

Analyzing Swiggy: Bangalore Delivery Outlet

Low-Level Design (LLD)

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Project Title	Analyzing Swiggy: Bangalore delivery outlet data
Technologies	Business Intelligence
Domain	Food Industry
Project Difficulties Level	Advance

Document Version Control

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21-11-2022	1.0	First Version on complete LLD	Soumyadip Tikader

Abstract

The online food ordering market includes food prepared by restaurants, prepared by independent people, and groceries ordered online and then picked up or delivered. The first online food ordering service, Worldwide Waiter (now known as Waiter.com), was founded in 1995. Online food ordering is the process of ordering food from a website or other application. The product can be either ready-to-eat food or food that has not been specially prepared for direct consumption.

In the world of rising new technology and innovation, the Food industry is advancing with the role of Data Science and Analytics. Data analysis can help them to understand their business in a quite different manner and helps to improve the quality of the service by identifying the weak areas of the business. This study demonstrates how different analysis help to make better business decisions and help analyze customer trends and satisfaction, which can lead to new and better products and services. Different analyses were performed such as Exploratory Data Analysis and Descriptive Analysis on a variety of use cases to get the key insights from this data based on which business decisions will be taken.

This dataset provides a huge amount of information on the best hotels and best cuisines in, India by rating and by price. Based on the Information the ultimate goal would be to predict the best hotels for common people and find important insights highlighting key indicators and metrics that influence customer choice.

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1. Introduction

1.1 Why this Low-Level Design Document?

The purpose of this LLD or a Low-Level Design (LLD) document is to give the internal logical design of the actual program code for Swiggy Data Analysis project. LLD describes the class diagrams with the methods and relations between classes and program specs. It describes the modules so that the programmer can directly code the program from the document. This document is intended for both the stakeholders and the developers of this project and will be proposed to the higher management for its approval.

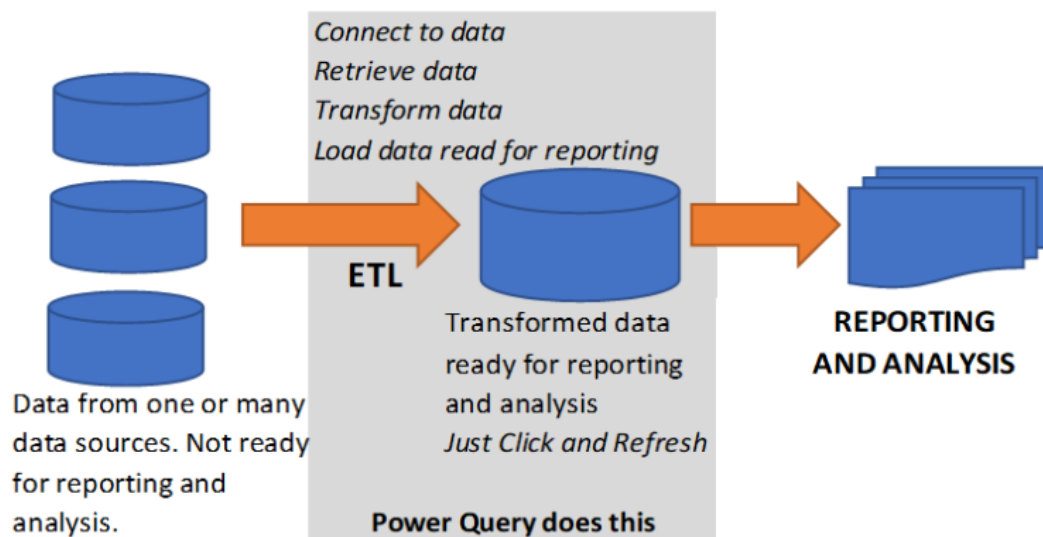
The main objective of the project is to analyse the various aspects with different use cases which covers many aspects of Swiggy Food Delivery Service. It helps in not only understanding the meaningful relationships between attributes but also allows us to do our own research and come up with our findings.

1.2 Scope

Low-level design (LLD) is a component-level design process that follows a step-by-step refinement process. This 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.

This study demonstrates how different analysis helps to make better business decisions and help analyse customer trends and satisfaction, which can lead to new and better products and services.

2. Architecture



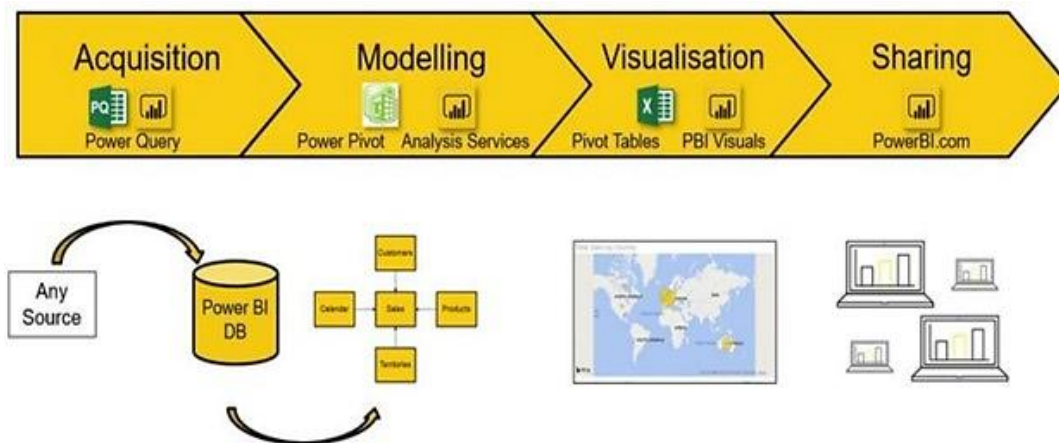
ETL (extract, transform and load) in Power BI use the preparation of data sets for analysis by removing irregularities in the data. It also involves data visualization to draw meaningful patterns and insights.

