High Level Design (HLD)

ANALYZING AMAZON SALES DATA

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12/04/2022	1.0	Abstract Introduction	Shashi
13/04/2022	1.1	General Description Design Details	Shashi
15/04/2022	1.2	KPIs Deployment	Shashi

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Abstract

Sales management is a key function which helps small and medium size enterprises (SMEs) in monitoring and tracking stock and co-ordinating transaction processing. The efficiency of sales management dependends on effective tools and facilities, especially modern information and communication technologies. Despite this, majority of businesses in developing countries, especially those in remote areas do not take full advantage of these technologies due to challenges related to the design of these technologies. According to the definition committee of the American marketing association sales management meant “The planning, direction, and control of personal selling including recruiting, selecting equipping, assigning, routing, supervising, paying, and motivating as these tasks apply to the personal sales force”.

1. Introduction

1.1. Why this High-Level Design Document?

The purpose of this High-Level Design (HLD) Document is to add the necessary detail description to represent a suitable model. This document is designed to help in operational requirement and can be used as a reference manual for how the modules interact. Basically, HLD is a technical representation of functional requirements and flow of information across assets or components.

1.2. Scope

The High-Level Design documentation presents the structure of the system as the application/database architecture, application flow and technology architecture. High-Level Design documentation may use some non-technical terms unlike Low Level design which should be strictly technical jargon.

2. General Description

2.1 Product Perspective & Problem Statement

The objective of the project is to perform data visualization techniques to understand the insight of the data. This project aims apply various Business Intelligence tools such as Tableau or Power BI to get a visual understanding of the data.

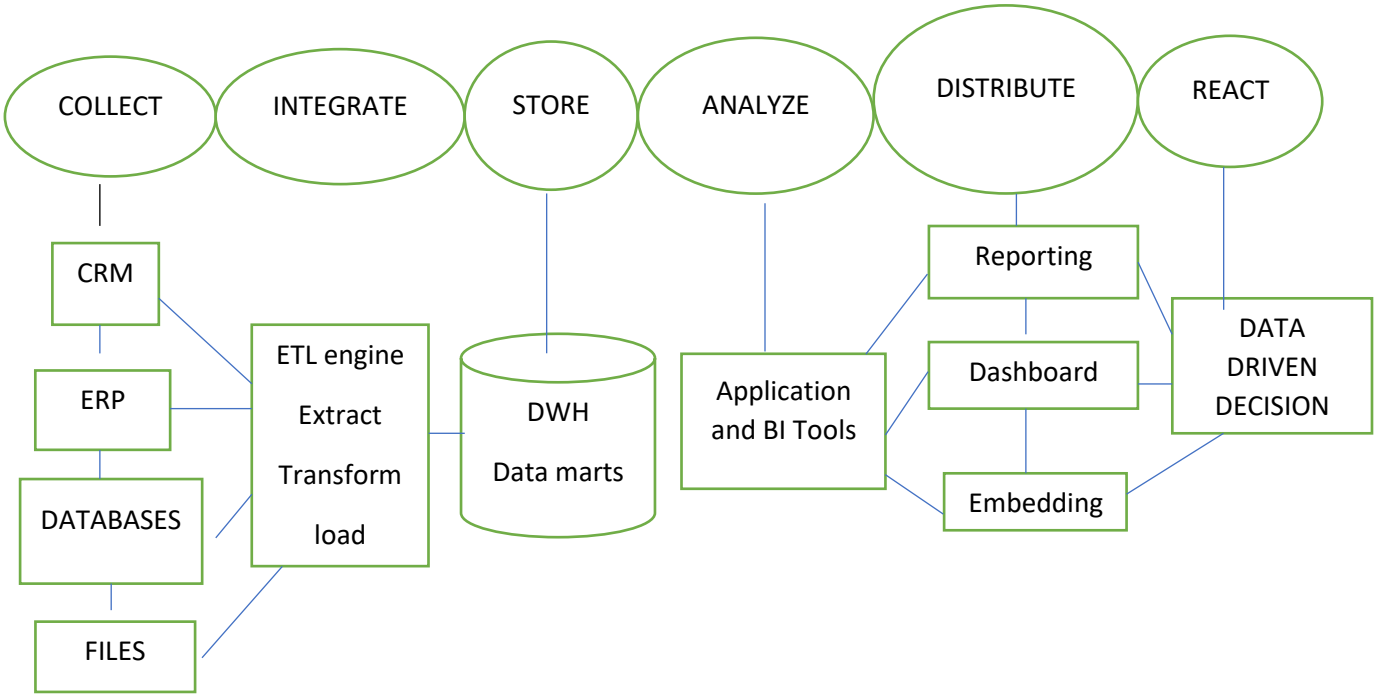
Sales management has gained importance to meet increasing competition and the need for improved methods of distribution to reduce cost and to increase profits. Sales management today is the most important function in a commercial and business enterprise.
Do ETL: Extract-Transform-Load some Amazon dataset and find for me Sales-trend -> month wise , year wise , yearly _month wise
Find key metrics and factors and show the meaningful relationships between attributes.
Do your own research and come up with your findings.

