Python Advance Assignment - 2

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**1.Explain three-dimensional data indexing.**

Ans: A 3D array is one in which data is organized and accessed with 3 indexes, for example [x,y,z]

Obviously, this is very useful for data about things in the real world: temperature of each cubic inch of water in a tub, position of each body in the solar system, etc.

But it could be ANYTHING describable with 3 indexes. For example, you could have a list of 20 people, each with 10 fingers, each with 3 digits, in your “wart tracker” app!

**2. What's the difference between a series and a dataframe?**

Ans: Series can only contain single list with index, whereas dataframe can be made of more than one series or we can say that a dataframe is a collection of series that can be used to analyse the data.

**3. What role does pandas play in data cleaning?**

Ans : Pandas provides a handy way of removing unwanted columns or rows from a DataFrame with the drop() function.

**4. How do you use pandas to make a data frame out of n-dimensional arrays?**

Ans: we can convert data frame to arrays by

1. import pandas as pd # Create the dataframe df = pd.DataFrame(numpy\_array)
2. df = pd.DataFrame(numpy\_array, columns=['digits', 'words']) ...
3. df = pd.DataFrame(numpy\_array, index=['day1', 'day2', 'day3', 'day4'], columns=['digits', 'words']

**5.Explain the notion of pandas plotting.**

Ans: Pandas uses the plot() method to create diagrams. We can use Pyplot, a submodule of the Matplotlib library to visualize the diagram on the screen. Read more about Matplotlib in our Matplotlib Tutorial.