Project Name :- Customer Churn Analysis & Retention Strategy

- ## Business Problem :-

Customer churn is a critical challenge for telecom companies as acquiring new customers is significantly more expensive than retaining existing ones. High churn directly impacts revenue and profitability. This analysis aims to identify churn drivers and provide actionable strategies to improve customer retention.

- ## Role of Data Analyst :-

The role of the data analyst in this project was to analyze customer data, identify churn patterns, and translate insights into actionable business strategies. The analysis supports management in making informed retention decisions.

- ## Dataset Overview :-

The dataset contains customer demographics, subscription details, billing information, and churn status for over 7,000 telecom customers. It includes attributes such as tenure, contract type, internet service, payment method, and monthly charges.

- ## Analysis Steps :-

1. **Exploratory Data Analysis using Python**
   - Cleaned and preprocessed raw data
   - Handled missing values and data type conversions
   - Performed exploratory data analysis (EDA)
   - Visualized churn patterns using charts

2. **SQL Analysis**
   - Imported data into MySQL
   - Calculated churn rates
   - Analyzed churn by contract, tenure, services, and charges
   - Identified high-risk customer segments

3. **Power BI Dashboard**

- Created KPI cards for Total Customers, Churned Customers, and Churn Rate
- Built interactive visuals for churn drivers
- Designed an executive-friendly dashboard layout

- ## Key Business Insights :-

- Month-to-month contract customers show the highest churn rate (~43%)
- Customers with tenure below 12 months are more likely to churn
- Fiber optic internet users have higher churn compared to DSL
- Higher monthly charges increase the likelihood of churn

- ## Retention Strategies :-

- Offer discounts on long-term contracts
- Provide loyalty benefits after 12 months of tenure
- Encourage customers to switch to auto-payment methods
- Improve service quality for fiber optic users
- Design personalized plans for high-value customers

- ## Conclusion :-

This project demonstrates an end-to-end data analytics workflow combining Python, SQL, and Power BI to solve a real-world business problem. The insights generated can help reduce customer churn and improve customer lifetime value.