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Technical Analysis

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Introduction

- Technical Analysis is the study of market action, primarily through the use of charts, for the purpose of forecasting future price trends.
- Technicians (also known as quantitative analysts or chartists) usually look at price, volume and psychological indicators over time.
- They are looking for trends and patterns in the data that indicate future price movements.

Technical Analysis
The Basic Assumption

- The Market Discount Everything
- Price Moves In Trends
- History Tends To Repeat Itself

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Strength & Weakness of Technical Analysis

Strength	Weakness
• Focus on Price	Analyst Bias
• Supply, Demand and Price Action	Open to Interpretation
• Support/Resistance	Too Late
• Pictorial Price History	Always Another Level
• Assist with Entry Point	Trader's Remorse

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Chart Type

- Charting Stocks
  - Bar Charts and Japanese Candlestick Charts
  - Point and Figure Charts
  - Line Chart
- Major Chart Patterns
- Price-based Indicators

Basic Technical Tools

- Trend
- Candle stick
- Trend Lines
- Moving Averages
- Price Patterns
- Indicators

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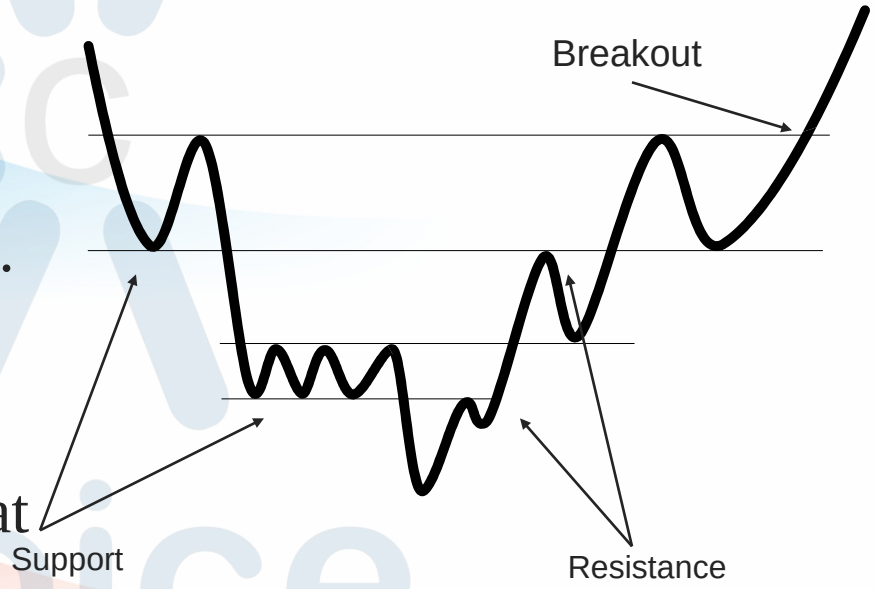
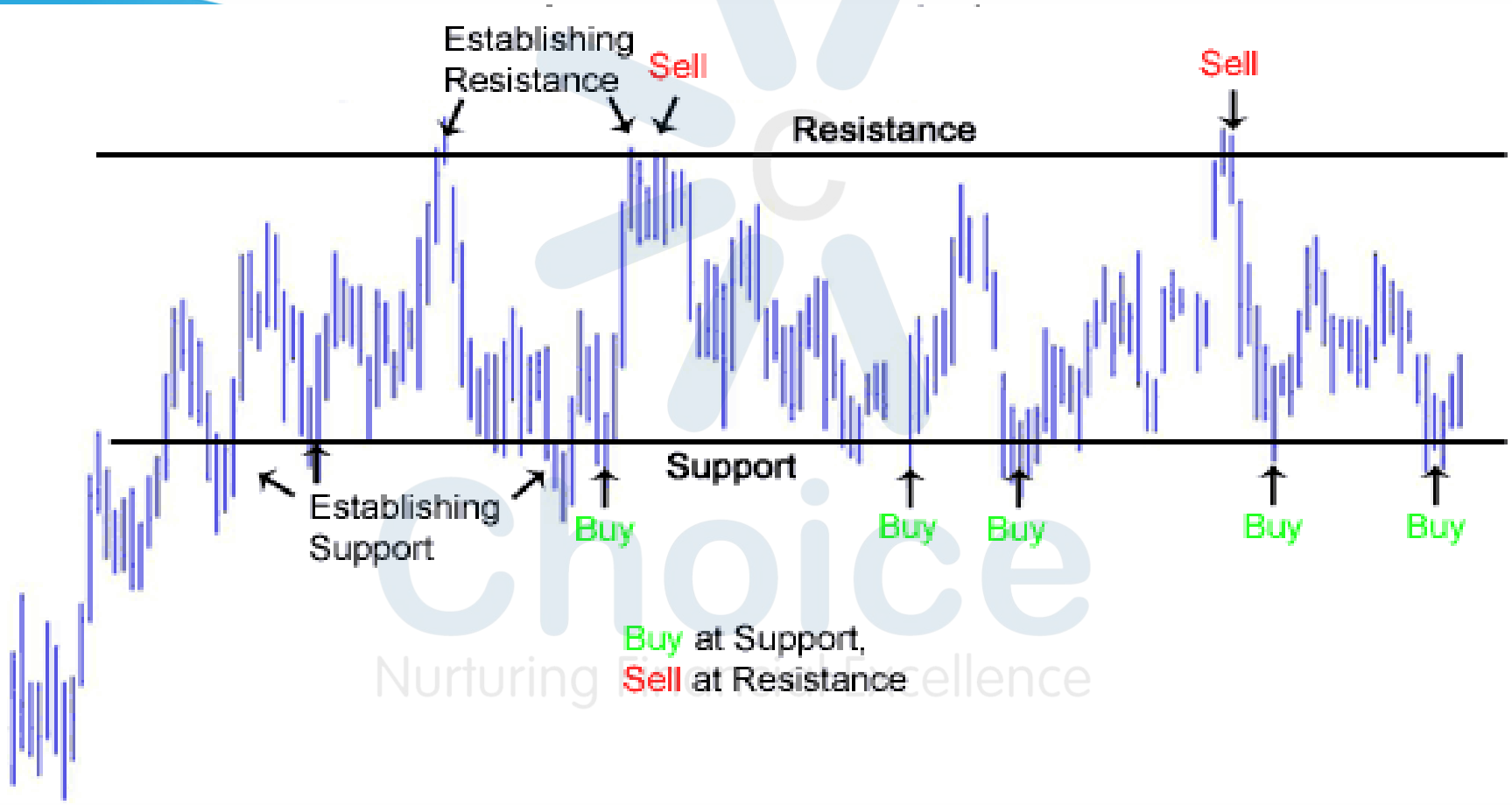
Support & Resistance

