

PYTHON FOR DATA SCIENCE - ASSIGNMENT 1

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1. Which Python library is primarily used for data analysis and manipulation?

- a) NumPy
- b) pandas
- c) matplotlib
- d) scikit-learn

Answer: b) pandas

2. What does the function len() return when used on a list?

- a) Maximum value in the list
- b) Minimum value in the list
- c) Number of elements in the list
- d) Sum of elements in the list

Answer: c) Number of elements in the list

3. Write a Python program using pandas to create a DataFrame with two columns: Name and Age, and display the DataFrame.

Answer:

```
import pandas as pd
data = {'Name': ['Alice','Bob'], 'Age': [25,30]}
df = pd.DataFrame(data)
print(df)
```

4. Explain the difference between 'loc' and 'iloc' in pandas with examples.

Answer:
- loc: Label-based indexing. Example: df.loc[0,'Name'] accesses by label.
- iloc: Integer-based indexing. Example: df.iloc[0,0] accesses by index number.
