**Data Structures:**

pandas.Series(): Creates a one-dimensional labeled array (Series).

pandas.DataFrame(): Creates a two-dimensional labeled data structure (DataFrame).

pandas.Index(): Creates an index object for row and column labels.

**Data Import and Export:**

pandas.read\_csv(): Reads data from a CSV file and creates a DataFrame.

pandas.read\_excel(): Reads data from an Excel file and creates a DataFrame.

pandas.read\_json(): Reads data from a JSON file and creates a DataFrame.

pandas.to\_csv(): Writes a DataFrame to a CSV file.

pandas.to\_excel(): Writes a DataFrame to an Excel file.

pandas.to\_json(): Writes a DataFrame to a JSON file.

**Data Inspection and Exploration:**

DataFrame.head(): Returns the first n rows of a DataFrame.

DataFrame.tail(): Returns the last n rows of a DataFrame.

DataFrame.info(): Provides information about a DataFrame, including data types and missing values.

DataFrame.describe(): Generates summary statistics of numerical columns.

DataFrame.shape(): Returns the shape of a DataFrame.

**Data Selection and Indexing:**

DataFrame.iloc[]: Integer-location based indexing for selection by position.

DataFrame.loc[]: Label-based indexing for selection by label.

DataFrame.at[]: Fast label-based scalar accessor.

DataFrame.iat[]: Fast integer-location scalar accessor.

DataFrame.isin(): Checks whether elements are contained in a DataFrame.

DataFrame.query(): Selects data based on a query expression.

**Data Cleaning and Transformation:**

DataFrame.drop(): Drops specified labels from rows or columns.

DataFrame.fillna(): Fills missing values with a specified value or method.

DataFrame.replace(): Replaces values in a DataFrame.

DataFrame.duplicated(): Checks for duplicate rows.

DataFrame.drop\_duplicates(): Drops duplicate rows.

DataFrame.rename(): Renames labels of rows or columns.

DataFrame.sort\_values(): Sorts a DataFrame by specified columns.

DataFrame.groupby(): Groups data by specified columns.

**Data Aggregation and Analysis:**

DataFrame.sum(): Computes the sum of values along specified axis.

DataFrame.mean(): Computes the mean of values along specified axis.

DataFrame.median(): Computes the median of values along specified axis.

DataFrame.count(): Counts non-null values along specified axis.

DataFrame.unique(): Returns unique values in a DataFrame.

DataFrame.nunique(): Returns the number of unique values in a DataFrame.

DataFrame.value\_counts(): Computes the frequency of unique values.

**Time Series and Date Functionality:**

pandas.to\_datetime(): Converts a column to datetime format.

DataFrame.resample(): Resamples time series data.

DataFrame.shift(): Shifts index by desired number of periods.

DataFrame.rolling(): Provides rolling window calculations.

**Merging and Joining:**

DataFrame.merge(): Merges two DataFrames based on a common column.

DataFrame.join(): Joins two DataFrames on index or specified columns.

**Pivot Tables:**

DataFrame.pivot\_table(): Creates a pivot table based on data in a DataFrame.

**Plotting and Visualization:**

DataFrame.plot(): Creates various types of plots directly from a DataFrame.

**Handling Categorical Data:**

pandas.Categorical(): Represents categorical data.

DataFrame.astype(): Converts data types of columns.

Series.cat.categories(): Returns unique categories of a categorical column.

**Handling Missing Data:**

DataFrame.dropna(): Drops rows with missing values.

DataFrame.fillna(): Fills missing values with a specified value or method.

DataFrame.isna(): Checks for missing values (NaN) in a DataFrame.

**Reshaping Data:**

DataFrame.pivot(): Reshapes data based on unique values in a column.

DataFrame.melt(): Unpivots data from wide to long format.

DataFrame.stack(): Pivots columns into rows.

DataFrame.unstack(): Pivots rows into columns.

**Working with Text Data:**

Series.str.lower(): Converts strings to lowercase.

Series.str.upper(): Converts strings to uppercase.

Series.str.strip(): Strips leading and trailing whitespaces.

Series.str.split(): Splits strings into lists based on a delimiter.

Series.str.replace(): Replaces substrings with other strings.

Series.str.contains(): Checks if a substring exists in each element.

**Handling Time Zones:**

pandas.Timestamp(): Represents a single timestamp.

pandas.to\_datetime(): Converts a column or array to datetime format.

pandas.tz\_localize(): Sets a time zone for datetime data.

pandas.tz\_convert(): Converts datetime data to a different time zone.

**Working with Categorical Data:**

pd.Categorical(): Represents categorical data.

DataFrame.astype(): Converts data types of columns.

Series.cat.categories(): Returns unique categories of a categorical column.

**Working with Datetime Data:**

pd.Timestamp(): Represents a single timestamp.

pd.to\_datetime(): Converts a column or array to datetime format.

Series.dt: Provides access to datetime properties and methods for Series.

**Handling Missing Data:**

DataFrame.dropna(): Drops rows or columns with missing values based on specified criteria.

DataFrame.fillna(): Fills missing values with a specified value or method.

DataFrame.isna(): Checks for missing values (NaN) in a DataFrame.

**Data Aggregation and Grouping:**

DataFrame.groupby(): Groups data by specified columns.

GroupBy.sum(): Computes the sum of values within groups.

GroupBy.mean(): Computes the mean of values within groups.

GroupBy.size(): Computes the size of each group.

GroupBy.agg(): Applies one or more aggregation functions to each group.

**Data Visualization**:

DataFrame.plot(): Creates various types of plots directly from a DataFrame.

DataFrame.hist(): Creates histograms of columns in the DataFrame.

DataFrame.scatter\_matrix(): Creates a scatter matrix plot of numerical columns.