- Support and resistance lines indicate likely end of trends.
- Resistance results from the inability to surpass prior high.
- Support results from the inability to break prior low.
- If support has broken than that level become the resistance, and vice-versa.



Historical Support & Resistance



Three types of trend

- Up Trend
- Down Trend
- Side Ways

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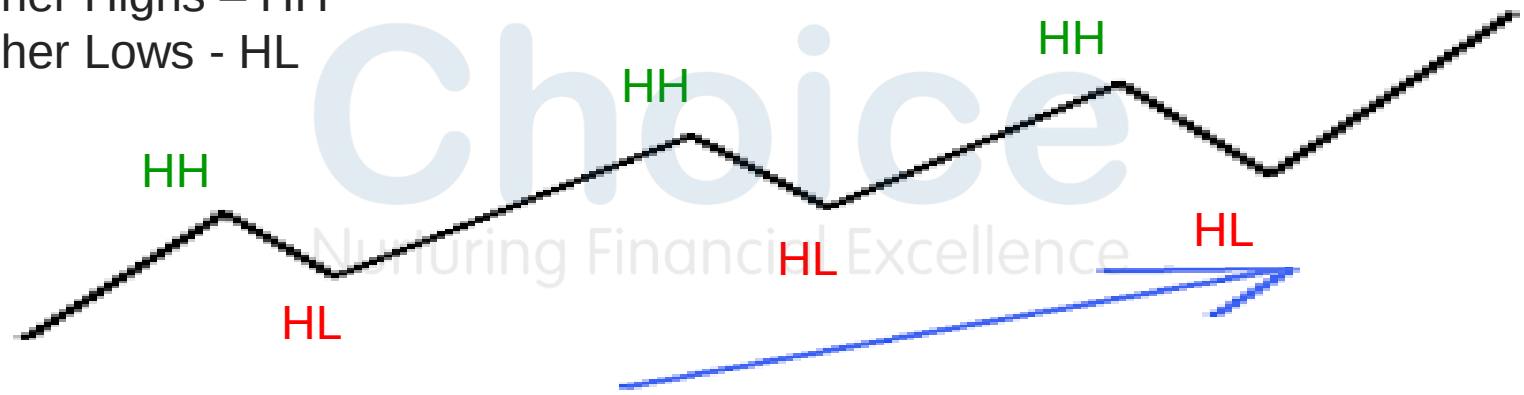
Up Trend