Based on the results of ETL, companies also make business decisions, which can have repercussions later.

- ✓ If ETL is not done properly then it can damage the business a lot in many ways such as loss of clients which whom we are working, the decision making will go completely wrong, and many more issues.
- ✓ If done well, it may improve the efficacy of everything we do next.

Below are the following steps to follow for ETL:

1. Data Sourcing
2. Data Cleaning
3. Data Modelling
4. Data Visualization



3. Architecture Description

3.1 Data Sourcing

The dataset is in CSV (Comma Separated Values) format. MS Excel is used to load the data.

This dataset is publicly available for research purposes.

Title: Swiggy Bangalore Outlet Details.csv

Source: [GitHub Repository](#)

3.2 Data Overview

- The dataset is of size 10 KB
- It includes a single file in “.csv” format.

- Number of rows/records: 118
- Number of attributes: 5

3.3 Data Description

The following attributes describes the dataset.

- Shop_Name
 - ▶ Description: Name of restaurant/hotels in Bangalore, India
 - ▶ Datatype: string
- Cuisine
 - ▶ Description: Name of cuisines available in respective restaurants
 - ▶ Datatype: string
- Location
 - ▶ Description: Complete Address of respective restaurants
 - ▶ Datatype: string
- Rating
 - ▶ Description: Ratings given by customers of the respective restaurants
 - ▶ Datatype: float
- Cost_for_Two
 - ▶ Description: Average cost of food for two person of respective restaurants.
 - ▶ Datatype: int

3.4 Data Loading in Power BI Query Editor

Power Query is the data connectivity and data preparation technology that enables end users to seamlessly import and reshape data from within a wide range of Microsoft products, including Excel, Power BI, Analysis Services, data verse, and more with the following characteristics.

- ❖ There can be multiple rows and columns in the data.
- ❖ Each row represents a sample of data,
- ❖ Each column contains a different variable that describes the

samples (rows).

- ❖ The data in every column can be a different type of data like numbers, strings, dates, Boolean etc.

Swiggy Bangalore Outlet Details.csv

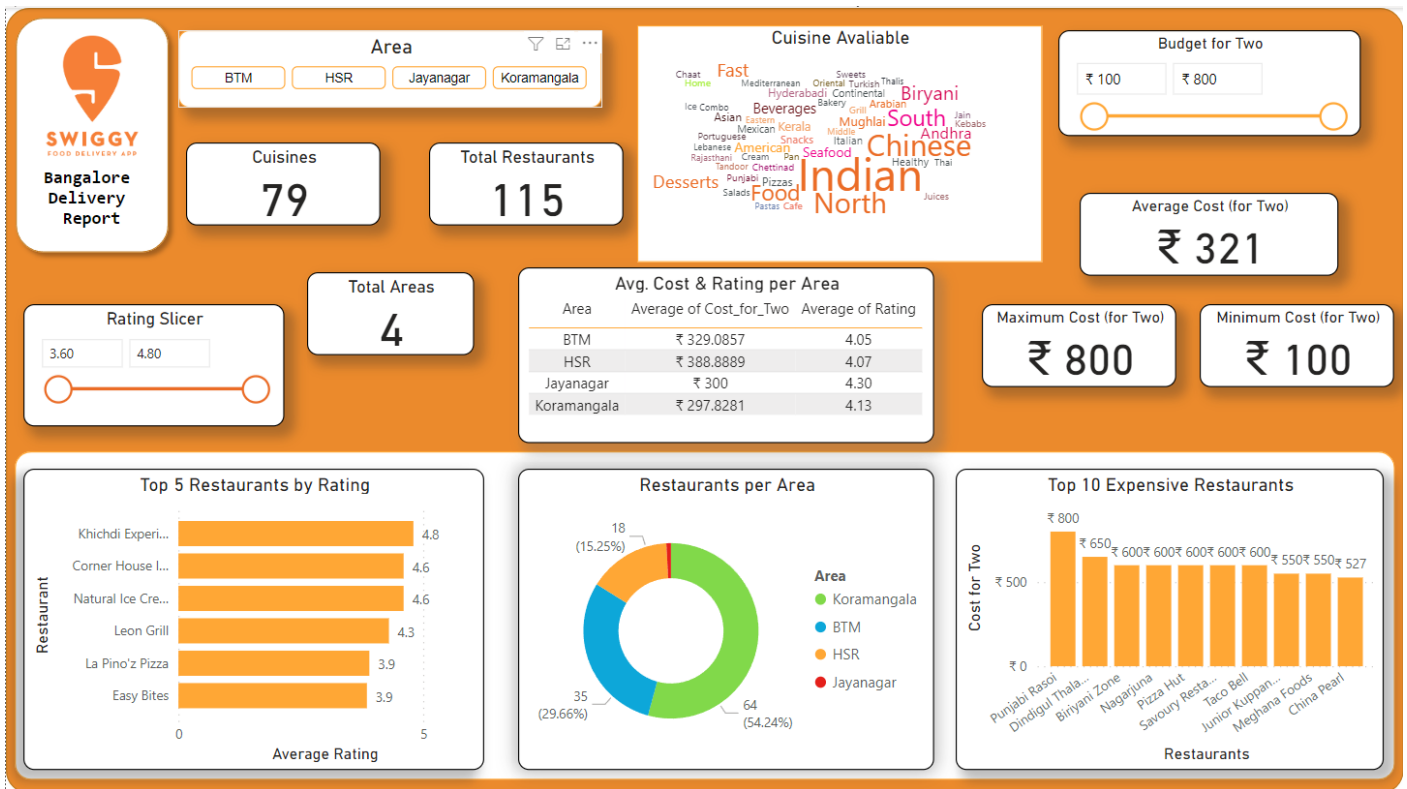
File Origin: 65001: Unicode (UTF-8) | Delimiter: Comma | Data Type Detection: Based on first 200 rows

