**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?**

Numpy is memory efficient. Pandas has a better performance when a number of rows is 500K or more. Numpy has a better performance when number of rows is 50K or less. Indexing of the pandas series is very slow as compared to numpy arrays.

| ***PANDAS*** | ***NUMPY*** |
| --- | --- |
| When we have to work on Tabular data, we prefer the p*andas*module. | When we have to work on Numerical data, we prefer the n*umpy* module. |
| The powerful tools of pandas are Dataframe and Series. | Whereas the powerful tool of *numpy* is Arrays. |
| *Pandas* consume more memory. | *Numpy* is memory efficient. |
| *Pandas*has a better performance when a number of rows is 500K or more. | *Numpy*has a better performance when number of rows is 50K or less. |
| Indexing of the *pandas* series is veryslow as compared to *numpy* arrays. | Indexing of *numpy* Arrays isvery fast. |
| *Pandas* offer a have2d table object called DataFrame. | *Numpy* is capable of providing multi-dimensionalarrays. |
| It was developed by Wes McKinney and was released in 2008. | It was developed by Travis Oliphant and was released in 2005. |
| It is used in a lot of organizations like Kaidee, Trivago, Abeja Inc. , and a lot more. | It is being used in organizations like Walmart Tokopedia, Instacart, and many more. |
| It has a higher industry application. | It has a lower industry application. |

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

**What Is a Ticker Symbol?**

A ticker symbol is the grouping of a specific set of characters, usually letters, that represent and identify any type of public security that trades on an [**exchange**](https://www.investopedia.com/terms/e/exchange.asp)**.** Symbols are unique, allowing investors to research and trade shares in the companies they represent.

Every [**security**](https://www.investopedia.com/terms/s/security.asp) that is listed has a ticker symbol, which is chosen by the company before it lists on an exchange. Although the symbol may be an abbreviation or other equivalent of the company's name, this isn't a requirement.

The ticker symbol system was created and standardized by [**Standard & Poor's**](https://www.investopedia.com/terms/s/sp.asp)(S&P) and is used by every major exchange in the world. Companies that trade on the [**New York Stock Exchange**](https://www.investopedia.com/terms/n/nyse.asp) (NYSE) have ticker symbols with three letters, while those listed on the Nasdaq have four letters.

**My Ticker Changed!**

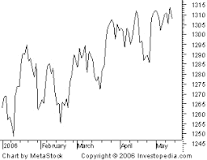
Ticker symbols help investors identify companies when they're doing research or making trades. But, like everything else, these symbols aren't always static. They can change for several different reasons:

* The company merges with another corporation
* The company changes its name
* The company[**delists**](https://www.investopedia.com/terms/d/delisting.asp) from its exchange

## What to Do if Your Stock's Ticker Changes

A ticker symbol change really means nothing to you, the investor, in the grand scheme of things. The change doesn't do anything to markets or to the way you execute trades. Since everything is electronic, your [**trading platform**](https://www.investopedia.com/terms/t/trading-platform.asp)**or**[**broker**](https://www.investopedia.com/terms/b/broker.asp)will already update your portfolio to include the new ticker symbol.

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



However, the four types that are most common are—**line chart, bar chart, point and figure chart and candlestick chart**.

#### **What are stock charts**

As we discussed earlier, trying to perform technical analysis without using stock charts is like trying to build a house without owning land! So we must try to understand how to read the charts. But before we get to that, let’s try to answer the question, what is a stock chart?

Put in the simplest possible terms, it is a graphical representation of how a stock’s price or trading volumes have changed over time. This relationship can be presented in a number of ways, through the use of different types of charts. It is your job, as a technical analyst, to identify the type that will bring out a hidden trend most effectively.

Stock charts, like all other charts, have two axis—the vertical axis and the horizontal axis. The horizontal axis represents the historical time periods for which a technical chart has been constructed. The vertical axis displays the stock price or the trading volume corresponding to each period.

There are many types of charts that are used for technical analysis. However, the four types that are most common are—line chart, bar chart, point and figure chart and candlestick chart. We will discuss these technical charts extensively later. However, we have illustrated three types of stock charts below. The bar chart looks a lot like the candlestick chart. All the charts displayed below are stock price charts. The nature of the input may, however, have to be altered when you move from one chart type to another.

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

In addition, the legend displays information about the points that are currently hovered over or, if none are hovered over, about the last points shown on the plot. The text of a legend item includes the name of a series and, depending on the series type, the value or values of the current or last point.

