**INTRODUCTION:**

I am pleased to present my project titled "Redbus Data Scraping with Selenium & Dynamic Filtering using Streamlit." This project focuses on collecting and visualizing bus travel data to enhance operational efficiency and strategic planning in the transportation industry. Using Selenium for web scraping, I automated the extraction of detailed information from Redbus, including bus routes, schedules, prices, and seat availability. The project also involves developing a Streamlit application for interactive data filtering and analysis, which is deployed on GitHub.

**OBJECTIVES:**

The primary objectives of this project were to:

1. Extract detailed bus travel data from the Redbus website.
2. Develop a Streamlit application for displaying and filtering the data.

**EXTRACT DATA:**

During the data extraction phase, I utilized Python and Selenium to scrape data from Redbus. The focus was on gathering comprehensive information about bus services, such as routes, schedules, prices, and seat availability, by targeting specific HTML elements.

**DATA STORAGE & APPLICATION DEVELOPMENT:**

The scraped data was organized into a structured SQL database for efficient management and retrieval. While the Streamlit application does not directly connect to this database, it is deployed on GitHub, allowing users to interact with the application independently. The application features various filters for bus type, route, price range, star rating, and availability, offering an engaging and user-friendly experience.

**RESULTS:**

* Scraped data from a minimum of 10 Government State Bus Transport services.
* Stored the data in a structured SQL database.
* Developed a Streamlit application, deployed on GitHub, for dynamic data filtering and visualization.

**CONCLUSION:**

In conclusion, the "Redbus Data Scraping with Selenium & Dynamic Filtering using Streamlit" project streamlined the process of extracting and visualizing bus travel data. By automating data collection and developing an interactive application, the project provides valuable tools for data-driven decision-making in the transportation sector.