Low Level Design

SWIGGY OUTLET DATA ANALYSIS

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1. Introduction

1.1 What is a Low-Level design document?

The goal of the LDD or Low-level design document (LLDD) is to give the internal logic design of the actual program code for the House Price Prediction dashboard. LDD describes the class diagrams with the methods and relations between classes and programs specs. It describes the modules so that the programmer can directly code the program from the document.

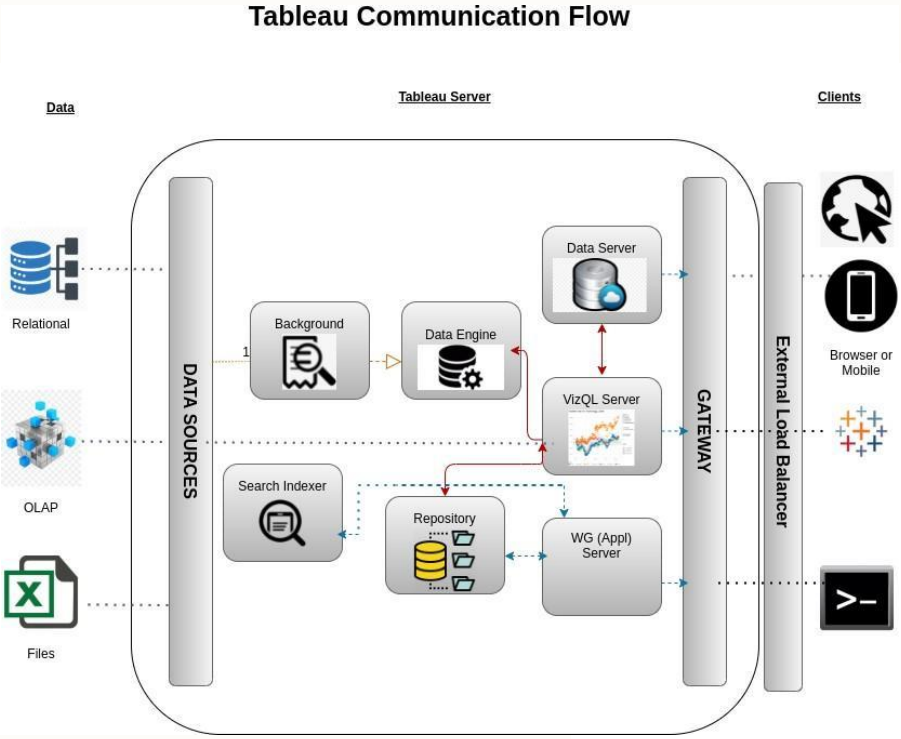
1.2 Scope

Low-level design (LLD) is a component-level design process that follows a step-by-step refinement process. The process can be used for designing data structures, required software architecture, source code and ultimately, performance algorithms. Overall, the data organization may be defined during requirement analysis and then refined during data design work.

2. Architecture

Tableau Server Architecture

Tableau has a highly scalable, n-tier client-server architecture that serves mobile clients, web clients and desktop-installed software. Tableau Server architecture supports fast and flexible deployments.



The following diagram shows Tableau Server's architecture:

3. Architecture Description

3.1. Data Description

The Dataset contains Swiggy Bangalore outlet details in columns Shop name, Cuisine, Location, Rating, Cost for Two.

1. Shop Name: Registered name of the Hotel.
2. Cuisine: Cuisines which are available in the respective Hotels/Outlet.
3. Location: Address of the Hotel/Outlet.
4. Rating: Rating given through votes by the customer in app. (1-5)
5. Cost for Two: Approximate Cost for two people.

	A	B	C	D	E	F
1	Shop_Name	Cuisine	Location	Rating	Cost_for_Two	
2	Kanti Sweets	Sweets	Koramangala, Koraman	4.3	â,¹ 150	
3	Mumbai Tiffin	North Indian, Home Food, Thalis	Sector 5, HSR	4.4	â,¹ 400	
4	Sri Krishna sagar	South Indian, North Indian, Fast	6th Block, Koramangala	4.1	â,¹ 126	
5	Al Daaz	American, Arabian, Chinese, Des	HSR, HSR	4.4	â,¹ 400	
6	Beijing Bites	Chinese, Thai	5th Block, Koramangala	4.1	â,¹ 450	
7	Kitchens of Punjab	North Indian	Koramangala 4th Block,	4.2	â,¹ 350	
8	99 VARIETY DOSA AND PAV BHAJI- Malli Ma	Fast Food, North Indian, Chinese	BTM 2nd Stage, BTM	4.1	â,¹ 200	
9	La Pino'z Pizza	Italian	BTM, BTM	3.9	â,¹ 500	
10	Hotel Manu	South Indian, Kerala, Chinese, N	HSR, HSR	4.1	â,¹ 350	
11	Yumlane Pizza	Pizzas, Italian, Mexican	9th Main road, Koramar	3.8	â,¹ 150	
12	Ambur Star Briyani	Chinese, South Indian, North Inc	outer ring road, BTM	4.1	â,¹ 500	
13	Cake Box	Desserts	Koramangala, Koraman	4	â,¹ 247	
14	Meghana Foods	Chinese, Andhra, Biryani, Seafoc	5th Block, Koramangala	4.3	â,¹ 550	
15	Momoz	Chinese	5th Block, Koramangala	4.3	â,¹ 450	
16	A2B - Adyar Ananda Bhavan	South Indian, Chinese, Desserts,	7th Block, Koramangala	4.2	â,¹ 450	
17	Shawarma Inc	Arabian, Fast Food	1st MAin, Koramangala	4.1	â,¹ 150	
18	WarmOven Cake & Desserts	Desserts, Beverages	Koramangala, Koraman	4.1	â,¹ 200	
19	Sri Lakshmi Dhaba	North Indian	Bommanahalli, BTM	3.7	â,¹ 200	
20	Falahaar & Kota Kachori	North Indian	6th block, Koramangala	4.2	â,¹ 300	
21	Shree Khana Khazana	Indian, Rajasthani	Sector 4, HSR	4.1	â,¹ 350	
22	Just Bake - Cakes & confectioners	Desserts, Bakery	BTM 1st stage, BTM	4.3	â,¹ 300	
23	Maa Di Hatti	Chinese, Healthy Food, North In	Jakkasandra Extn, Korar	4	â,¹ 129	

This is the Data set which was given by the company in CSV format.

