

## Low-Level Design (LLD)

### ANALYZING AMAZON SALES DATA

**Revision Number - 1.2**

**Last Date of Revision - 08/04/2023**

**Ayush**

# LOW LEVEL DESIGN (LLD)

## Document Control

Date	Version	Description	Author
06/04/2023	1.0	Introduction, Problem Statement	Ayush
07/04/2023	1.1	Data set Information, Architecture Description	Ayush
09/04/2023	1.2	Final Revision	Ayush

# Contents

Document Version Control.....	2
1. Introduction .....	4
1.1 What is Low-Level Design Document? .....	4
1.2 Scope.....	4
1.3 Project Introduction.....	4
2. Problem Statement.....	5
3. Data set Information.....	5
4. Architecture.....	6
4.1 Architecture Description .....	6

# 1. Introduction

## 1.1 What is 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 Sales 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

This is a project about Sales Management. Organizations under the E-commerce industry seek to attain core competence by creating and sustaining a unique process to collect personal information about customers and their purchasing trends. The report critically evaluates how service-based organizations -Amazon use Management information systems to attain competitive advantage through efficient management and acquisition of information. The purpose of this project is to analyze Amazon Sales Data to obtain meaningful information. To do that, a Sales data set is provided, which includes sales amount, list price, cost price, etc.

# 2. Problem Statement

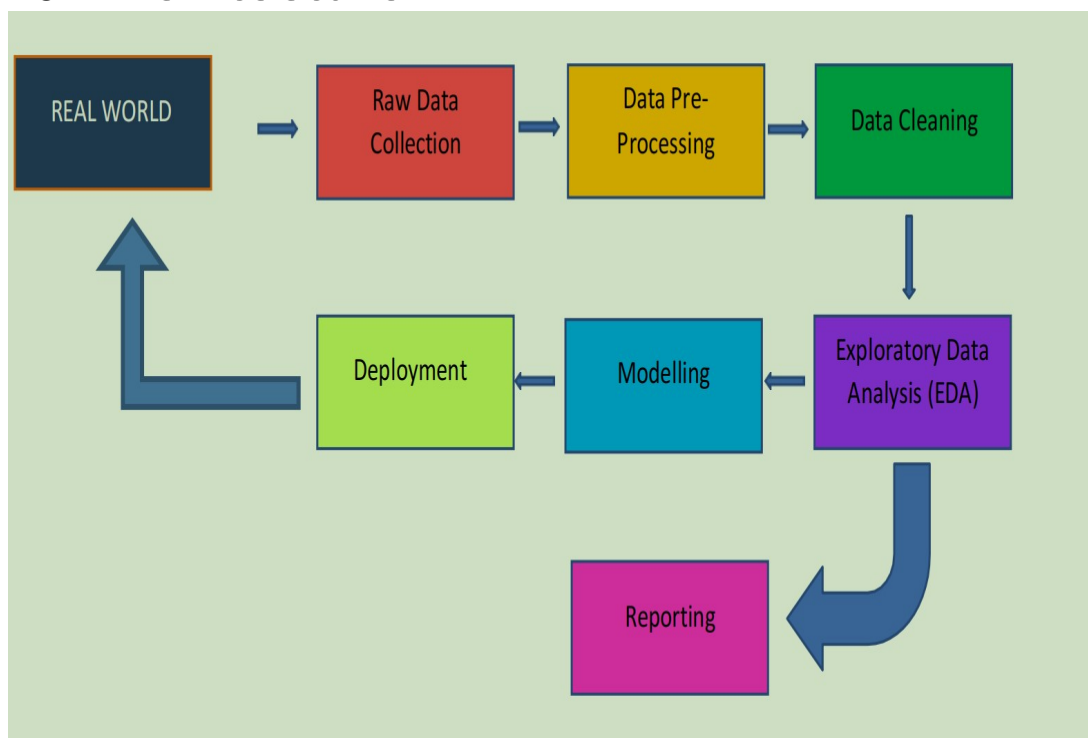
Sales management has gained importance to meet increasing competition and the need for improved distribution methods to reduce cost and increase profits. Today, sales management is the most important function in a commercial and business enterprise. Do ETL: Extract-Transform-Load some Amazon datasets and find for me Sales-trend -> month-wise, year-wise, yearly month wise. Find key metrics and factors and show the meaningful relationships between attribute.

### 3.Data set Information

This data set contains:-

- Sales data for different regions, countries, and items.
- Sold through various sales channels.
- Includes order date, order ID, ship date, units sold, unit price, unit cost, total revenue, total cost, and total profit for each transaction.
- Order priority column indicates the priority level of the order.

### 5. Architecture



## 5.1 Architecture Description

### 1. Raw Data Collection

The Data set was taken from Pw skills' Provided Project Description Document.

[https://drive.google.com/file/d/1tvNcSh1Ayfkv7NIE2oKqIMOLIfedNJvM/view?usp=share\\_link](https://drive.google.com/file/d/1tvNcSh1Ayfkv7NIE2oKqIMOLIfedNJvM/view?usp=share_link)

### 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 fed 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

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

- a) Remove duplicate or irrelevant observations.
- b) Filter unwanted outliers.

### 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 hypotheses-and check assumptions with the help of summary statistics and graphical representations.

### 5.Reporting

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

- High-Level Design Document (HLD)
- Low-Level Design Document (LLD)
- Architecture
- Wireframe
- Detailed Project Report

## 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 to store the data in a database. The Data Model's main focus is on what data is needed and how we have to organize the data rather than what operations we have to perform.

## 7. Deployment

We created a Power BI Dashboard.

