

# Pandas (Assignment Problems)

Let's do some practical exploration & analysis.

## Assignment Problems

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**Q1.** Start by loading the **IRIS** dataset. [Dataset Link: [Iris Flower Dataset](#)]

A. Display the following information:

- First 10 rows
- Shape & Data types
- Summary statistics (mean, std, min, max)

B. Select only those rows where:

- $\text{petal\_length} > 4.5$
- $\text{species} = \text{"Iris-virginica"}$

C. Group by  $\text{species}$  and compute:

- Average  $\text{sepal\_length}$
- Maximum  $\text{petal\_width}$
- Standard deviation of  $\text{sepal\_width}$

D. Create a new column: "**petal\_ratio**" =  $\text{petal\_length} / \text{petal\_width}$

- For each species, find the average petal\_ratio.

**Q2.** Start by loading the **TITANIC** dataset. [Dataset Link: [Titanic Dataset](#)]

A. Display only columns: *Name, Sex, Age, Fare, Survived*

B. Select passengers who:

- Are female
- Fare > 30

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C. Group by *Pclass* and compute:

- Survival rate
- Average Fare
- Average Age