

Low Level Design

ENTERTAINER DATA
ANALYSIS
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1. Introduction

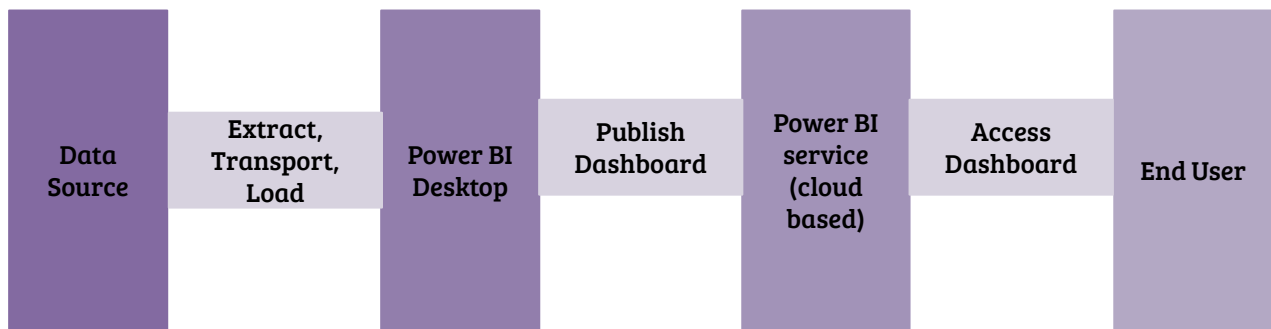
1.1 Why This Low-Level Design Document?

The purpose of this Low-Level Design Document (LDD) is to provide detailed information about how the House Price Prediction dashboard is built. It includes diagrams that show the structure of the code, the relationships between different parts of the program, and specific details about how everything should work. This document helps programmers write the code by giving them a clear blueprint.

1.2 Scope

Low-Level Design (LLD) focuses on designing the individual components of the system. It involves creating detailed designs for data structures, software architecture, and performance algorithms. Initially, the overall data organization is defined during the requirement analysis phase, and then it is refined during the detailed design process.

2. Architecture



3. Architecture Description.

3.1 Data Description

1. **Data Source** : This is where your original data comes from, like a database, spreadsheet, API, or other storage systems.
2. **ETL (Extract, Transform, Load)** : This step involves taking data from the source, cleaning and transforming it as needed, and then loading it into Power BI for analysis. Tools like Power Query can help with this.
3. **Power BI Desktop** : This is the tool you use to create your dashboard. It offers various features for making visualizations, setting up relationships, and adding calculations.
4. **Publish** : After designing your dashboard, you publish it from Power BI Desktop to the Power BI Service, which moves it to the cloud.

5. **Power BI Service** : This is the cloud platform that hosts your published dashboards. It handles data storage, security, access control, collaboration, and management.
6. **Access** : Users can view the published dashboard through web browsers or the Power BI mobile app. They can interact with the visualizations, apply filters, and explore the data.
7. **End Users** : These are the people who will use the dashboard. They can view the data, gain insights, and make decisions based on the information provided.

3.2 Data Transformation

1. **Cleaning and Formatting Data** : This means fixing problems in the data, like filling in missing information, removing duplicates, making sure everything is in a consistent format, and correcting any errors.
2. **Filtering and Sub-setting Data** : This involves picking specific rows or columns that meet certain criteria so you can focus on the data that's most relevant.
3. **Aggregating and Summarizing Data** : This is about grouping data by certain features and calculating key statistics, such as totals, averages, or percentages.

04. **Creating Derived Variables:** This means making new variables from existing ones, like figuring out a person's age from their birth year or calculating the time between two dates.
05. **Merging and Joining Datasets:** This involves combining different datasets using common identifiers to add more information and make the analysis richer.
06. **Data Normalization or Scaling:** This is adjusting the range of data values so that they are easier to compare or visualize.

These data transformations help to structure the data in a way that facilitates analysis, exploration, and visualization, allowing you to gain insights and draw conclusions from the Entertainer dataset.

3.1 Import Data from Database/Excel Dataset.

When we import data from an Excel sheet into our Entertainer Data Analysis, we essentially read the data from the Excel file and bring it into our analysis tool. This lets us manipulate the data using libraries like Pandas or NumPy. Here are the basic steps to follow:

- 1. Install Necessary Libraries:** First, make sure you have the required libraries, like Pandas, installed in your environment.
- 2. Load the Excel File:** Use a function from Pandas, such as `pd.read_excel()`, to read the Excel file. You need to provide the file path or URL as an input. This function will create a DataFrame, which is a structured way to hold the data.
- 3. Explore the Data:** After loading the data into a DataFrame, you can check its structure and content. Use functions like `head()` to see the first few rows, and `info()` to understand the data types and get summary statistics.

4. Clean and Preprocess the Data: Next, you may need to clean the data. This includes fixing missing values, changing data types, removing duplicates, or resolving any quality issues.

5. Analyze and Visualize the Data: With the data ready, you can perform various analyses using libraries like NumPy or Pandas. This can involve statistical calculations, aggregating data, creating visualizations, or extracting insights.

This process helps you work effectively with the data for your analysis tasks

3.4 Deployment

Deploying your Entertainer Data Analysis Dashboard in Power BI means making it accessible to users. Power BI offers several ways to share your dashboard:

1. Power BI Service: This is a cloud-based platform where you can publish, share, and collaborate on your dashboards. To deploy your dashboard here, you need to create a Power BI account, set up a workspace, and upload your dashboard file (PBIX) to that workspace. After uploading, you can adjust access permissions and share the dashboard with specific users or groups, allowing for collaboration.

2. Power BI Desktop: This tool is used for creating and designing your dashboard. If you want to deploy your dashboard using Power BI Desktop, you can save it as a PBIX file and share that file with others. Keep in mind that anyone who wants to view or interact with the dashboard will need to have Power BI Desktop installed on their computer.

This process ensures that dashboard is available and usable for the intended audience.

4. Unit Test Cases.

Test Case Description	Expectation Result
Entertainer Slicer	When clicked on the slicer, the dropdown should occur which has various parameters/name of the entertainers.
Oscar Won Graph	Here a Oscar Award won by Top 5 Entertainers
8 Cards of the Entertainers	When clicked on the slicer, the dropdown will come, after selecting any of Entertainer from the dropdown list, all 8 cards should only show the data respectively with the selected Entertainer
Award won By Gender (Traditional)	It is a graph which represents the data based on the Genders i.e. Male and Female
Top 10 Entertainer Bar Graph	It is Bar Graph which shows the Top 10 Entertainers from the Dataset