Low Level Design (LLD)

Entertainer Data Analysis

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Contents

1 Introduction

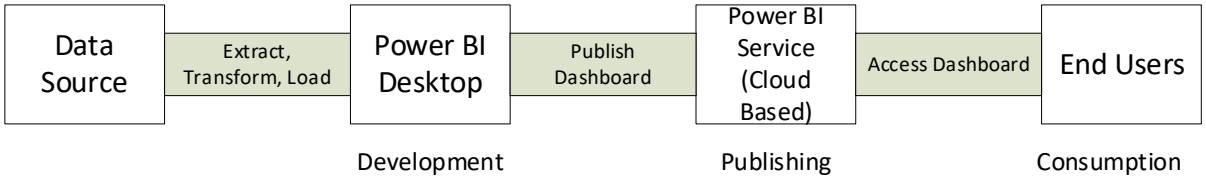
1.1 Why this Low-Level Design Document?

The goal of the LDD or Low-level design document (LDD) is to give the internal logic design of the actual program code for the House Price Prediction dashboard. LDD 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 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.

2 Architecture



3 Architecture Description

3.1 Data Description

1. Data Source: Represents the original data that you want to analyze. It could be a database, spreadsheet, API, or other data storage systems.

2. Extract, Transform, Load (ETL): This step involves extracting data from the source, performing any necessary transformations or cleaning, and loading it into Power BI for analysis. This can be done using Power Query or other ETL tools.

3. Power BI Desktop: This is the development environment where you design and create your dashboard. Power BI Desktop provides a rich set of tools for creating visualizations, defining relationships, and adding calculations.

4. Publish: Once the dashboard design is complete, you publish it from Power BI Desktop to the Power BI Service. Publishing transfers the dashboard to the cloud-based Power BI Service for deployment.

5. Power BI Service: The Power BI Service is a cloud-based platform that hosts and manages your published dashboards. It provides capabilities for data storage, security, access control, collaboration, and dashboard administration.

6. Access: Users can access the published dashboard through web browsers or the Power BI mobile app. They can interact with the visualizations, apply filters, drill down into data, and explore the insights presented in the dashboard.

7. End Users: Represents the intended audience or stakeholders who consume and interact with the deployed dashboard. They can view the data, gain insights, and make data-driven decisions based on the information presented.

3.2 Data Transformation

1. Cleaning and formatting data: This involves handling missing values, removing duplicates, standardizing data formats, and correcting any inconsistencies or errors in the data.

2. Filtering and sub-setting data: Selecting specific rows or columns based on certain criteria or conditions to focus on relevant data subsets.

3. Aggregating and summarizing data: Grouping data based on certain attributes and calculating summary statistics such as counts, averages, sums, or percentages.

4. Creating derived variables: Calculating new variables based on existing ones, such as calculating age from birth year or calculating the duration between two dates.

5. Merging and joining datasets: Combining multiple datasets based on common identifiers or keys to enrich the analysis with additional information.

6. Data normalization or scaling: Adjusting the scale or range of data values to facilitate meaningful comparisons or visualizations.

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.

3.3 Import Data from Database/Excel Dataset

When we import data from an Excel sheet into our Entertainer Data Analysis, it involves reading the data from the Excel file and loading it into your analysis environment. This allows you to work with the data programmatically using libraries like Pandas or Numpy.

Importing data from Excel typically involves the following steps:

1. Installing the necessary libraries: Ensure that you have the required libraries, such as Pandas, installed in your environment.

2. Loading the Excel file: Use the appropriate function provided by the Pandas library, such as pd.read_excel(), to read the Excel file. Specify the file path or URL of the Excel file as the

input parameter. This function reads the data from the Excel file and creates a Pandas DataFrame object.

3. Exploring the data: Once the data is loaded into a DataFrame, you can explore its structure and content. Use functions like head(), info() to view the first few rows, the data types of columns, or summary statistics of the data.

4. Data cleaning and pre-processing: Perform any necessary data cleaning and pre-processing steps on the imported data. This may include handling missing values, data type conversions, removing duplicates, or addressing any data quality issues.

5. Analyzing and visualizing the data: With the data loaded into the analysis environment, you can now perform various data analysis tasks using libraries like Numpy or Pandas. This may involve applying statistical operations, aggregating data, creating visualizations, or deriving insights from the data.

3.4 Deployment

Deploying your Entertainer Data Analysis Dashboard in Power BI involves the process of making your dashboard available for consumption by end-users. Power BI provides several options for deploying and sharing your dashboard with others.

1. Power BI Service: Power BI Service is a cloud-based platform that allows you to publish, share, and collaborate on your Power BI dashboards. To deploy our dashboard in Power BI Service, we need to sign up for a Power BI account, create a workspace, and upload our dashboard file (PBIX) to the workspace. Once uploaded, we can configure access permissions, share the dashboard with specific users or groups, and collaborate with others.

2. Power BI Desktop: Power BI Desktop is a powerful tool for creating and designing our dashboard. To deploy our dashboard using Power BI Desktop, we can save your dashboard as a PBIX file and share it with others. However, this method requires recipients to have Power BI Desktop installed on their machines to view and interact with the dashboard.

4 Unit Test Cases

Test Case Description	Expected Results
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