ENABLING / DISABLING

In AnyStock, the legend is enabled by default. To disable or enable it, pass false / true to the [**legend()**](https://api.anychart.com/v8/anychart.core.stock.Plot#legend) method of the plot or to the [**enabled()**](https://api.anychart.com/v8/anychart.core.ui.Legend#enabled) method of the legend:

// create two plots

var plot1 = chart.plot(0);

var plot2 = chart.plot(1);

// disable the legend on the first plot

plot1.legend(false);

// create two plots

var plot1 = chart.plot(0);

var plot2 = chart.plot(1);

// disable the legend on the first plot

plot1.legend.enabled(false);

**. Tokens**

The available tokens include:

* {%dataIntervalUnit}
* {%dataIntervalUnitCount}
* {%hoveredDate}
* {%value}
* {%rawValue}

**2. Formatting Functions**

The **[titleFormat()](https://api.anychart.com/v8/anychart.core.ui.Legend" \l "titleFormat" \t "_blank)** method can be also combined with and the following fields:

* dataIntervalUnit
* dataIntervalUnitCount
* hoveredDate
* isGrouped
* value
* rawValue

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

**How to reduce the size of a DataFrame in pandas**

* import pandas as pd. ​ drinks = pd. read\_csv('http://bit.ly/drinksbycountry') print(drinks. ...
* import pandas as pd. ​ cols = ['beer\_servings', 'continent'] small\_drinks = pd. ...
* import pandas as pd. ​ dtypes = {'continent':'category'} cols = ['beer\_servings', 'continent']
* Pandas DataFrames are usually kept in memory once they are loaded. Therefore, we will sometimes need to reduce the DataFrame size in order to load it in the memory and work with that DataFrame.
* Let’s create a DataFrame and see how much memory it occupies.

import pandas as pd

drinks = pd.read\_csv('http://bit.ly/drinksbycountry')

print(drinks.info(memory\_usage='deep'))

import pandas as pd

cols = ['beer\_servings', 'continent']

small\_drinks = pd.read\_csv('http://bit.ly/drinksbycountry',

usecols = cols)

print(small\_drinks.info(memory\_usage='deep'))

**Explanation**

* The code is almost the same. The only differences are in *line 3*, where we specify the column names that we are actually interested in; and in *line 4*, where we pass those column names as the usecols parameter.
* In *line 6*, we print the memory usage of our DataFrame. Now, we can see that it uses only 13.6 KB.
* import pandas as pd
* dtypes = {'continent':'category'}
* cols = ['beer\_servings', 'continent']
* smaller\_drinks = pd.read\_csv('http://bit.ly/drinksbycountry',
* usecols = cols,
* dtype = dtypes)
* print(smaller\_drinks.info(memory\_usage='deep'))

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

## What Is a Moving Average (MA)?

In finance, a moving average (MA) is a stock indicator commonly used in [technical analysis](https://www.investopedia.com/terms/t/technicalanalysis.asp). The reason for calculating the moving average of a stock is to help smooth out the price data by creating a constantly updated [average price](https://www.investopedia.com/terms/a/averageprice.asp).

By calculating the moving average, the impacts of random, short-term fluctuations on the price of a stock over a specified time frame are mitigated.

### **KEY TAKEAWAYS**

* A moving average (MA) is a stock indicator commonly used in technical analysis.
* The moving average helps to level the price data over a specified period by creating a constantly updated average price.
* A simple moving average (SMA) is a calculation that takes the arithmetic mean of a given set of prices over a specific number of days in the past.
* An exponential moving average (EMA) is a weighted average that gives greater importance to the price of a stock in more recent days, making it an indicator that is more responsive to new information.
* **Q7. Did the chapter's final example use "indirect" importing? If so, how exactly do you do it?**

**Structure Of The Chapter**

The chapter begins by looking at the concept of market entry strategies within the control of a chosen marketing mix. It then goes on to describe the different forms of entry strategy, both direct and indirect exporting and foreign production, and the advantages and disadvantages connected with each method. The chapter gives specific details on "countertrade", which is very prevalent in global marketing, and then concludes by looking at the special features of commodity trading with its "close coupling" between production and marketing.

**Basic issues**

An organisation wishing to "go international" faces three major issues:

i) Marketing - which countries, which segments, how to manage and implement marketing effort, how to enter - with intermediaries or directly, with what information?

ii) Sourcing - whether to obtain products, make or buy?

iii) Investment and control - joint venture, global partner, acquisition?

Decisions in the marketing area focus on the value chain (see figure 7.1). The strategy or entry alternatives must ensure that the necessary value chain activities are performed and integrated.

[**Figure 7.1 The value chain -marketing function detail**](https://www.fao.org/3/w5973e/w5973e0c.jpg)

In making international marketing decisions on the marketing mix more attention to detail is required than in domestic marketing.

|  |
| --- |
| **1. Product support** - Product sourcing - Match existing products to markets - air, sea, rail, road, freight - New products - Product management - Product testing - Manufacturing specifications - Labelling - Packaging - Production control - Market information |
| **2. Price support** - Establishment of prices - Discounts - Distribution and maintenance of pricelists - Competitive information - Training of agents/customers |
| **3. Promotion/selling support** - Advertising - Promotion - literature - Direct mail - Exhibitions, trade shows - Printing - Selling (direct) - Sales force - Agents commissions - Sale or returns |
| **4. Inventory support** - Inventory management - Warehousing - Distribution - Parts supply - Credit authorisation |
| **5. Distribution support** - Funds provision - Raising of capital - Order processing - Export preparation and documentation - Freight forwarding - Insurance - Arbitration |
| **6. Service support** - Market information/intelligence - Quotes processing - Technical aid assistance - After sales - Guarantees - Warranties/claims - Merchandising - Sales reports, catalogues literature - Customer care - Budgets - Data processing systems - Insurance - Tax services - Legal services - Translation |
| **7. Financial support** - Billing, collecting invoices - Hire, rentals - Planning, scheduling budget data - Auditing |