**Project Documentation**  
**Project Title:** Movie Metadata Overview

**1. Project Overview**

This project analyzes movie metadata using **Microsoft Excel** and **Power BI** to identify trends, calculate profitability, and visualize insights such as country-wise performance, language distribution, and director-level metrics. The goal is to gain a comprehensive understanding of movie industry data.

**2. Tools Used**

* Microsoft Excel (including Power Query)
* Power BI

**3. Dataset**

* **Source:** Sample dataset
* **Data Contains Columns Like:**
  + Movie\_Title, Gross, Duration, Title\_year, Budget, Director\_Name, Color, Language, Genres, Country
  + Director\_Facebook\_Likes, Actor Names and Facebook Likes, Cast\_Total\_Facebook\_Likes
  + Num\_Critic\_For\_Reviews, Num\_Voted\_Users, Facenumber\_In\_Poster, Plot\_Keywords, Movie\_imdb\_link
  + Num\_user\_for\_reviews, Content\_rating, imdb\_score, Aspect\_ratio, Movie\_facebook\_likes

**4. Steps Followed**

**🧹 Data Cleaning in Excel and Power Query:**

* Removed duplicates and blank rows
* Filled missing values using appropriate methods
* Capitalized each word for consistency
* Converted each column's datatypes into appropriate types

**🔄 Transformed Data in Power Query (Power BI):**

* Created new column **Profit = Gross - Budget**
* Created columns:
  + **Profit Status** = IF(Profit > 0, "Profit", IF(Profit < 0, "Loss", "No Profit"))
  + **Budget Status** = Based on budget range

**5. DAX Calculations**

**🧱 Columns Created:**

* **Decade** = INT([Title\_year]/10)\*10

**📐 Measures Created:**

* Total Profit = SUM([Profit])
* Total Movies = COUNT(Movie\_Title)
* Total Budget = SUM(Budget)
* Total Gross = SUM(Gross)
* Average IMDb Score = AVERAGE([imdb\_score])
* Average Aspect Ratio = AVERAGE([Aspect\_ratio])

**📊 DAX Tables:**

* Top 10 Movies Based on Profit
* Top 10 Directors Based on Gross/Profit
* Directors Table with related metrics
* Movies Country-Based Table (e.g., count and performance by country)
* Movie Counts Language-Based Table (distribution of movies by language)

**6. Dashboard Visuals**

**📈 Visual Types and Metrics**

* **Pie Chart:** Total Number of Movies Based on Color
* **Line and Stacked Column Chart:** Average Profit and Sum of IMDb Score by Content Rating
* **Stacked Bar Chart:** Total Number of Movies by Profit Status
* **Scatter Chart:** Average Duration and Average IMDb Score by Country
* **Line and Clustered Column Chart:** Total Gross of Top 10 Directors
* **Filled Map:** Average Gross by Country based on Count of Movies
* **Line Chart:** Sum of Gross and Budget by Decade Range and Movie Color
* **Funnel Chart:** Profit by Movies

**💳 KPI Cards**

* Total Profit
* Total Movies
* Total Budget
* Total Gross
* Average IMDb Score
* Average Aspect Ratio

**🔘 Buttons with Actions**

* **Full Movie Details**
* **Facebook Likes Details**

**📌 Slicers Used**

* Movie Title
* Country
* Languages
* IMDb Score
* Profit Status
* Release Year

**7. Tooltips & Drillthrough**

**🧰 Tooltip 1**

**Title:** *Profit Status Overview*  
**Visuals:**

* Clustered Column Chart: Average of Num User for Reviews, Num of Critic for Reviews, and Duration by Profit Status
* Decade Range Based Count of Movies and Profit

**🧰 Tooltip 2**

**Title:** *Country-Level Summary*  
**Visuals:**

* Column/Stacked Bar Chart: Count of Movies by Country
* Multi-Card: Average Gross, Average Profit, and Total Movies by Country

**🎯 Drillthrough Pages**

* Full Movie Profile
* Facebook & Cast Analysis

**8. Files Included**

* movie\_data.xlsx – Cleaned and transformed data
* movie\_dashboard.pbix – Power BI Dashboard file
* README.md – Project summary and usage instructions

**9. How to Use**

* Open movie\_data.xlsx to view cleaned and preprocessed data
* Open movie\_dashboard.pbix in Power BI Desktop to explore interactive visuals