(Bachelor of Computer Application)

A Project Report on

Netflix Subscription Dashboard

Using Microsoft Power BI

Submitted by:

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Dwarka sec-9,New Delhi

(Bachelor of Computer Application)

Certificate

This project is for the department of Bachelor of computer Application, under faculty of computer science and engineering at **Delhi skill and Entrepreneurship University**, the project entitled **Netflix Subscription Dashboard** in satisfactory manner as a partial fulfillment of required degree of bachelor of computer application for the academic year 2024 ,of DSEU Dwarka Campus

This is to certify that **Aman Singh(41222121)** has contributed in successfully completing the project

Abstract of the Project

The proliferation of streaming services has led to an immense amount of data generated by platforms like Netflix. Analyzing this data is crucial for understanding user behavior, optimizing content delivery, and enhancing the overall user experience. This project focuses on the development of a comprehensive Netflix subscription dashboard using Microsoft Power BI, designed to visualize key metrics and trends associated with user subscriptions.

The dashboard provides insights into various aspects of Netflix's subscriber base, including demographic distributions, subscription plan preferences, regional performance, and user engagement patterns. The visualizations enable stakeholders to monitor subscription growth, identify churn rates, and forecast future trends. This project involved data collection, data cleaning, and the use of Power BI's data modeling and visualization capabilities to create interactive reports.

The resulting dashboard offers a user-friendly interface, allowing Netflix executives and analysts to make data-driven decisions with greater accuracy and efficiency. By leveraging Power BI, the project demonstrates the potential for business intelligence tools to transform raw data into actionable insights, ultimately contributing to improved customer retention and revenue growth for Netflix

1. Introduction

a. About the project idea:

This project focuses on developing a Netflix subscription dashboard using Power BI to visualize key metrics like subscriber growth, demographics, and engagement. The dashboard will help Netflix's management make informed decisions by providing insights into trends, churn patterns, and regional performance, ultimately supporting data-driven strategies for optimizing customer retention and revenue

b. About tools in use:

The project uses **Power BI** to create a dynamic and interactive dashboard, with data cleaning and preparation handled through **Power Query**. These tools together enable effective visualization and analysis of Netflix subscription data, providing clear insights for decision-making

Resources Required:

Netflix Subscription order dataset

Power bi

Access to computational resources for model training (e.g., CPU/GPU)

2. Purpose/Scope/Objective of the Analysis

Purpose: To develop an interactive Power BI dashboard that visualizes Netflix subscription data, providing actionable insights into subscriber growth, demographics, and engagement patterns.

Scope: The project involves collecting and integrating data related to subscription trends, demographic information, plan preferences, and regional performance, and then creating visualizations to present this data effectively.

Objectives:

- Design and implement interactive visualizations to track subscription growth and demographic trends.
- Analyze subscriber preferences for different plans and assess regional performance variations.
- Identify and understand patterns in user engagement and churn rates.
- Deliver insights that support strategic decision-making and improve Netflix's subscription management.

3. Requirements for the Project

a. **Hardware used:**.

While the hardware requirements are not overly demanding, a computer with sufficient processing power and RAM (depending on dataset size) will ensure smooth workflow.

Processor: Intel core i5

RAM: 12 GB

Storage : 512 GB SSD

b. **Software used:** Microsoft Power BI is a business intelligence tool that allows you to visualize and analyze data.

c. **Technology used:**

Access to the Netflix Subscription order dataset (ideally in a well-structured format like CSV).Data science methodologies, including data preprocessing, exploratory data analysis (EDA).

