Low-Level Design (LLD)

Budget Sales Analysis

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DOCUMENT VERSION CONTROL

Date Issued	Version	Description	Author
17 - 04 - 2022	1.0	Introduction, Problem statement	Indrajeet Thakare
17 - 04 -2022	1.1	Dataset Information Architecture	Indrajeet Thakare
17-06- 2022	1.2	Final Revision	Indrajeet Thakare

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1. INTRODUCTION

1.1 What is a Low-Level Design Document?

The goal of the Low-level design document (LLDD) is to give the internal logic design of the actual program code for the Budget Sales data. Analysis dashboard. LLDD 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 What is 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.

1.3 Project Introduction

Today people are more aware of the things they are supposed to do in order to live a healthy life. Lately people have got to know the health benefits of riding bike in there day to day life. We will be analyzing the sales data of a company which major focused on cycle as their main category.

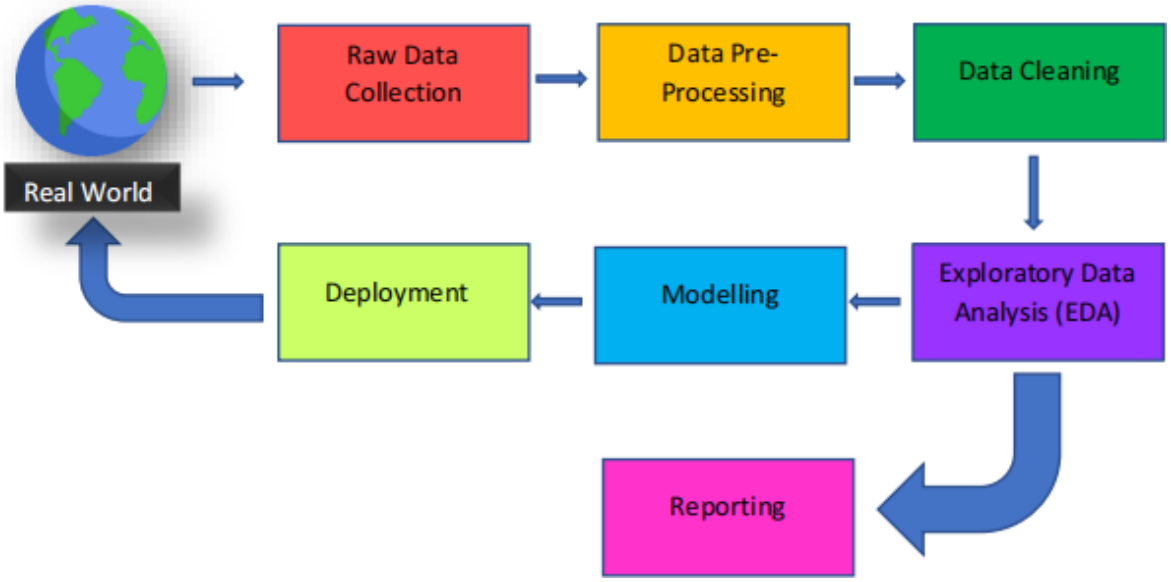
2. Problem Statement

Our "Domain Sale" process is structured to help potential buyers purchase the domain they want immediately without the hassle of contacting the seller directly. A seller lists a domain for sale at a specific price in our Marketplace. An interested buyer sees this domain for sale and decides to buy it.

3. Dataset Information

Sr no	Title	Discription
1	Product Key	Unique identification number of each product
2	OrderDate	Date on which order was placed by the customer
3	ShipDate	Date on which order was Shipped by the Retailer or Supplier
4	Customer key	Unique identification number of each customer
5	Promotion Key	Offers or discounts offered on various products
6	Sales Territory Key	Unique identification number given to each Territory
7	Sales Order Number	unique identification number attached to every order
8	Sales Order Line number	
9	OrderQuantity	Quantity ordered of specific product
10	UnitPrice	Sales price of each product
11	Total Product Cost	Cost required to manufacture the product
12	Sales Amount	Revenue generated by the sale of a specific product
13	Tax amount	Tax amount on purchase
14	Year	Year in wich the order was placed (Y
15	Quarter	Quarter of the year in wich the order was placed(Q
16	Month	Month of the year in wich the order was placed
17	Fiscal Year	Fiscal Year in wich the order was placed
18	Fiscal Quarter	Fiscal Quarter in wich the order was placed
19	Weekday	Week day on wich the order was placed
20	Week day weekend	(Sunday / Saturday)
21	Marital Status	Married(M) or Single(S)
22	Yearly Income	Yearly income of the customer
23	Occupation	Main Occupation of the customer
24	Product Name	Name of the product
25	Subcategory	Category under which the products falls
26	Region	Region from where the order was placed
27	Country	Country from where the order was placed
28	Group	Continent specific orders
29	Education	Highest Qualification of the customer who Placed an order
30	HouseOwnerFlag	It signifies that the person who has placed the order is home owner or any other family member other than home owner

4. Architecture



4.1 Architecture Description

1. **Raw Data Collection**
   The Dataset was taken from iNeuron's Provided Project Description Document.
   https://drive.google.com/drive/folders/165Pjmfb9W9PGy0rZjHEA22LW0Lt3Y-Q8?usp=sharing

2. **Data Pre-Processing**
   Before building any model, it is crucial to perform data pre-processing to feed the correct data to the model to learn and predict. Model performance depends on the quality of data feeded to the model to train. This Process includes
   a) Handling Null/Missing Values
   b) Handling Skewed Data
   c) Outliers Detection and Removal.

3. Data cleaning is the process of fixing or removing incorrect, corrupted, incorrectly formatted, duplicate, or incomplete data within a dataset.

a) Remove duplicate or irrelevant observations
b) Filter unwanted outliers
c) Renaming required attributes

4. Exploratory Data Analysis (EDA)

Exploratory Data Analysis refers to the critical process of performing initial investigations on data to discover patterns, spot anomalies, test hypothesis and to check assumptions with the help of summary statistics and graphical Representations.

5. Reporting

Reporting is a most important and underrated skill of a data analytics field. Because of being a Data Analyst, you should be good in easy and self-explanatory report because your model will be used by many stakeholders who are not from technical background.

a) High-Level Design Document (HLD)
b) Low-Level Design Document (LLD)
c) Architecture
d) Wireframe
e) Detailed Project Report
f) PowerPoint Presentation

6. Modelling

Data modelling is the process of analyzing the data objects and their relationship to the other objects. It is used to analyze the data requirements that are required for the business processes. The data models are created for the data to be stored in a database. The Data Model's main focus is on what data is needed and how we have to organize data, rather than what operations we have to perform.

7. Deployment

We created a Power BI dashboard