2.2 Tools used

Business Intelligence tools and libraries works such as Numpy, Pandas,matplotlib, Excel, Tableau, Power BI are used to build the whole framework.

3 Design Details

3.1 Functional Architecture



3.2 Optimization

Your data strategy drives performance

- Remove unnecessary columns
- Remove unnecessary rows
- Group by and summarize
- Disable auto date/time

Best practices

- Appropriate use of error functions
- Avoid converting BLANKS to VALUES
- Use variables to improve formula
- Use COUNTROWS instead of Count
- Use DIVIDE function this measure expression achieve the outcome more efficiently and elegantly

4. KPIs

KPI, or a key performance indicator, are measurable values used to evaluate how successful a person or organization is at reaching a target. You can have high-level KPIs that look at the performance of your business, or KPIs that drill down into processes at the individual or departmental level, too.

4.1. KPIs (Key Performance Indicators)

1)Net profit on particular product

2)customer retention rate

3)average profit by customer

4) year on year growth

5)Total Sales, Yearly, monthly

5. Deployment

In today's world, analytics is a vital part of decision making in almost every organization. The growing use of Power BI as an analytics tool, requires it to use more data, look appealing and be user-friendly. Above all however, Power BI needs to always be available and reliable. To meet these requirements, BI creators must collaborate effectively.

The deployment process lets you clone content from one stage in the pipeline to another, typically from development to test, and from test to production.

During deployment, Power BI copies the content from the current stage, into the target one. The connections between the copied items are kept during the copy process. Power BI also applies the configured deployment rules to the updated content in the target stage. Deploying content may take a while, depending on the number of items being deployed. During this time, you can navigate to other pages in the Power BI portal, but you cannot use the content in the target stage.

Deploying content to an empty stage

When you deploy content to an empty stage, the metadata of the reports, dashboards, and datasets in the workspace you're deploying from, is copied to the stage you're deploying to. A new workspace for the stage you deployed to, is created on a Premium capacity. There are two ways to deploy content from one stage to the next one. You can deploy all the content, or you can select which content items to deploy. You can also deploy content backwards, from a later stage in the deployment pipeline, to an earlier one. After the

deployment is complete, refresh the datasets so that you can use the newly copied content. The dataset refresh is required because data isn't copied from one stage to another.

Creating a Premium workspace

During first-time deployment, deployment pipelines checks if you have Premium permissions. If you have Premium permissions, the content of the workspace is copied to the stage you're deploying to, and a new workspace for that stage is created on the Premium capacity. If you don't have Premium permissions, the workspace is created but the content isn't copied. You can ask a capacity admin to add your workspace to a capacity, or ask for assignment permissions for the capacity. Later, when the workspace is assigned to a capacity, you can deploy content to this workspace.

Advantages and Disadvantages of Power BI

Pros of Power BI

- Affordability
- Custom visualization
- Excel integration
- Data connectivity
- Prompt update
- Interactive visuals

Cons of Power BI

- Table relationship
- Configuration of visual
- Crowed user interface
- Rigid formulas
- Handling large data volumes