6. As we have seen earlier, in our Swiggy dataset, we have around 118 records with 5 different features. Features are distributed as 2 Continuous features and 3 Categorical features

3.2. Tools used

3.3. Data Insertion into Database

a. Database Creation and connection – Created a database in PostgreSQL, and opened the connection to the database.

b. Table creation in the database.
c. Insertion of files in the table

```
CREATE table "swiggy_data"
( shop_name varchar (255),
 cuisine varchar (255),
 location varchar(255),
 rating varchar (10),
 cost_for_two varchar(10)) ;

COPY swiggy_data
FROM 'D:\LEARN-DATA\Projects\Analyzing Swiggy\CSV\Swiggy Bangalore Outlet Details.csv'
DELIMITER ','
CSV HEADER;
```

Read the data

```
/* Let's have a look at the data. This query will retrieve all the data from the table. */
SELECT *
FROM swiggy_data;
```

3.4. EDA

- "Exploratory Data Analysis" (EDA) is a "Data Exploration" step in the Data Analysis Process, where a number of techniques are used to better understand the dataset being used.
- Extracting Important "Variables".
- Identifying "Outliers", "Missing Values", or "Human Error".
- Understanding the Relationships between variables.
- Ultimately, maximizing our insights of a dataset and minimizing potential "Error" that may occur later in the process
    a. The dataset contains 118 rows and 5 columns.
    b. Had 1 null value in the ratings column.
    c. Checked the locations column to find any anomalies.
    d. Cost for two column was in currency format.
    e. Min and max range for ratings is 3.6 and 4.8 respectively.
    f. Min and max range for cost of two is 100 and 800.

3.5 Data cleaning and Data manipulation using SQL.

Review the data quality to ensure that it is ready for our analysis and visualization. Remember to take note of any assumptions or issues we need to go back to the client on.

3.6 Set up the data source

Step 1: Configuring Tableau

Launch Tableau on your workstation and select Text from the connect column on the left. This will open a dialogue box where you need to provide the locate details for CSV

Step 2: Configuring Data Source

Select the data source name option and give a unique name to the database you are using. It's considered a good practice to have a unique name as it makes it much easier for users to identify the database from which data is being fetched.

To select the desired schema, you can use the schema drop-down list from the column on the left.

You can also perform a text-based search to find the desired option. Now similarly find and select the desired table and drag it onto the Canva.

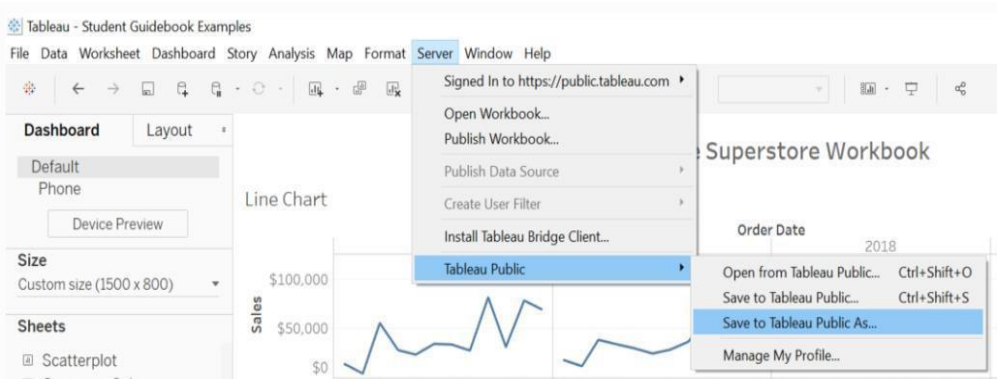
Export Data from Database

Data Export from Database - The data in a stored database is exported as a CSV file to be used for Data Pre-processing.

3.7 Deployment.

Once you've completed your dashboard, follow these steps: **- Server, Tableau Public, Save to Tableau Public As**

You may be prompted to log into your Tableau Public profile first if this is your first-time publishing.



Next, fill out the title you want your viz to have and click "save".

Link for TABLEAU PUBLIC Swiggy data analysis

4. Unit Test Cases

TEST CASE DESCRIPTION	EXPECTED RESULTS
Location Dropdown (Filter)	When clicked on the location box, a dropdown should occur which has all the locations available
Rating Slider (Filter)	When clicked on the slider, we can filter out the restaurants according to our rating needs.
Restaurants List by Ratings	Here a Table which shows the list of restaurants based on our location, rating and price filter which is automatically sorted by the highest rating in first.
Cost for two Slider (Filter)	When clicked on the slider we can filter the dashboard based on the cost for two.
Other Visualizations are the Relationship and analysis based on the data	The visual should show a bubble diagram, Bar chart, scatter plot and a map chart.
Summary	The summary shows the overview of the user filtered data, for example if user clicks HSR with cost of two as 600, the summary gives the available hotels and average ratings for the specified Area