It describes the price movement of a stock when the overall direction is upward. A formal uptrend is when each successive peak and trough is higher than the ones found earlier in the trend.

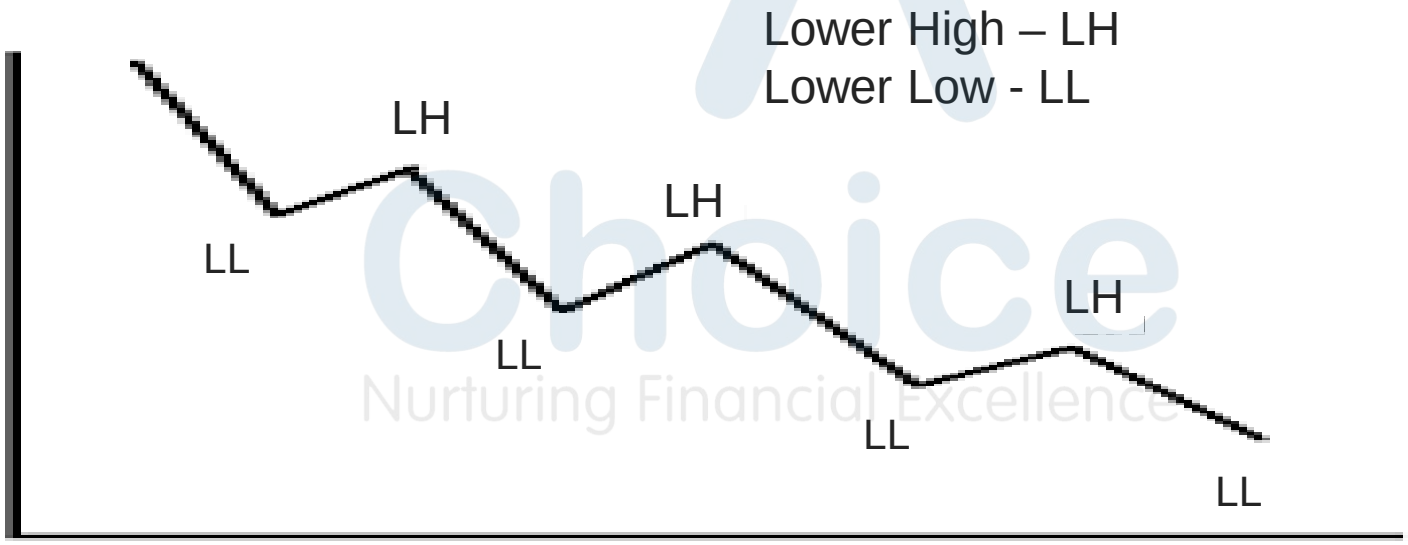
UpTrend

Higher Highs – HH
Higher Lows - HL



Down Trend

Describes the price movement of a stock when the overall direction is downward. A formal downtrend occurs when each successive peak and trough is lower than the ones found earlier in the trend.



Sideways Trend

It Describes the horizontal price movement that occurs when the forces of supply and demand are nearly equal. A sideways trend is often regarded as a period of consolidation before the price continues in the direction of the previous move.

