

## Amazon Sales Data Analysis

### Low Level Design (LLD)

#### Amazon Sales Data Analysis

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Lally

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# Amazon Sales Data Analysis

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## Amazon Sales Data Analysis

### Abstract

In the world of rising new technology and innovation, the Amazon sales 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 sales of all over the world. Based on the Information the ultimate goal would be to predict the best sales product for common people and find important insights highlighting key indicators and metrics that influence customer choice.

## 1. Introduction

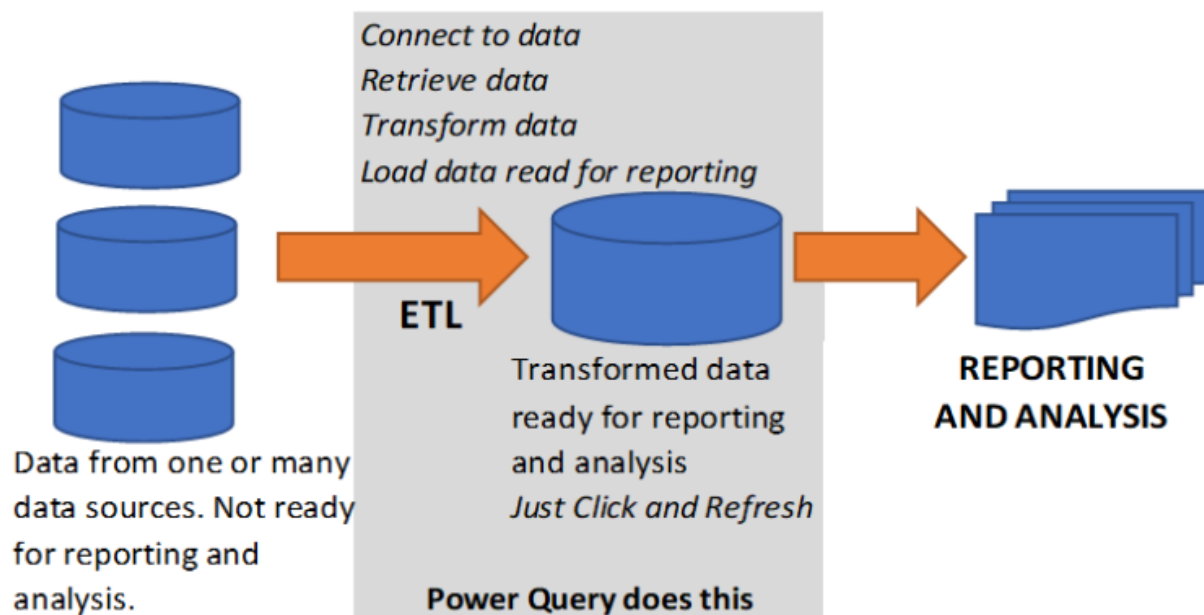
### 1.1. What is Low-Level design document?

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 Amazon 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.

### 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 analyze customer trends and satisfaction, which can lead to new and better products and services.

## 2.Architecture

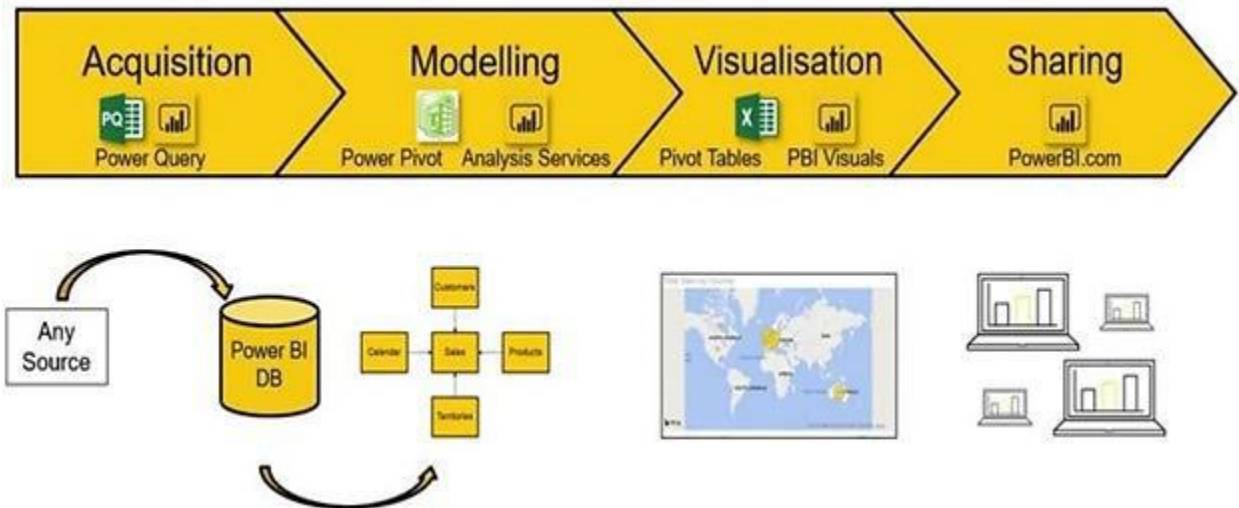


ETL (extract, transform and load) in Power BI use the preparation of data sets for analysis by removing irregularities in the data. It also involves data visualization to draw meaningful patterns and insights.

