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# SWIGGY METRO-CITIES ANALYSIS

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## Low-Level Design (LLD)

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<b>Project Title</b>	<b>SWIGGY METRO-CITIES ANALYSIS</b>
<b>Technologies</b>	<b>Business Intelligence</b>
<b>Domain</b>	<b>Food industry</b>
<b>Project Difficulties level</b>	<b>Advance</b>

## Document Version Control

Date Issued	Version	Description	Author
14-Aug-2022	1.0	Complete LLD	Pooja Das

## Abstract

The hotel and restaurant business domain, as a vital part of the overall supply chain, is expected to highly evolve in the upcoming years via the developments, which are taking place on the side of the Future Internet. This paper presents a novel business-to-business collaboration platform from the hotel-restaurant sector perspective, which aims to facilitate the collaboration of numerous stakeholders belonging to associated business domains, in an effective and flexible manner.

This dataset provides a huge amount of information on the best hotels and best cuisines in Bangalore, 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:

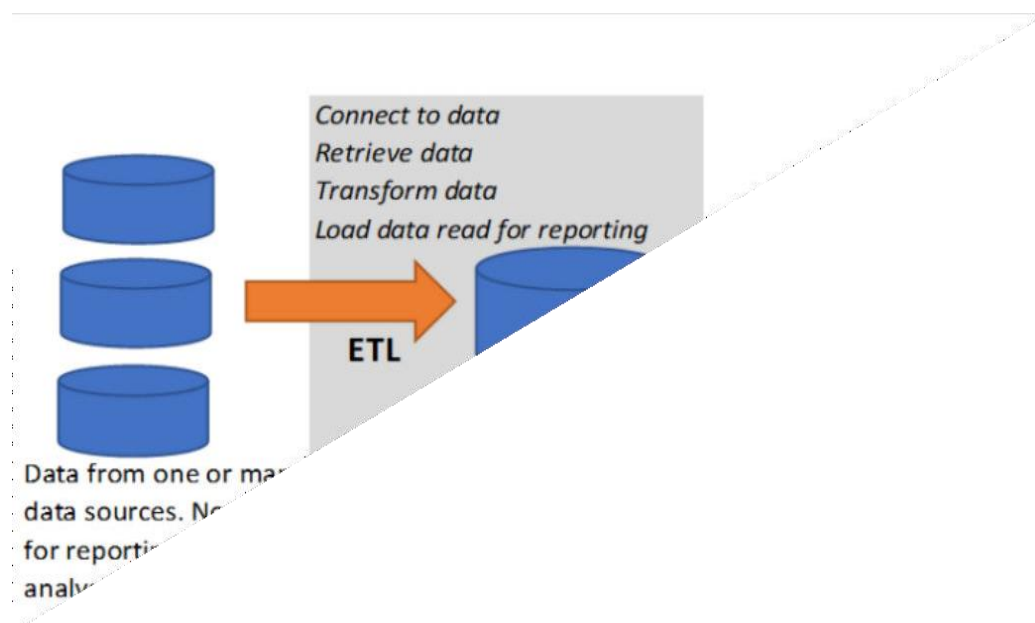
### 1.1. Why this Low-Level Design Document?

The goal of the LDD or Low-level design document (LLDD) is to give the internal logic design of the actual program code for the Bank Marketing Campaign Analysis. LDD 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.