4. Methodology

a. Introduction:

The methodology outlines the approach for developing a Netflix subscription dashboard using Power BI. It details the steps taken from data collection to visualization and analysis, ensuring a structured process for delivering actionable insights.

b. General Description:

The process begins with gathering relevant data on Netflix subscriptions, including growth metrics, demographic information, plan details, and regional performance. Data is then cleaned and transformed using Power Query. The cleaned data is imported into Power BI, where interactive dashboards and reports are created to visualize key metrics and trends.

c. Specific Requirements, Functions, and Formulas:

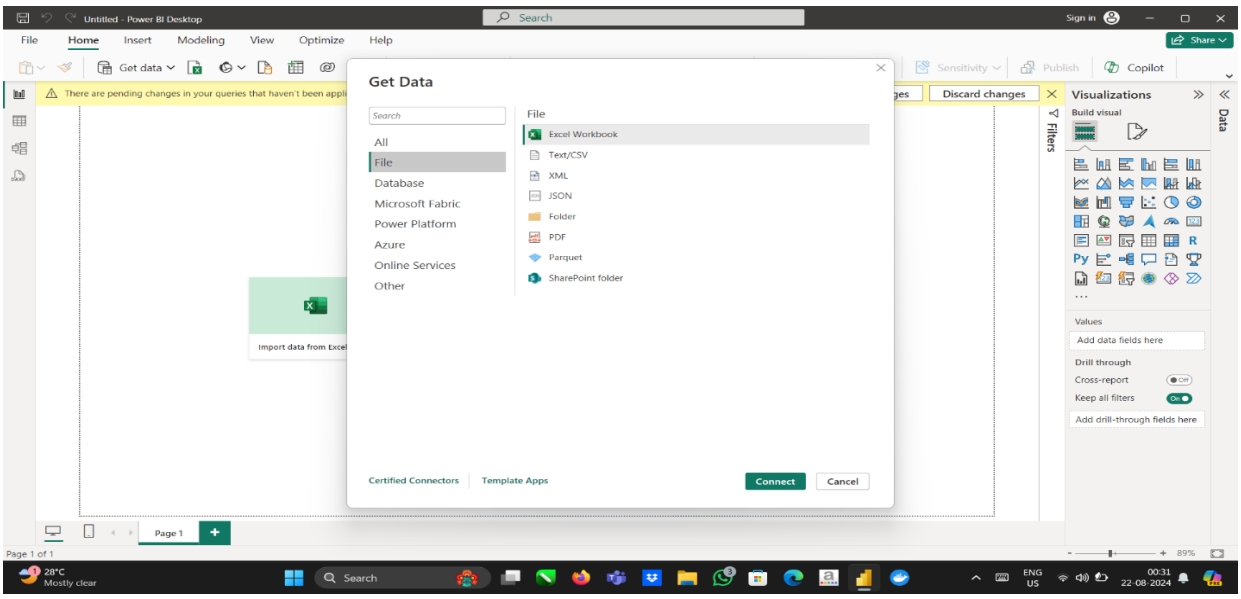
1.) Data Sources: Subscription records, demographic data, plan details, regional statistics.

