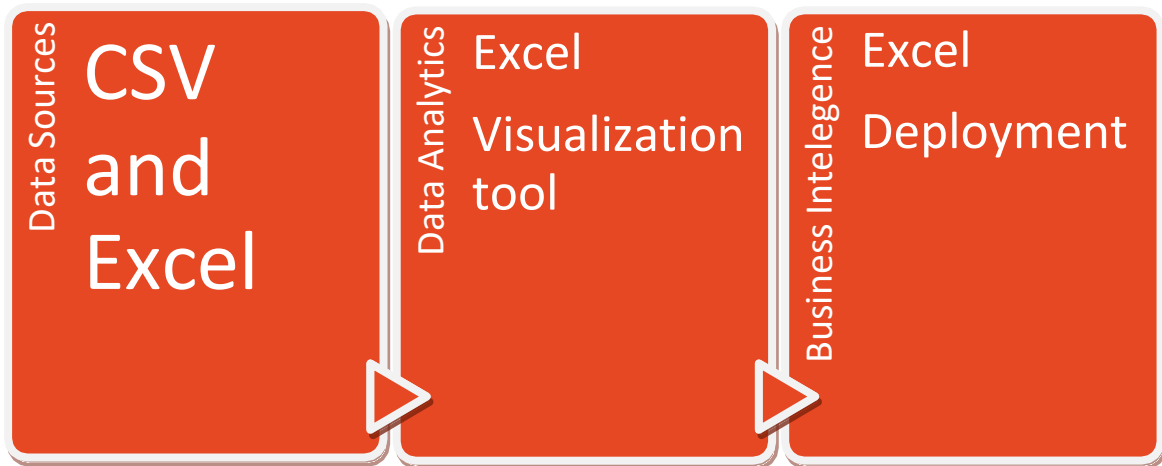
Office 365 Excel, Word, PowerPoint and OneDrive are used.



3 Design Details

3.1 Functional Architecture

High Level Design (HLD)



3.2 Optimization

Your data strategy drives performance

- Minimize the number of fields
- Minimize the number of records
- Optimize extracts to speed up future queries by materializing calculations, removing columns and the use of accelerated views

Reduce the marks (data points) in your view

- Practice guided analytics. There's no need to fit everything you plan to show in a single view. Compile related views and connect them with action filters to travel from overview to highly granular views at the speed of thought.
- Remove unneeded dimensions from the detail shelf.
- Explore. Try displaying your data in different types of views.

Limit your filters by number and type

- Reduce the number of filters in use. Excessive filters on a view will create a more complex query, which takes longer to return results. Double-check your filters and remove any that aren't necessary.
- Use an include filter. Exclude filters load the entire domain of a dimension, while include filters do not. An include filter runs much faster than an exclude filter, especially for dimensions with many members.
- Use a continuous date filter. Continuous date filters (relative and range-of-date filters) can take advantage of the indexing properties in your database and are faster than discrete date filters.
- Use Boolean or numeric filters. Computers process integers and Booleans (t/f) much faster than strings.
- Use parameters and action filters. These reduce the query load (and work across data sources).

Optimize and materialize your calculations

- Perform calculations in the database
- Reduce the number of nested calculations.

Reduce the granularity of LOD or table calculations in the view. The more granular the calculation, the longer it takes.

- o LODs - Look at the number of unique dimension members in the calculation.

than MIN or MAX. Often rows will be duplicated and display the same result with MIN, MAX, or AVG

4. KPIs

Dashboards will be implemented to display and indicate certain KPIs and relevant indicators for the disease.

As and when, the system starts to capture the historical/periodic data for a user, the dashboards will be included to display charts over time with progress on various indicators or factors.

4.1 KPIs (Key Performance Indicators)

Used various KPI indicators that show different insights in dashboards.

- Total Sales
- Total Profit
- Profit %
- Total Sold Quantity
- Monthly Sales & Profit
- Daily Sales & Profit,
- Sales of Market
- Profit of Market
- Sub-Category Sales
- Sub-Category Profit
- Top 5 Sales Product
- Bottom 5 Sales Product
- Order Priority Sales
- Top 5 Profit Product
- Bottom 5 Profit Product
- Order Priority Profit
- Top 10 Sales Country
- Top 10 Profit Country
- Country Sales
- Country Profit
- Vendor Sales & Profit
- Top 5 Vendor Profit
- Top 5 Selling Vendor

5 Deployment

Prioritizing data and analytics couldn't come at a better time. Your company, no matter what size, is already collecting data and most likely analyzing just a portion of it to solve business problems, gain competitive advantages, and drive enterprise transformation.

OneDrive is used to Deployment of Dashboard