### 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:



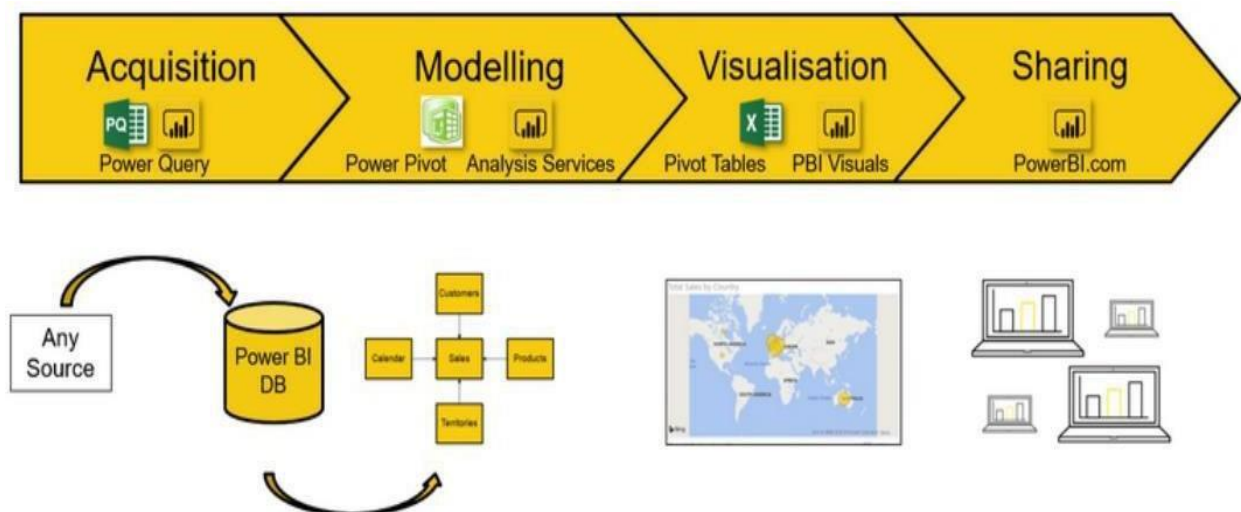
ETL (extract, transform and load) in Power BI uses preparation of data sets for analysis by removing irregularities in the data. It also involves data visualization to draw meaningful patterns and insights.

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 client which we are working for, 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.

### Citation Request:

This Dataset is publicly available for research, Available at <https://www.kaggle.com/datasets/aniruddhapa/swiggy-restaurants-dataset-of-metro-cities> named as Swiggy\_Dataset.csv.

1. Title - Swiggy Metro-Cities
2. Source- <https://www.kaggle.com/datasets/aniruddhapa/swiggy-restaurants-dataset-of-metro-cities>

### 3.2. Data Overview –

- ❖ The Data includes a single .csv file with all examples.
- ❖ The Number of Instances - 8660 for Swiggy Dataset.csv
- ❖ Number of attributes – 16 attributes

### 3.2 Data Description –



Swiggy_Final_Data	
	Address
	Area
Σ	Average Rating
	City
Σ	Cost For Two Person
	Cuisines
Σ	Delivery Time
Σ	ID
	Locality
Σ	Maximum Delivery Time
Σ	Minimum Delivery Time
	Name
	Restaurants Type
	Total Ratings String
	Vegetarian

[Collapse](#) ^



- ❖ Data loading in Jupyter lab is the data connectivity and data preparation technology that enables JupyterLab is the latest web-based interactive development environment for notebooks, code, and data. Its flexible interface allows users to configure and arrange workflows in data science, scientific computing, computational journalism, and machine learning. A modular design invites extensions to expand and enrich functionality.
- ❖
- ❖ 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 – e.g. numbers, strings, dates, Boolean etc.

