 **🧪 Lab**  | EDA with ggplot2 on mtcars Dataset

**OBJECTIVE:** This assignment aims to guide you through exploratory data analysis (EDA) using the ggplot2 package in R, focusing on the mtcars dataset. By completing this assignment, you will enhance your proficiency in visualization.

INSTRUCTIONS: In your own R script file, please complete the following tasks:

1. Select the mtcars dataset for analysis.
2. Perform EDA to comprehend the dataset's structure and characteristics thoroughly.
3. Identify continuous and discrete variables within the mtcars dataset.
4. Create insightful visualizations using ggplot2 to uncover patterns and relationships within the data.

DATA OVERVIEW: The mtcars dataset comprises various automobile characteristics such as miles per gallon (mpg), number of cylinders (cyl), horsepower (hp), and other performance metrics.

**VISUALIZATIONS**

1. Histograms or density plots to visualize the distribution of continuous variables (mpg, hp, etc.).
2. Bar plots to display the frequency of discrete variables (number of cylinders, gear type).
3. Scatter plots to explore relationships between two continuous variables.
4. Box plots or violin plots to compare the distribution of a continuous variable across different levels of a categorical variable (e.g., cylinders).

SUBMISSION: R script containing code for loading the mtcars dataset, performing EDA, conducting data manipulation using dplyr, and generating visualizations using ggplot2.