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EX1 Write-up

Through this Pandas exercise, I gained practical experience with fundamental DataFrame operations essential for data manipulation in Python. I learned how to create DataFrames from Series objects using dictionaries, and understood the crucial distinction between different indexing methods: `iloc` for position-based access, `loc` for label-based access, and direct bracket notation for column access. A key insight was understanding that to make both `df[0]` and `df.dept` work simultaneously is impossible—numeric column names require bracket notation while string names enable dot notation, highlighting the importance of choosing appropriate naming conventions. I practiced essential DataFrame operations including dropping columns using both `drop()` method with column names and `iloc` for positional selection, as well as dropping rows by index. Working with external data, I learned to load CSV files from both local storage and GitHub URLs (using raw URLs), and discovered how to navigate multi-index DataFrames. Additionally, I gained practical experience troubleshooting common errors like `KeyError` when accessing non-existent columns and `ModuleNotFoundError` when required packages aren't installed. This exercise reinforced that pandas DataFrames use label-based indexing by default, and understanding the difference between column access (`df['name']`), row access (`df.iloc[0]`), and proper data structure setup is fundamental to effective data analysis in Python.