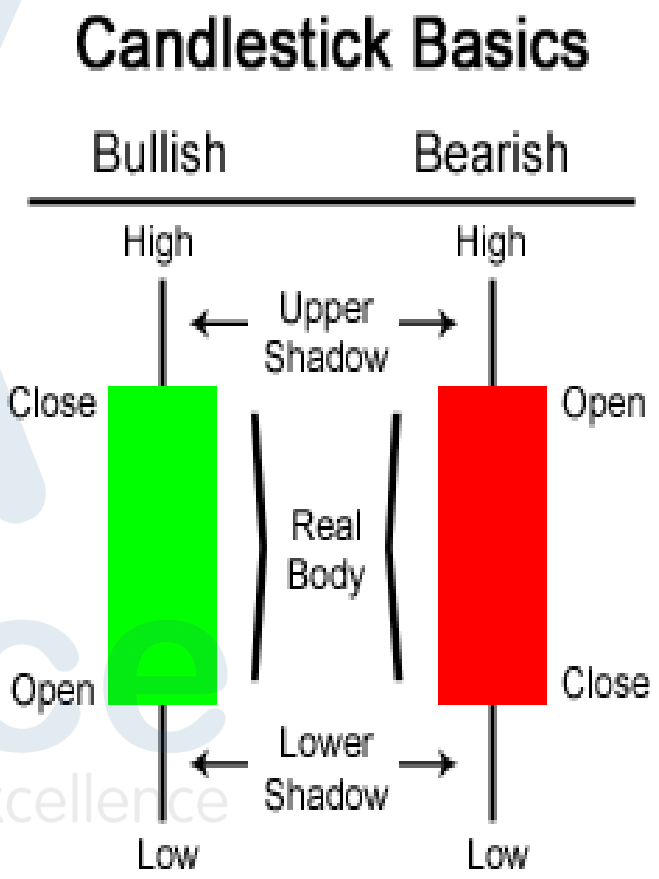
Trend Lines Showing Sideways Trend

Candlestick Basics

Candlestick charts are an effective way of visualizing price movements.

There are two basic candlesticks:

- Bullish Candle: When the close is higher than the open (usually green or white)
- Bearish Candle: When the close is lower than the open (usually red or black)



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Candlestick Parts

- There are three main parts to a candlestick:

  - Upper Shadow: The vertical line between the high of the day and the close (bullish candle) or open (bearish candle).

  - Real Body: The difference between the open and close; colored portion of the candlestick.

  - Lower Shadow: The vertical line between the low of the day and the open (bullish candle) or close (bearish candle).

Candlestick Patterns

- Candlestick Charts is with multiple candlesticks forming reversal and continuation patterns.

- Bullish Engulfing Pattern
- Bearish Engulfing Pattern
- Dark Cloud Cover
- Doji
- Evening Star
- Morning Star
- Hammer
- Hanging Man
- Harami
- Inverted Hammer
- Piercing Line Pattern
- Shooting Star

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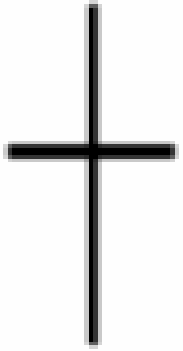
Doji

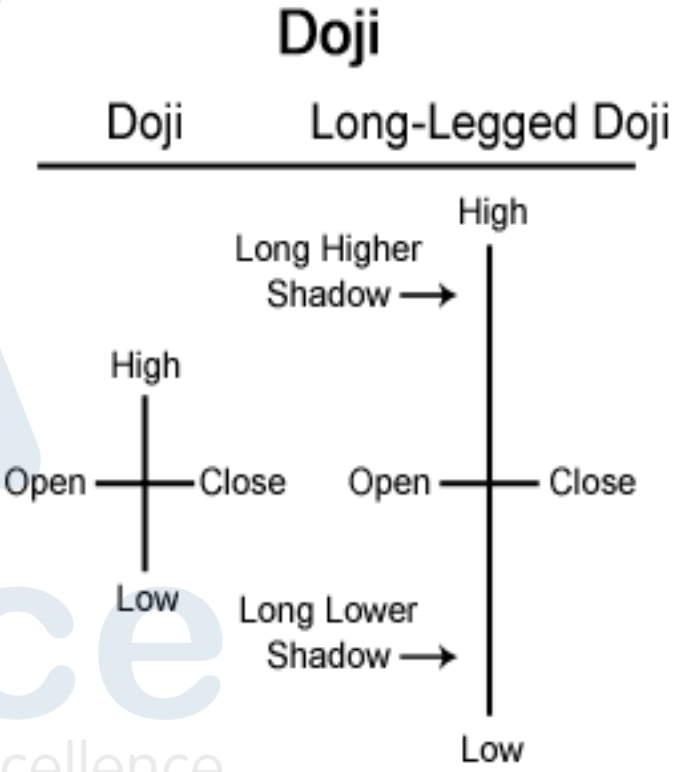
- The open and close are very close together, creating a very small body