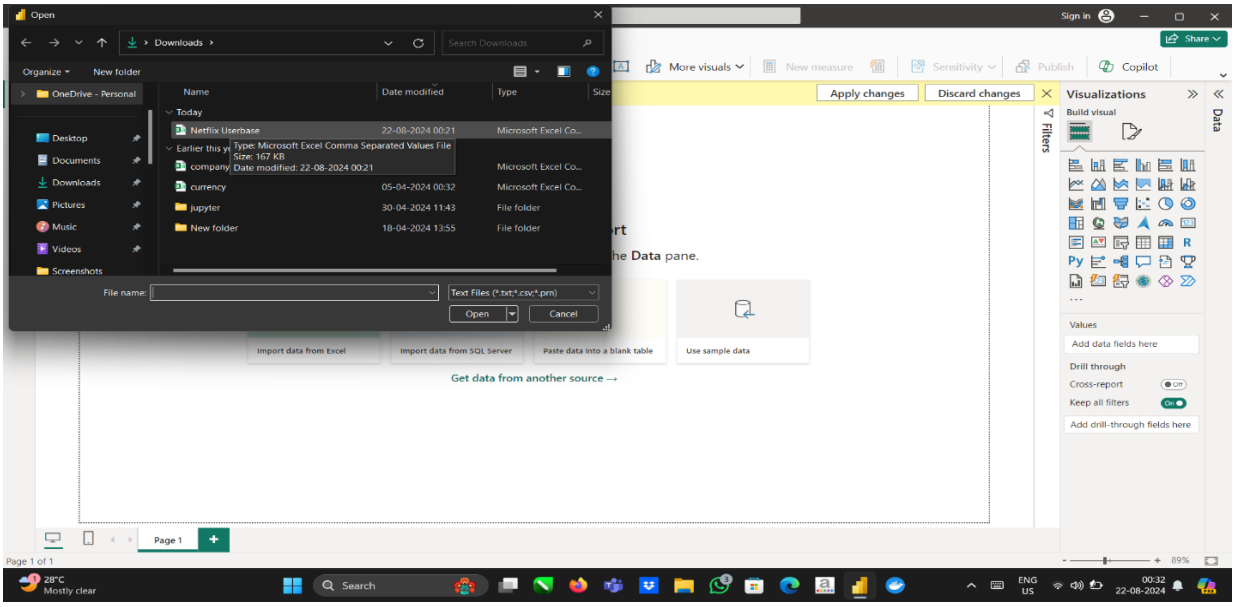
2.) Functions: Use Power Query for data cleaning, DAX (Data Analysis Expressions) for calculations and aggregations.

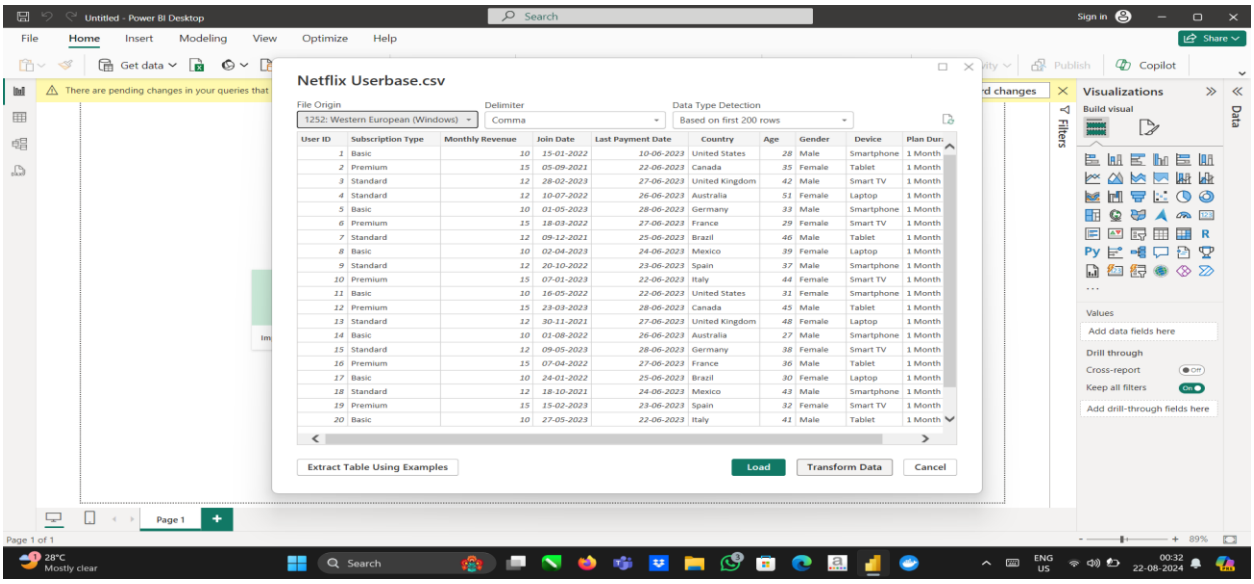
d. **Analysis Results:**

The analysis provides insights into subscriber growth patterns, demographic distribution, plan popularity, and regional performance. Key findings include trends in subscription changes, demographic preferences, and regions with the highest engagement or churn. These insights are visualized through interactive charts and graphs, enabling stakeholders to make data-driven decisions to optimize Netflix's subscription strategy