Below are the following steps to follow for ETL:

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

## Amazon Sales Data Analysis



### 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: Amazon Sales Dataset.csv

#### 3.2 Data Overview

- The dataset is of size 30 KB
- It includes a single file in “.csv” format.
- Number of rows/records: 200
- Number of attributes: 14

## Amazon Sales Data Analysis

### 3.3 Data Description

The following attributes describes the dataset.

#### **Region:**

Region describe the Continents. Where all the sales has happened.

#### **Item type:**

Item type say what type of item been sold.

Ex-Tops, T-shirts, Shirts, kurta set

#### **Order data and Ship date:**

The order data and shipping data we can say that how many days did it took to ship the order.

### 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.

# Amazon Sales Data Analysis

- 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.

FileHomeHelp

Table tools

NameOrders (2)

Structure

Mark as date table

Manage relationships

New measure

Quick measure

New column

New table

Ship Date

Ship Mode

Customer ID

Customer Name

Country

City

State

Region

Product ID

Category

Sub-Category

Product

14 June 2014

Standard Class

BH-11710

Brosina Hoffman

United States

Los Angeles

California

West

OFF-AR-10002833

Women's Clothing

Shrugs

Longline Shrug

14 June 2014

Standard Class

BH-11710

Brosina Hoffman

United States

Los Angeles

California

West

OFF-AP-10002892

Women's Clothing

Shorts

Cargo Shorts

22 July 2016

Standard Class

RA-19885

Ruben Ausman

United States

Los Angeles

Calif

California

OFF-ST-10003479

Women's Clothing

Kurtas & Kurta Sets

Anarkali Kurtas

November 2015

Standard Class

KM-16720

Kunst Miller

United States

Los Angeles

California

West

OFF-PA-10003892

Women's Clothing

T-Shirts

Boxy T-Shirt

September 2016

Standard Class

JS-15685

Jim Sink

United States

Los Angeles

California

West

OFF-AR-10004930

Women's Clothing

Tops

Wrap Top

September 2016

Standard Class

JS-15685

Jim Sink

United States

Los Angeles

California

West

OFF-PA-10000304

Women's Clothing

T-Shirts

Boxy T-Shirt

09 August 2014

Standard Class

CS-12130

Chad Sievert

United States

Los Angeles

California

West

OFF-PA-10000659

Women's Clothing

Sweatshirts

Front-Open Sweatshirt

09 August 2014

Standard Class

CS-12130

Chad Sievert

United States

Los Angeles

California

West

OFF-PA-10001144

Women's Clothing

Trousers

Formal Trousers

November 2016

Standard Class

JH-15910

Jonathan Howell

United States

Los Angeles

California

West

OFF-ST-10001328

Women's Clothing

Long Skirts & Palazzos

Maxi Skirt

09 March 2017

Standard Class

SP-20860

Sung Pak

United States

Los Angeles

California

West

OFF-AR-10001573

Women's Clothing

T-Shirts

Loose Fit Solid T-Shirt

09 March 2017

Standard Class

SP-20860

Sung Pak

United States

Los Angeles

California

West

OFF-EN-10000483

Women's Clothing

Skirts

Pencil Skirt

December 2017

Standard Class

BN-11515

Bradley Nguyen

United States

Los Angeles

California

West

OFF-AR-10003611

Women's Clothing

Accessories

Wollen Cap

December 2017

Standard Class

BN-11515

Bradley Nguyen

United States

Los Angeles

California

West

OFF-AR-10001246

Women's Clothing

T-Shirts

Boxy T-Shirt

15 June 2016

Standard Class

OT-18730

Olvera Toch

United States

Los Angeles

California

West

OFF-LA-10001297

Women's Clothing

Shrugs

Longline Shrug

15 June 2016

Standard Class

OT-18730

Olvera Toch

United States

Los Angeles

California

West

OFF-PA-10003441

Women's Clothing

Skirts

Flared Skirt

September 2015

Standard Class

CC-12145

Charles Crestani

United States

Los Angeles

California

West

OFF-SU-10004498

Women's Clothing

Kurtas & Kurta Sets

Anarkali Kurtas

02 April 2015

Standard Class

AB-10165

Alan Barnes

United States

Los Angeles

California

West

OFF-PA-10000743

Women's Clothing

Accessories

Hat

8 February 2016

Standard Class

RD-19810

Ross DeVincents

United States

Los Angeles

California

West

OFF-PA-10004092

Women's Clothing

Jeans & Jeggings

Wide Leg Denim Jeans

September 2015

Standard Class

AR-10510

Andrew Roberts

United States

Los Angeles

California

West

OFF-PA-10003441

Women's Clothing

Shirts

Boxy Casual Shirt

12 April 2016

Standard Class

LC-17140

Logan Currie

United States

Los Angeles

California

West

OFF-PA-10002947

Women's Clothing

Tops

High-Low Top

12 April 2016

Standard Class

LC-17140

Logan Currie

United States

Los Angeles

California

West

OFF-ST-10002583

Women's Clothing

Shirts

Regular Fit Casual Shirt

12 April 2016

Standard Class

LC-17140

Logan Currie

United States

Los Angeles

California

West

OFF-PA-10000019

Women's Clothing

Coats & Jackets

Bomber Jacket

Data

Search

Orders (2)

Category

City

Country

Customer ID

Customer Name

Discount

Order Date

Order ID

Product

Product ID

Profit

Quantity

Region

Row ID

Sales

Ship Date

Ship Mode

State



# Amazon Sales Data Analysis

## 3.5 Data to Insights through Visualizations and Data Analysis

