ASSIGNMENT - 25

Q1. What is the distinction between a numpy array and a pandas data frame? Is there a way to convert between the two if there is?

Ans: Numpy Array vs. Pandas DataFrame:

* Numpy arrays are homogeneous, multi-dimensional arrays with mathematical operations. Pandas DataFrames are two-dimensional, heterogeneous tabular data structures, offering labeled axes (rows and columns) with more functionality like handling missing data and indexing.
* You can convert a Numpy array to a Pandas DataFrame using pd.DataFrame() and a Pandas DataFrame to a Numpy array using the .values attribute.

Q2. What can go wrong when an user enters in a stock-ticker symbol, and how do you handle it?

Ans: Possible issues include incorrect symbols, non-existent symbols, or symbols not available in the dataset. Handling involves validation and error-checking mechanisms to ensure the entered symbol is valid and available in the data source. Providing informative error messages or suggesting alternatives can enhance user experience.

Q3. Identify some of the plotting techniques that are used to produce a stock-market chart.

Ans: Techniques include line charts for stock price trends, candlestick charts for open-high-low-close (OHLC) data, volume bars to represent trading volumes, moving averages for trend analysis, and overlaying multiple series for comparison.

Q4. Why is it essential to print a legend on a stock market chart?

Ans: A legend on a stock market chart helps identify different elements, such as multiple stock prices or indicators, plotted on the same chart. It aids in understanding the data being presented and facilitates comparisons.

Q5. What is the best way to limit the length of a pandas data frame to less than a year?

Ans: You can limit the length of a Pandas DataFrame to less than a year by using slicing techniques, selecting rows within a specific date range, or filtering rows based on a date column using conditional statements.

Q6. What is the definition of a 180-day moving average?

Ans: A 180-day moving average is a statistical indicator that calculates the average price of a security over the past 180 trading days. It helps in smoothing out short-term fluctuations and identifying the long-term trend of a stock or market.

Q7. Did the chapter’s final example use “indirect” importing? If so, how exactly do you do it?

Ans: Indirect importing involves importing a module indirectly through another module without directly referencing it in the code. It might involve importing modules within functions or conditional import statements based on runtime conditions. Without specific details on the chapter's example, it's challenging to confirm if indirect importing was used.