**Data Mining and Data Warehousing Lab**

CSEL-4108

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| Assignment on Data Analysis Techniques Using Pandas — 1 |

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| Submitted By | |
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**pd.Series()**

The Series method creates a one-dimensional array-like object, akin to a Python list or array, that can hold any data type and is indexed by labels. For example:

A screenshot of a computer

Description automatically generated

**pd.DataFrame()**

The DataFrame method constructs a two-dimensional, mutable, and potentially heterogeneous data structure, similar to a table with labeled axes (rows and columns). For instance:

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Description automatically generated

**pd.read\_csv()**

The read\_csv method imports data from a CSV file into a DataFrame. It's an essential method for loading data from external sources. Example:

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**DataFrame.head()**

The head method returns the first n rows of a DataFrame, defaulting to 5 rows if n isn't specified. Example:

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Description automatically generated

**DataFrame.tail()**

The tail method provides the last n rows of a DataFrame, with 5 rows as the default when n is not given. Example:

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**DataFrame.add()**

The add method performs element-wise addition between two DataFrames or between a DataFrame and a Series. Missing values are replaced with NaN unless specified otherwise. Example:

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Description automatically generated

**DataFrame.sub()**

The sub method allows for element-wise subtraction between two DataFrames or between a DataFrame and a Series. Missing values can be substituted using the fill\_value argument. Example:

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**DataFrame.mul()**

The mul method is used for element-wise multiplication between two DataFrames or between a DataFrame and a Series. It also allows for filling in missing values. Example:

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Description automatically generated

**DataFrame.div()**

The div method performs element-wise division between a DataFrame and another DataFrame or Series. It also supports handling missing data through the fill\_value parameter. Example:

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Description automatically generated

**DataFrame.loc[]**

The loc method provides label-based indexing to select specific rows or columns within a DataFrame. It allows for slicing, boolean arrays, and lists of labels. Example:

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Description automatically generated

**DataFrame.drop()**

The drop method removes specified rows or columns from a DataFrame by their label names. Example:

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Description automatically generated

**DataFrame.rename()**

The rename method is used to change the labels of rows or columns within a DataFrame. It allows for renaming multiple labels simultaneously. Example:

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Description automatically generated

**DataFrame.append()**

The append method allows you to add rows from another DataFrame to the end of the first DataFrame. If the columns in the second DataFrame are not present in the first, they will be added as new columns. Example:

