Low Level Design

Analysing Swiggy

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DOCUMENT CONTROL

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0.1	25- June - 2023	Gouthamram Puranik	First version of complete LLD

Contents

1. Introduction

1.1 What is 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. Problem statement

The online food ordering market includes foods prepared by restaurants, prepared by independent people, and groceries being ordered online and then picked up or delivered. The first online food ordering service, World Wide 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 direction consumption.

Given Task:

Do ETL : Extract-Transform-Load the dataset and find for me some information from this large data. This is form of data mining.

Find key metrics and factors and show the meaningful relationships between attributes.

Do your own research and come up with your findings.

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3. Analysis

3.1. Dataset

	Shop_Name	Cuisine	Location	Rating	Cost_for_Two
0	Kanti Sweets	Sweets	Koramangala, Koramangala	4.3	₹ 150
1	Mumbai Tiffin	North Indian, Home Food, Thalis, Combo	Sector 5, HSR	4.4	₹ 400
2	Sri Krishna sagar	South Indian, North Indian, Fast Food, Beverag...	6th Block, Koramangala	4.1	₹ 126
3	Al Daaz	American, Arabian, Chinese, Desserts, Fast Foo...	HSR, HSR	4.4	₹ 400
4	Beijing Bites	Chinese, Thai	5th Block, Koramangala	4.1	₹ 450
5	Kitchens of Punjab	North Indian	Koramangala 4th Block, Koramangala	4.2	₹ 350
6	99 VARIETY DOSA AND PAV BHAJI- Malli Mane Food...	Fast Food, North Indian, Chinese	BTM 2nd Stage, BTM	4.1	₹ 200
7	La Pino'z Pizza	Italian	BTM, BTM	3.9	₹ 500
8	Hotel Manu	South Indian, Kerala, Chinese, North Indian	HSR, HSR	4.1	₹ 350
9	Yumlane Pizza	Pizzas, Italian, Mexican	9th Main road, Koramangala	3.8	₹ 150
10	Ambur Star Briyani	Chinese, South Indian, North Indian, Desserts,...	outer ring road, BTM	4.1	₹ 500
11	Cake Box	Desserts	Koramangala, Koramangala	4	₹ 247
12	Meghana Foods	Chinese, Andhra, Biryani, Seafood	5th Block, Koramangala	4.3	₹ 550
13	Momoz	Chinese	5th Block, Koramangala	4.3	₹ 450
14	A2B - Adyar Ananda Bhavan	South Indian, Chinese, Desserts, North Indian	7th Block, Koramangala	4.2	₹ 450
15	Shawarma Inc	Arabian, Fast Food	1st MAin, Koramangala	4.1	₹ 150
16	WarmOven Cake & Desserts	Desserts, Beverages	Koramangala, Koramangala	4.1	₹ 200
17	Sri Lakshmi Dhaba	North Indian	Bommanahalli, BTM	3.7	₹ 200
18	Falahaar & Kota Kachori	North Indian	6th block, Koramangala	4.2	₹ 300
19	Shree Khana Khazana	Indian, Rajasthani	Sector 4, HSR	4.1	₹ 250

3.2. Basic Information

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 118 entries, 0 to 117
Data columns (total 5 columns):
 #   Column        Non-Null Count  Dtype
---  ------        --------------  -----
 0   Shop_Name     118 non-null    object
 1   Cuisine       118 non-null    object
 2   Location      118 non-null    object
 3   Rating        118 non-null    object
 4   Cost_for_Two  118 non-null    object
dtypes: object(5)
memory usage: 4.7+ KB
```

3.3. Data description

	Shop_Name	Cuisine	Location	Rating	Cost_for_Two
count	118	118	118	118	118
unique	115	79	65	13	30
top	La Pino'z Pizza	North Indian	BTM, BTM	4.1	₹ 300
freq	2	12	13	30	16

In the Swiggy Bangalore Outlet dataset, we have observed a total of 118 records, each consisting of 5 distinct features. These features can be categorized into two types: continuous and categorical. Specifically, we have 2 continuous features and 3 categorical features. The dataset is provided in the widely used Comma Separated Value (.csv) format .

3.4. Extract, Transform, Load (ETL)

- ETL techniques are employed to gain a deeper understanding of the dataset being analyzed.
- The goal of ETL includes extracting important variables, identifying outliers, missing values, or human errors, and comprehending relationships between variables.
- ETL helps maximize insights derived from the dataset while minimizing potential errors that may arise later in the analysis process.
- In essence, ETL provides a better understanding of variables and their relationships within the dataset.

	Rating	Cost_for_Two
count	117.000000	117.000000
mean	4.096581	320.760684
std	0.209240	137.850784
min	3.600000	100.000000
25%	4.000000	200.000000
50%	4.100000	300.000000
75%	4.300000	400.000000
max	4.800000	800.000000

	Shop_Name	Cuisine	Location	cost_category	Area
count	117	117	117	117	117
unique	114	79	65	3	4
top	La Pino'z Pizza	North Indian	BTM, BTM	Medium	Koramangala
freq	2	12	13	80	64

3.5. Exploratory data analysis(EDA)

Exploratory data analysis (EDA) involves thoroughly analyzing the data to extract meaningful insights, facilitating a comprehensive understanding of the dataset and providing answers to key questions. It entails a systematic exploration of the data through various statistical techniques, visualizations, and descriptive summaries. By delving into the data's characteristics, patterns, and relationships, EDA enables the identification of important trends, anomalies, and correlations. Through this process, we gain valuable insights that contribute to our understanding of the data and aid in addressing specific questions or objectives.

3.6. Data Visualization

Data visualization is the process of converting complex datasets and metrics into visual representations, such as charts, graphs, and diagrams. It encompasses various types of visualizations, including bar plots, pie charts, box plots, scatter plots, and more. These visual representations serve the purpose of simplifying and conveying information in a visually appealing and intuitive manner. By using visuals, data visualization aids in the identification and communication of insights, patterns, and relationships present in the data, enabling effective decision-making and knowledge sharing.