- It represent indecision between the bulls and the bears.



Long-Legged Doji

- A long-legged Doji is the same as Doji, except the upper and lower shadows are much longer than the regular Doji formation.



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Example of Long-Legged Doji

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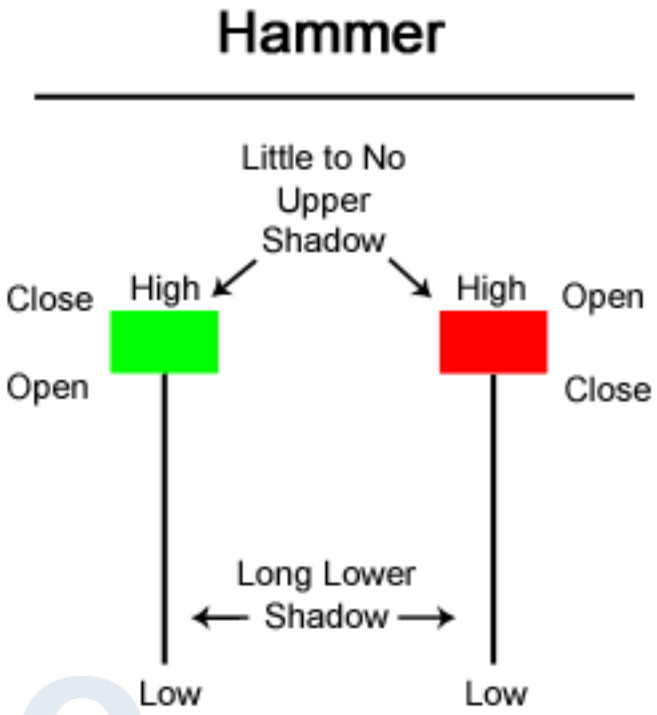
Hammer

Hammer

- The Hammer candlestick formation is a significant bullish reversal candlestick pattern that mainly occur at the bottom of downtrends.
- It has a long lower shadow twice the length of the upper body.



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Classic Example of Hammer

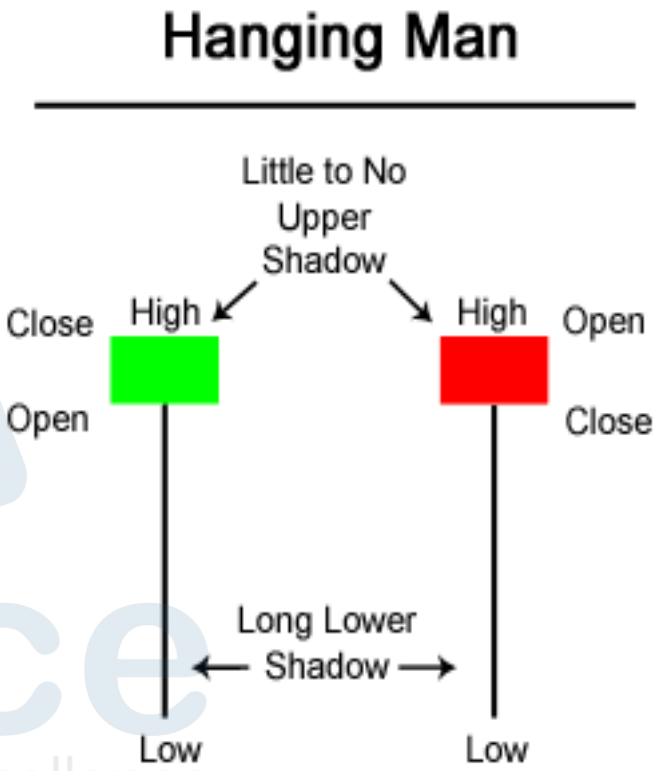
Classic Example of Inverted Hammer

Hanging Man

Hanging Man

- The Hanging Man candlestick formation is a bearish sign. This pattern occur mainly at the top of uptrends and is a warning of a potential reversal downward.