5. Importing Data, Data Cleaning and Transformation



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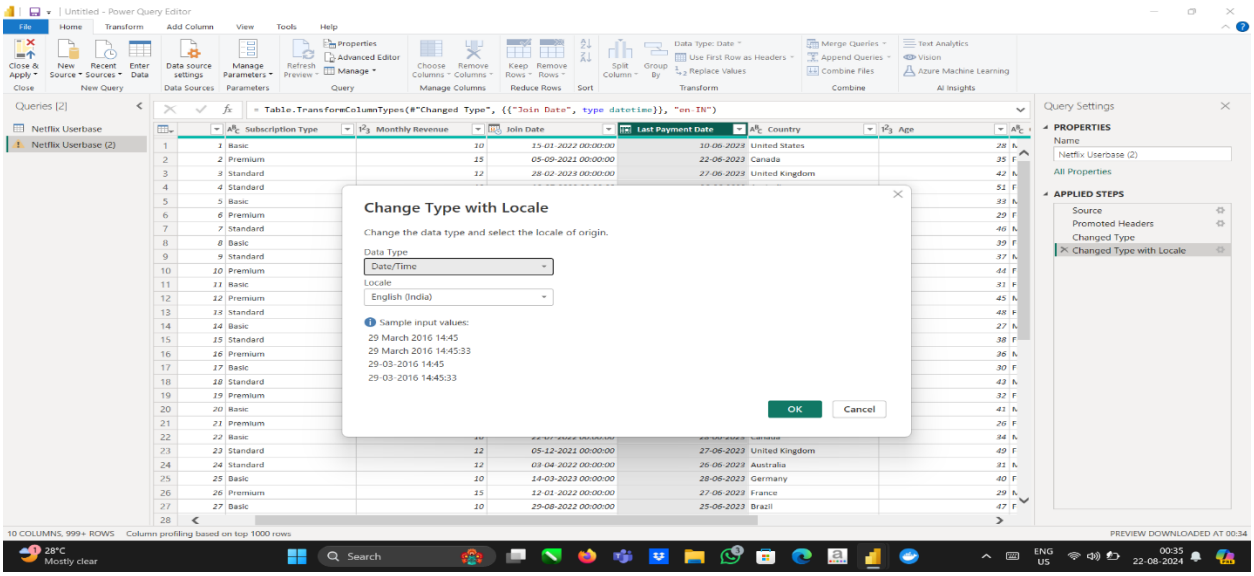
Visualizations
Page 1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Date/Time
Locale
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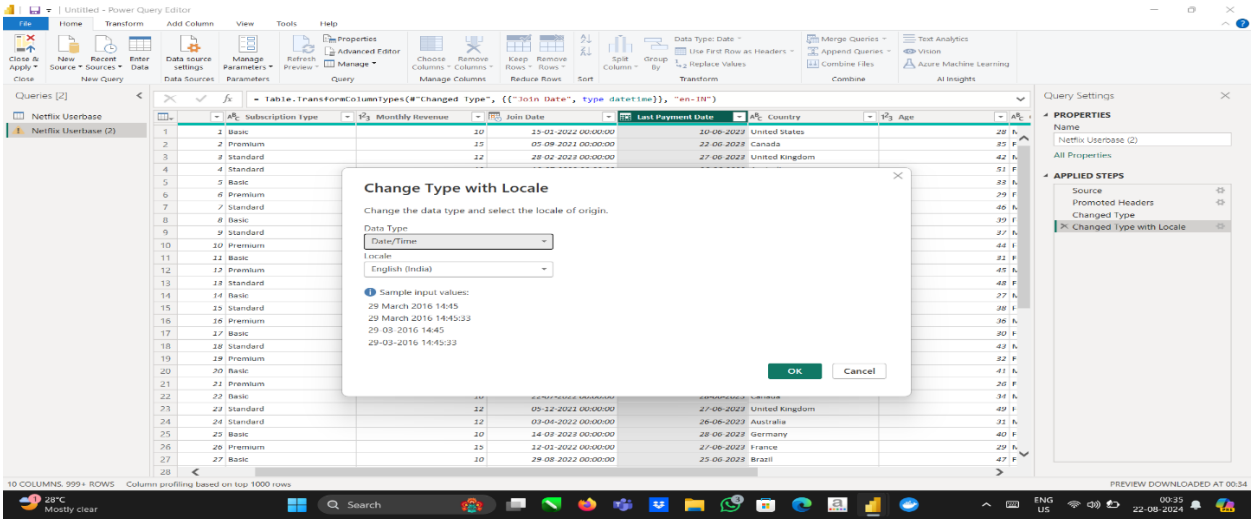
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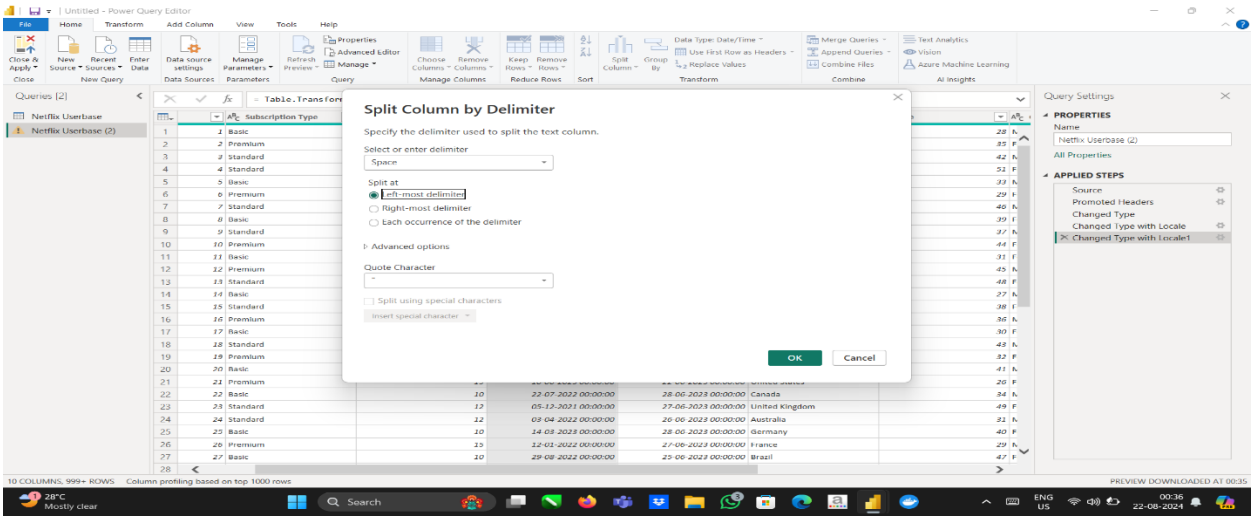
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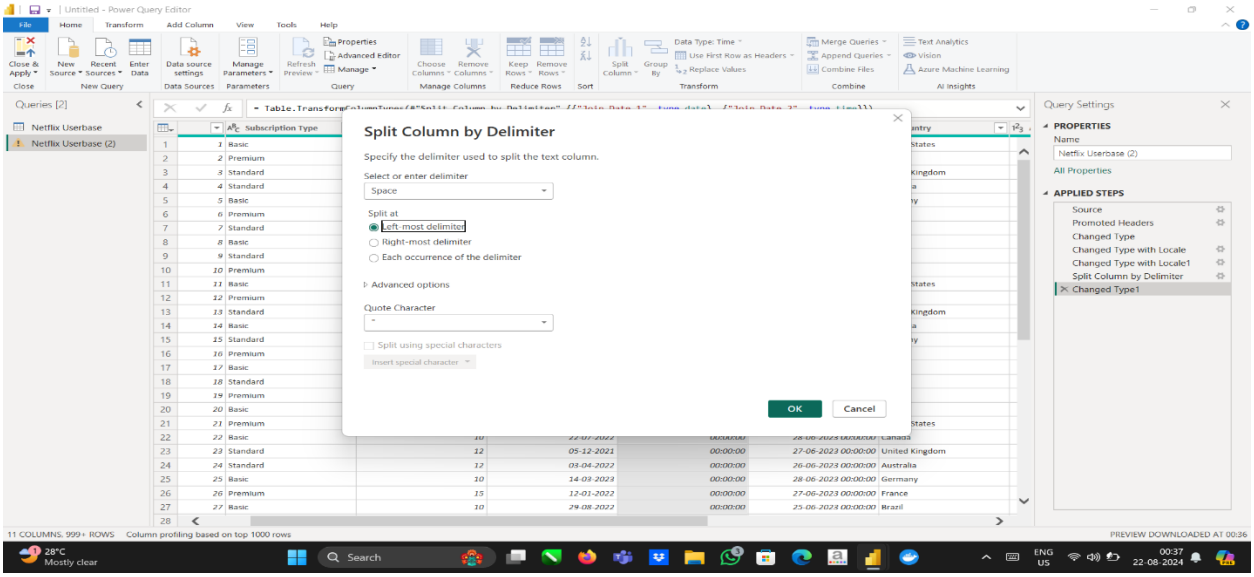
