

## 1. Load Dataset from an Online Source

### Question:

Visit [Kaggle](#) or [UCI ML Repository](#) and download a dataset of your choice (e.g., Titanic, Wine Quality, Diabetes).

- Upload it to Google Colab.
- Load the dataset using `pandas`.
- Show first 5 and last 5 records.

## 2. Correlation Matrix and Heatmap

### Question:

Using `pandas` and `seaborn`, create a correlation matrix:

- Display correlation of all numeric features using `.corr()`.
- Plot a heatmap of the correlations using `seaborn.heatmap()`.

## 3. Feature Selection from Correlation

### Question:

Based on the correlation matrix:

- Identify 2 features that are highly correlated (correlation  $> 0.85$ ).

## 4. Using mall customer csv file :

### Find Best K Value (Elbow Method)

### Question:

From the elbow plot (Q6), determine the **optimal number of clusters  $k$** .

- Explain how you chose the best  $k$ .
- Visualize the clusters again using the chosen value of  $k$ .