- There is a long lower shadow, which should be at least twice the length of the real body.



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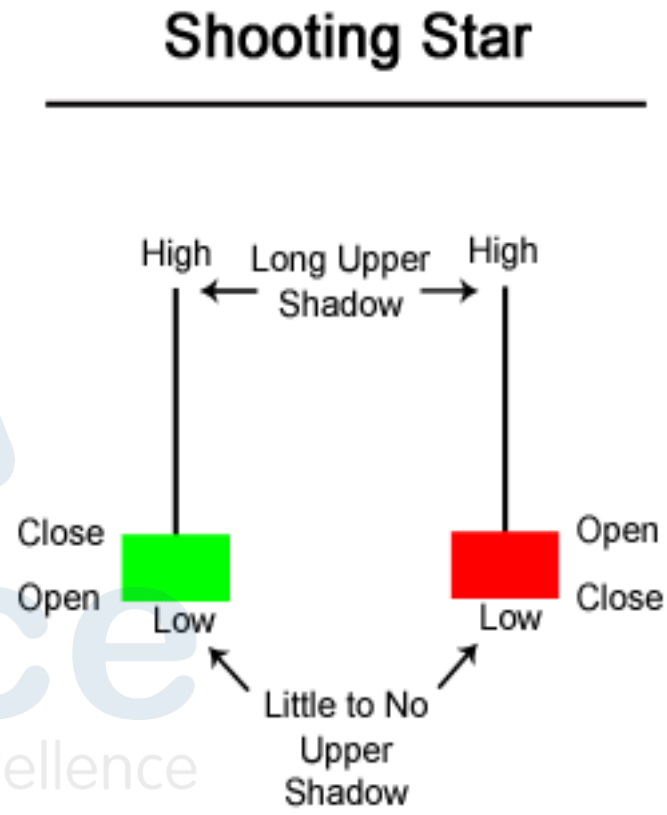
Classic Example of Hanging Man

Shooting Star

Shooting Star

- The Shooting Star candlestick formation is a significant bearish reversal candlestick pattern that mainly occur at the top of uptrends.
- There is a long upper shadow, generally defined as at least twice the length of the real body.



Classic Example of Shooting Star

Engulfing Patterns

- Engulfing patterns have one bearish and one bullish candle.
- The second candle must fully cover the first candle.
- Bullish or bearish, according to the second candle.

Bullish Engulfing

Bearish Engulfing

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Bearish Engulfing Patterns

Bullish Engulfing Patterns

Morning Star

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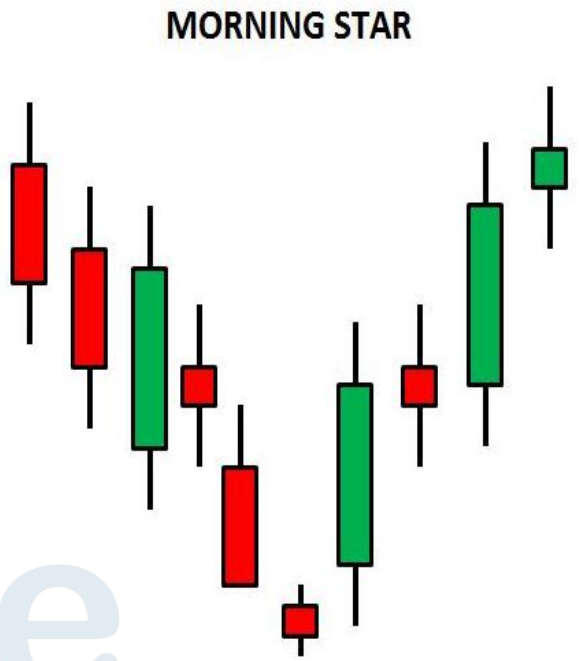
Morning Star

- It is a bullish candlestick pattern that consist of three candles.
- The first candle is a large bearish candle located within a defined downtrend.
- The second candle is a small bodied candle (bullish or bearish)that closes below the first red bar.
- The last candle is a large bullish candle that open above the middle candle and close near the middle of the first candle.