Shop_Name	Cuisine	Location	Rating	Cost_for_Two
Kanti Sweets	Sweets	Koramangala, Koramangala	4.3	150.00
Mumbai Tiffin	North Indian, Home Food, Thalís, Combo	Sector 5, HSR	4.4	400.00
Sri Krishna sagar	South Indian, North Indian, Fast Food, Beverages, Jain	6th Block, Koramangala	4.1	126.00
Al Daaz	American, Arabian, Chinese, Desserts, Fast Food, Mughl...	HSR, HSR	4.4	400.00
Beijing Bites	Chinese, Thai	5th Block, Koramangala	4.1	450.00
Kitchens of Punjab	North Indian	Koramangala 4th Block, Koramangala	4.2	350.00
99 VARIETY DOSA AND PAV BHAJI- Malli Mane Food Co...	Fast Food, North Indian, Chinese	BTM 2nd Stage, BTM	4.1	200.00
La Pino'z Pizza	Italian	BTM, BTM	3.9	500.00
Hotel Manu	South Indian, Kerala, Chinese, North Indian	HSR, HSR	4.1	350.00
Yumlane Pizza	Pizzas, Italian, Mexican	9th Main road, Koramangala	3.8	150.00
Ambur Star Briyani	Chinese, South Indian, North Indian, Desserts, Fast Foo...	outer ring road, BTM	4.1	500.00
Cake Box	Desserts	Koramangala, Koramangala	4	247.00
Meghana Foods	Chinese, Andhra, Biryani, Seafood	5th Block, Koramangala	4.3	550.00
Momoz	Chinese	5th Block, Koramangala	4.3	450.00
A2B - Adyar Ananda Bhavan	South Indian, Chinese, Desserts, North Indian	7th Block, Koramangala	4.2	450.00
Shawarma Inc	Arabian, Fast Food	1st MAIN, Koramangala	4.1	150.00
WarmOven Cake & Desserts	Desserts, Beverages	Koramangala, Koramangala	4.1	200.00
Sri Lakshmi Dhaba	North Indian	Bommanahalli, BTM	3.7	200.00
Falahaar & Kota Kachori	North Indian	6th block, Koramangala	4.2	300.00
Shree Khana Khazana	Indian, Rajasthani	Sector 4, HSR	4.1	350.00

The data in the preview has been truncated due to size limits.

Extract Table Using Examples | Load | Transform Data | Cancel

3.5 Data to Insights through Visualizations and Data Analysis



4. Deployment in Power BI Service

Power BI My workspace

My workspace

+ New

View Filters Search

Name	Type	Owner	Refreshed	Next refresh	Endorsement	Sensitivity
Analyzing_Swiggy_Final_Report	Report	Sourmyadip Tikader	1/11/22, 9:21:47 pm	—	—	—
Analyzing_Swiggy_Final_Report	Dataset	Sourmyadip Tikader	1/11/22, 9:21:47 pm	N/A	—	—
assignment	Report	Sourmyadip Tikader	18/2/22, 7:35:40 pm	—	—	—
assignment	Dataset	Sourmyadip Tikader	18/2/22, 7:35:40 pm	N/A	—	—
sales	Dashboard	Sourmyadip Tikader	—	—	—	—
sales_data_viz	Report	Sourmyadip Tikader	19/10/20, 2:14:37 am	—	—	—
sales_data_viz	Dataset	Sourmyadip Tikader	19/10/20, 2:14:37 am	N/A	—	—

