Pandas Basics

1. What is Pandas?

Pandas is a Python library used for data analysis and manipulation.
It helps in handling structured data easily.
Example:
import pandas as pd

2. What is a DataFrame?

A DataFrame is a two-dimensional data structure with rows and columns.
It is similar to an Excel sheet.
Example:
df = pd.DataFrame({"Name": ["A", "B"], "Age": [20, 21]})

3. Difference between Series and DataFrame

A Series is a one-dimensional data structure that stores a single column.
A DataFrame is two-dimensional and can store multiple columns.
Example:
pd.Series([10, 20, 30]) → Series
pd.DataFrame({"Marks": [80, 90]}) → DataFrame

4. What is CSV?

CSV stands for Comma Separated Values and is used to store data in text format.
Each value is separated by a comma.
Example:
data.csv

5. Why is Pandas important for AI?

Pandas is used to clean, preprocess, and analyze data before training AI models.
Good data preprocessing improves model accuracy.
Example:
df.dropna() removes missing values