The screenshot shows a JupyterLab environment with a Python 3 (ipykernel) notebook. The notebook contains the following code:

```

Changing data type of 'avgRating' & 'costForTwoStrings'

[29]: dataset_copy['avgRating'] = dataset_copy['avgRating'].astype('float')

[30]: dataset_copy['costForTwoStrings'] = dataset_copy['costForTwoStrings'].astype('int64')

Remove Outliers cost less than 2

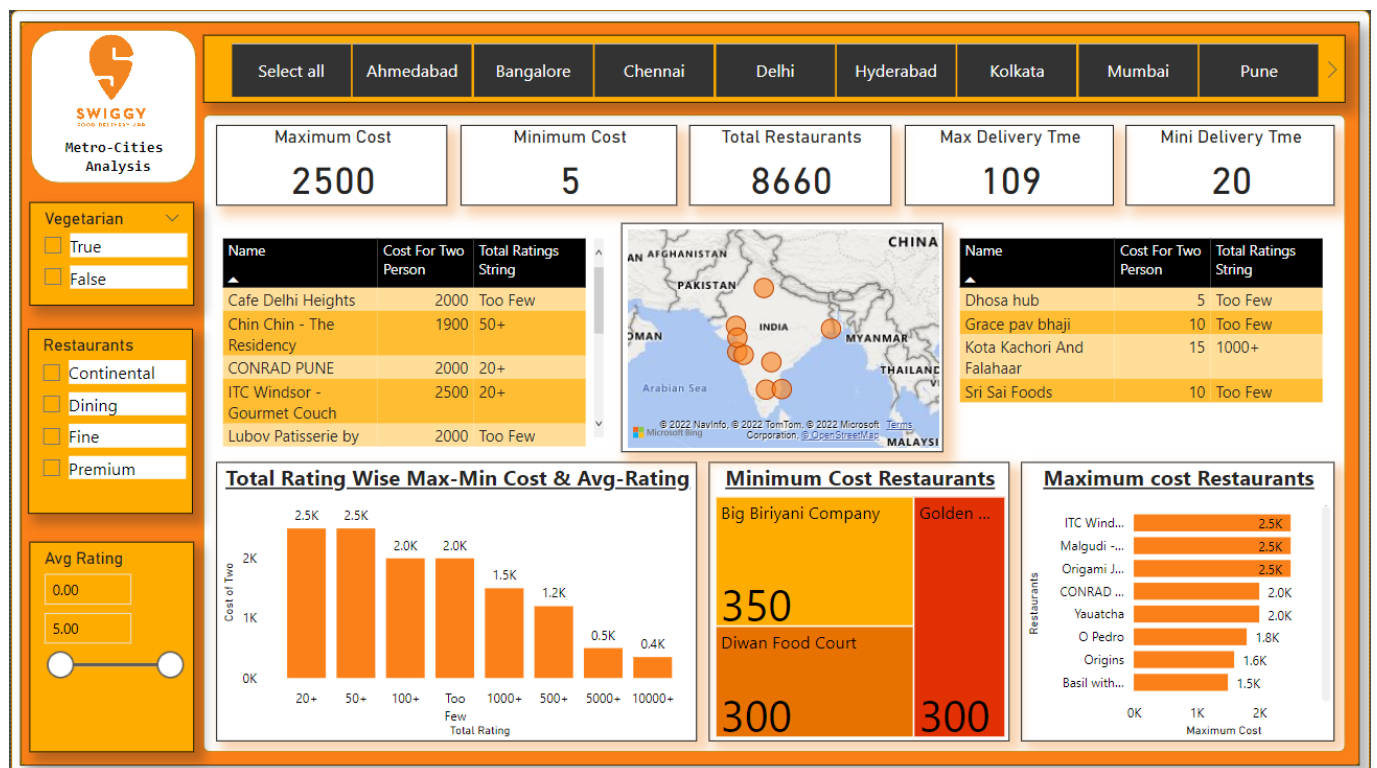
[31]: dataset_copy = dataset_copy[dataset_copy['costForTwoStrings'] > 2]
dataset_copy

[31]:

```

	Restaurants Type	id	name	city	area	avgRating	totalRatingsString	cuisines	costForTwoStrings	deliveryTime	minDelin
0	Fine	37933	Faasos - Wraps & Rolls	Ahmedabad	Vastrapur	4.2	500+	['Combo','Snacks','Beverages','Desserts','Indi...	200	44	
1	Fine	81814	Burger King	Ahmedabad	Ellisbridge	4.2	1000+	['American','Fast,Food']	350	33	
2	Fine	107046	Mahalaxmi Pav Bhaji	Ahmedabad	Ellisbridge	4.3	500+	['North,Indian']	200	28	
3	Fine	328315	HIIT Meals	Ahmedabad	Vishala	0.0	Too Few	['Fast,Food','Combo','Snacks','North,Indian',...]	150	51	

### 3.5 Data to Insights through Visualizations and Excel Data Analysis



### 3. Deployment to Power BI Service

