

## Homework of Date 17-02-2025

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### Answers:

1. **What is Scaling? Why do we apply Scaling to a DataFrame?**
  - **Scaling** is the process of adjusting numerical values in a dataset to a common range.
  - It helps prevent some features from dominating others due to their large values.
  - Many machine learning algorithms work better and converge faster when data is properly scaled.
2. **On which type of DataFrame should we apply Normalization and Standardization?**
  - **Normalization** (scales values between 0 and 1) is useful for datasets with different measurement units (e.g., height in cm, weight in kg).
  - **Standardization** (centers data around 0 with a standard deviation of 1) is useful when data follows a normal distribution or contains outliers.