Changed Type with Locale1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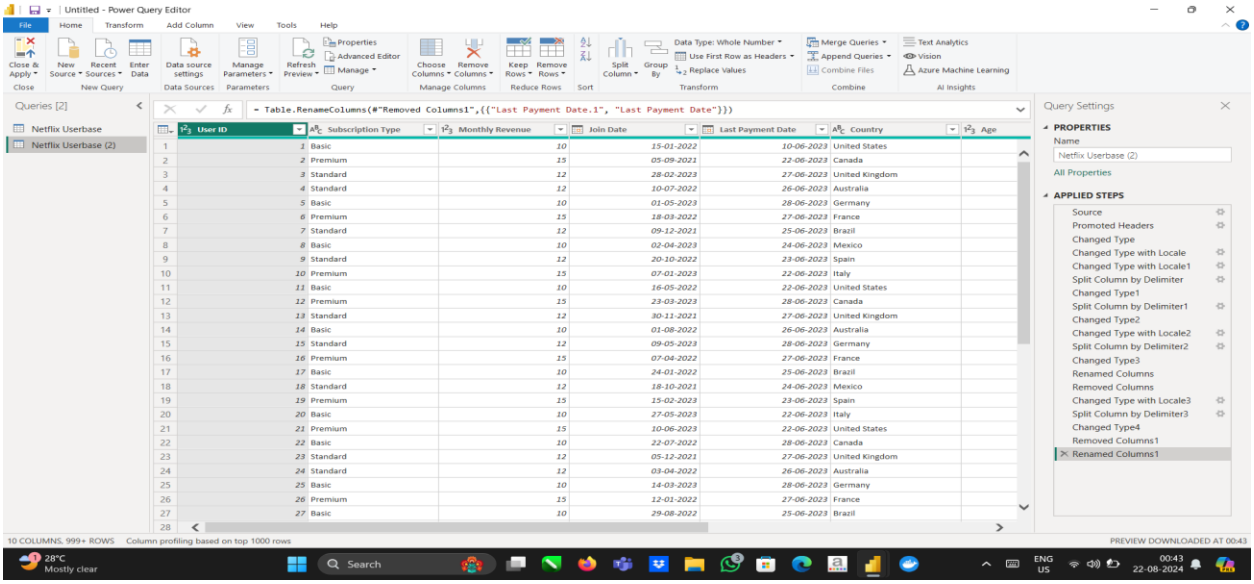
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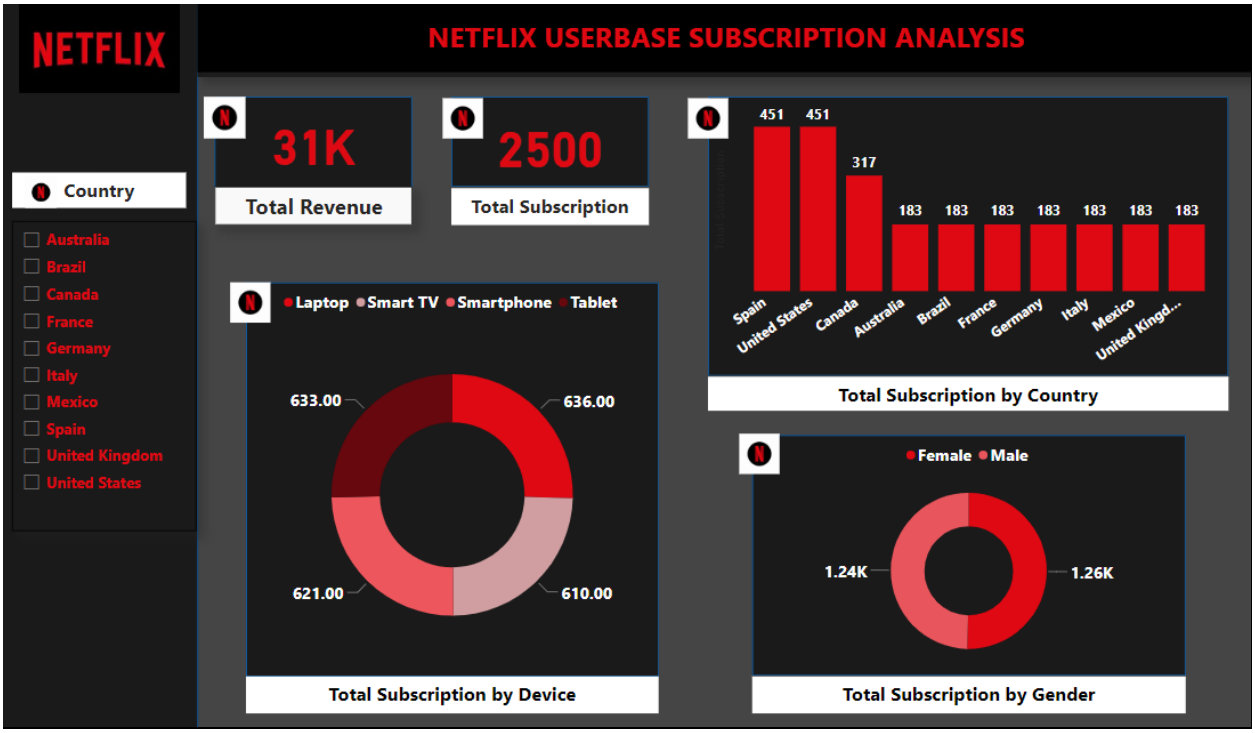
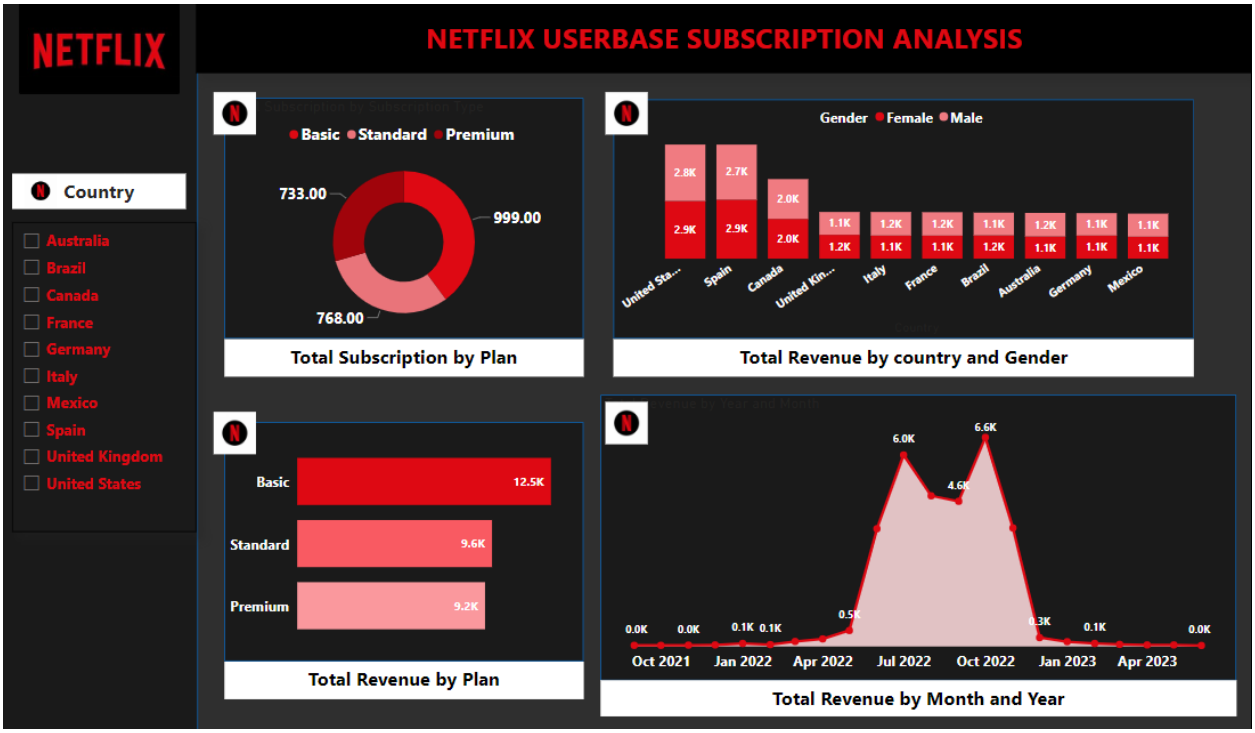
6. Dashboard Visualization





7. Future Scope of Project:

The future scope of this project includes expanding the dashboard's capabilities by integrating additional data sources, such as user behavior analytics, content preferences, and social media sentiment analysis. Advanced predictive analytics and machine learning models can be incorporated to forecast subscriber trends, identify potential churn risks, and suggest personalized content to retain users. Additionally, the dashboard could be enhanced with real-time data streaming to provide up-to-date insights. Extending the dashboard's accessibility to mobile platforms and integrating it with other business intelligence tools will further improve its usability and impact for Netflix's decision-makers.

8. **Conclusion:**

The Netflix subscription dashboard developed using Power BI effectively transforms raw data into actionable insights, enabling Netflix to better understand its subscriber base. By visualizing key metrics such as growth trends, demographic breakdowns, plan preferences, and regional performance, the dashboard supports data-driven decision-making that can enhance customer retention and optimize revenue strategies. The project demonstrates the power of business intelligence tools in turning complex data into clear, interactive visualizations, ultimately contributing to more informed and strategic management of Netflix's subscription services.

9. Bibliography :

For datasets:

https://www.kaggle.com/datasets/arnavsmayan/netflix-userbase-dataset

Other references:

https://en.m.wikipedia.org/wiki/Data_science