HIGH LEVEL DESIGN (LLD) DOCUMENT

ANALYZING SWIGGY

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Contents

I. Abstract

Online Food Delivery is emerged as one of the most fast-paced development in the e-commerce space. This sector has revolutionized the entire outlook towards the food industry as consumers now have the privilege to choose from a wide range and variety of cuisines, anywhere, anytime from a range from a restaurant listed online. Revenue in the online food delivery segment amounts close to US$ 10,196 Mn in 2020.The revenue is expected to show an annual growth rate (CAGR 2020-2024) OF 9.5% resulting in a market volume of US$14,670 Mn by 2024.

1. Introduction

1.1 Why this High-Level Design Document?

The purpose of this High-Level Design (HLD) Document is to add the necessarydetail to the current project description to represent a suitable model for coding. This document is also intended to help detect contradictions prior to coding, andcan 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:

  - ❖ 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 databasearchitecture, 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.

2. General Description

2.1 Product Perspective and Problem Statement

Online Food Delivery is emerged as one of the most fast-paced development in the e-commerce space. This sector has revolutionized the entire outlook towards the food industry as consumers now have the privilege to choose from a wide range and variety of cuisines, anywhere, anytime from a range from a restaurant listed online. Revenue in the online food delivery segment amounts close to US$ 10,196 Mn in 2020.

Things to be done:
- Do ETL Operations - Extract-Transform-Load the dataset and find for me some information from this large data. This is form of data mining. What allinformation can be achieved by mining this data, would be brainstormed bythe interns.
- Find key metrics and factors and show the meaningful relationships betweenattributes.
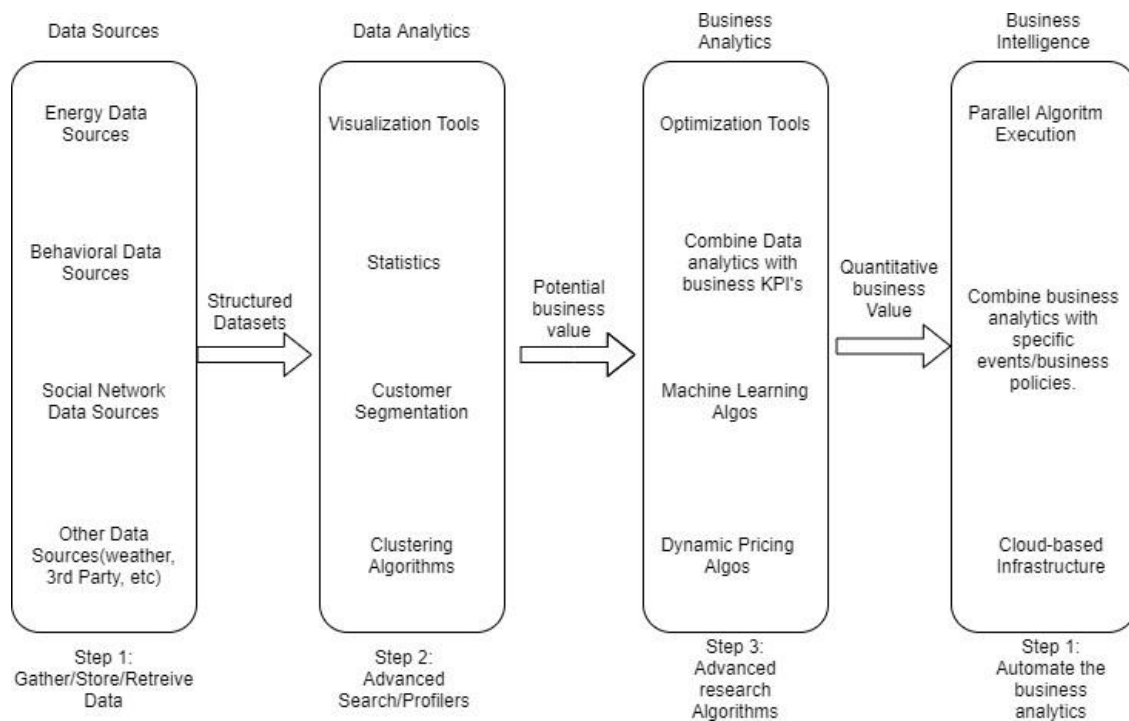- Do your own research and come up with your findings.
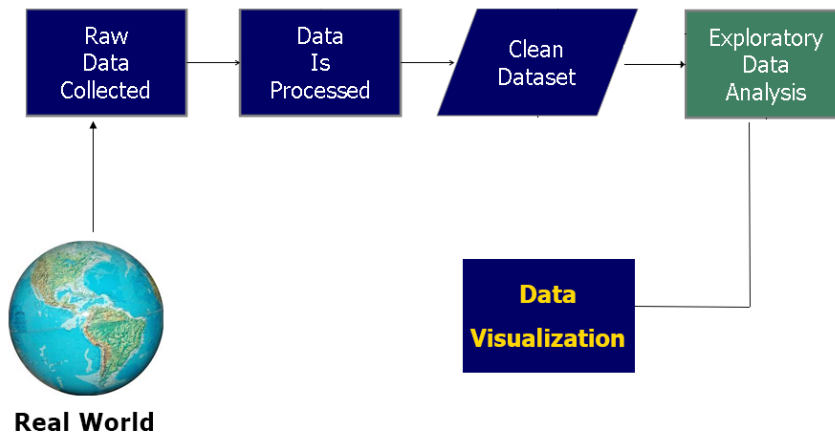
2.2 Tools:

Business Intelligence tools and libraries works such as NumPy, Pandas, Excel, R,Tableau, Power BI are used to build the whole framework. For this project I had exclusively used Tableau
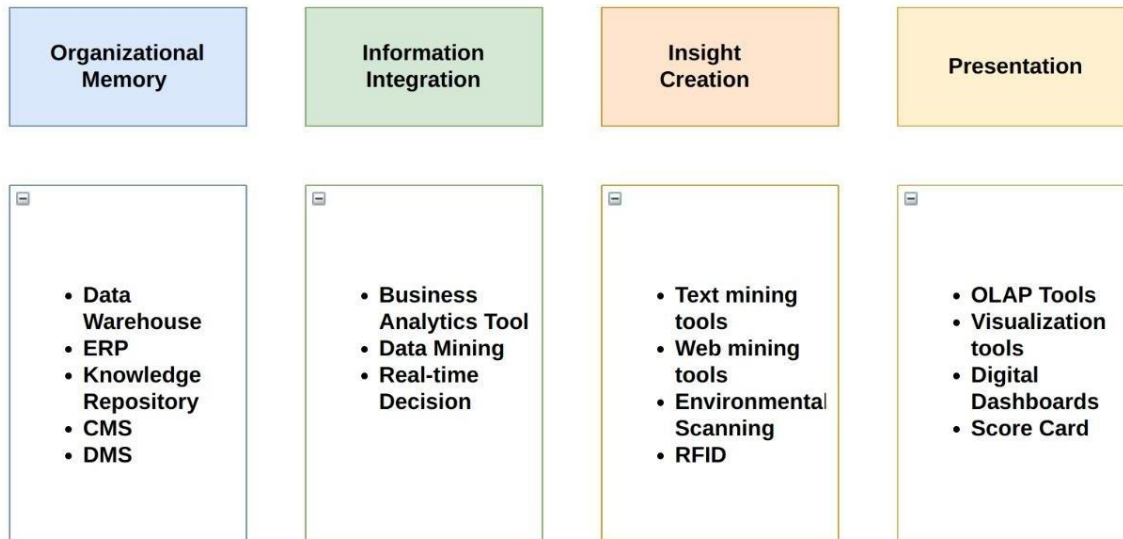

3. Design Details:

3.1 Functional Architecture:

Real World

How BI Really Works

Organizational Memory	Information Integration	Insight Creation	Presentation
• Data Warehouse • ERP • Knowledge Repository • CMS • DMS	• Business Analytics Tool • Data Mining • Real-time Decision	• Text mining tools • Web mining tools • Environmental Scanning • RFID	• OLAP Tools • Visualization tools • Digital Dashboards • Score Card

1. 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.

2. 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 filtersto 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.

3. Limit your filters by number and type

- Reduce the number of filters in use. Excessive filters on a view will createa 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 arefaster 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 workacross data sources).

4. Optimize and materialize your calculations

- Perform calculations in the database

- Reduce the number of nested calculations.

- Where possible, use MIN or MAX instead of AVG. AVG requires more processing than MIN or MAX. Often rows will be duplicated and display the sameresult with MIN, MAX, or AVG.

- Make groups with calculations. Like include filters, calculated groups loadonly named members of the domain, whereas Tableau's group function loads the entire domain.

- Use Booleans or numeric calculations instead of string calculations.Computers can process integers and Booleans (t/f) much faster than strings. Boolean>Int>Float>Date>Date Time>String.

4. KPIs

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

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. With the explosive growth of enterprise data, database technologies, and the high demand for analytical skills, today's most effective IT organizations have shifted their focus to enabling self-service by deploying and operating Tableau at scale, as well as organizing, orchestrating,and unifying disparate sources of data for business users and experts alike to author and consume content.

Tableau prioritizes choice in flexibility to fit, rather than dictate, your enterprise architecture. Tableau Server and Tableau Online leverage your existing technology investments and integrate into your IT infrastructure to provide a self-service, modern analytics platform for yourusers. With on-premises, cloud, and hosted options, there is a version of Tableau to match your requirements. Below is a comparison of the three types:

TYPE PROS CONS

Tableau Server - On Premises

- Full control of hardware and software
- Infrastructure and data remain behind your firewall
- Need dedicated administrators to manage hardware and software
- Additional infrastructure needed to access off-network (mobile, external)

Tableau Server - Public Cloud (IaaS)

- Full control of software on managed hardware
- Puts infrastructure in same place as data (for migration to cloud)
- Flexibility to spin up/down hardware as needed
- Need dedicated administrators to manage software
- Additional infrastructure needed to access off-network (mobile, external)

Tableau Online (SaaS)

- Fully hosted solution (hardware, software upgrades)
- Fast to deploy
- Easy for external audience to access
- Single-site in multi-tenant environment
- Cubes are not supported
- No guest account access

Depending on your organizational roles and responsibilities, Tableau Server should be installed by a systems administrator and the designated Tableau Server Administrator in coordination with the appropriate IT roles. For Tableau Online, you will integrate with your existing technology and configure the site settings. The Data & Analytics Survey, completed by business teams, identifies and prioritizes data use cases, audience size, and users. You will use the information collected in both surveys to plan your deployment strategy, including sizing, installation, and configuration of your Tableau Server or integration and configuration of Tableau Online. In addition to installing Tableau Server or configuring Tableau Online, administrators will also need to plan for the client software installation of Tableau Prep Builder, Tableau Desktop, Tableau Mobile, and Tableau Bridge for Tableau Online where applicable.