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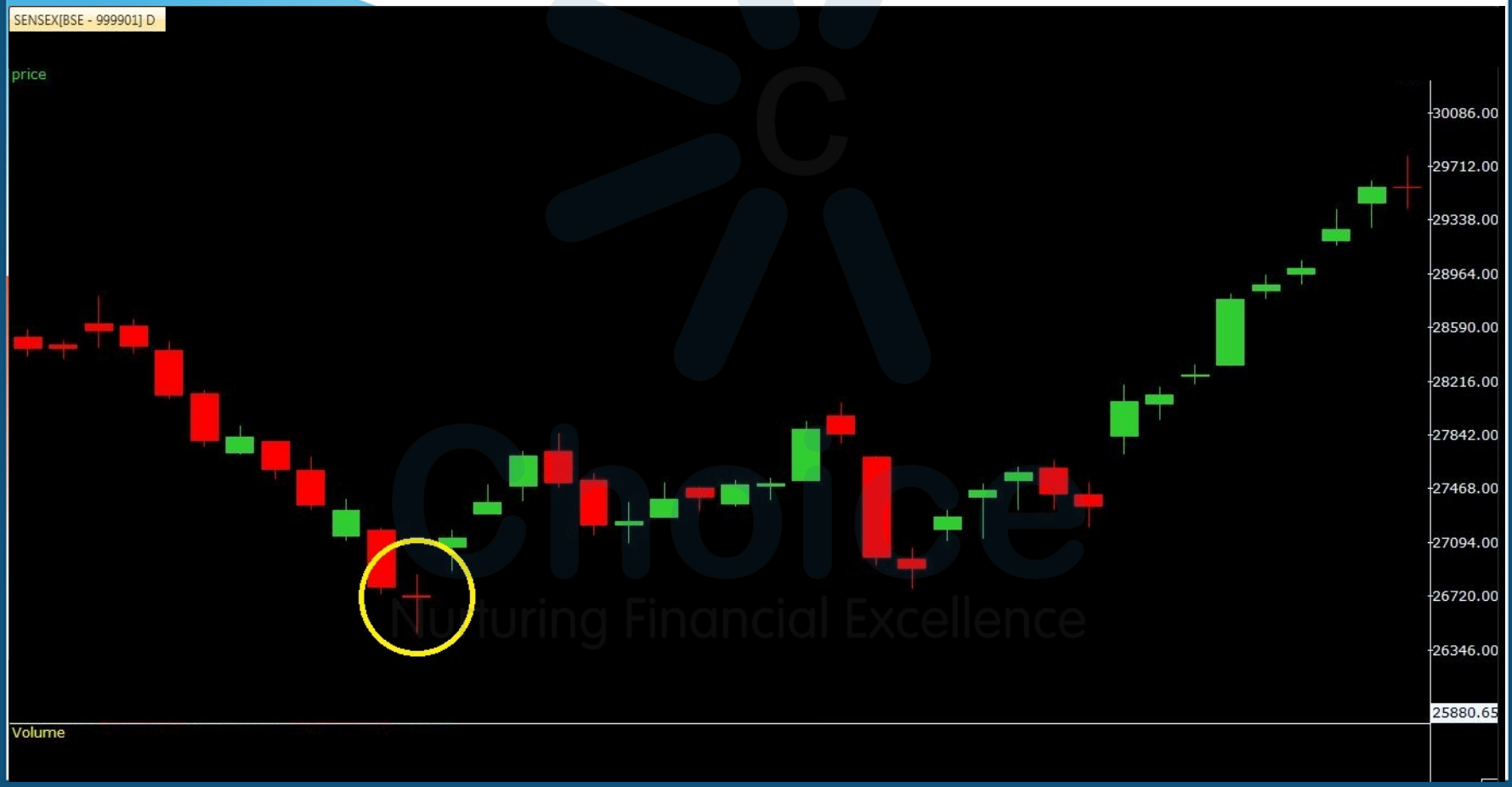
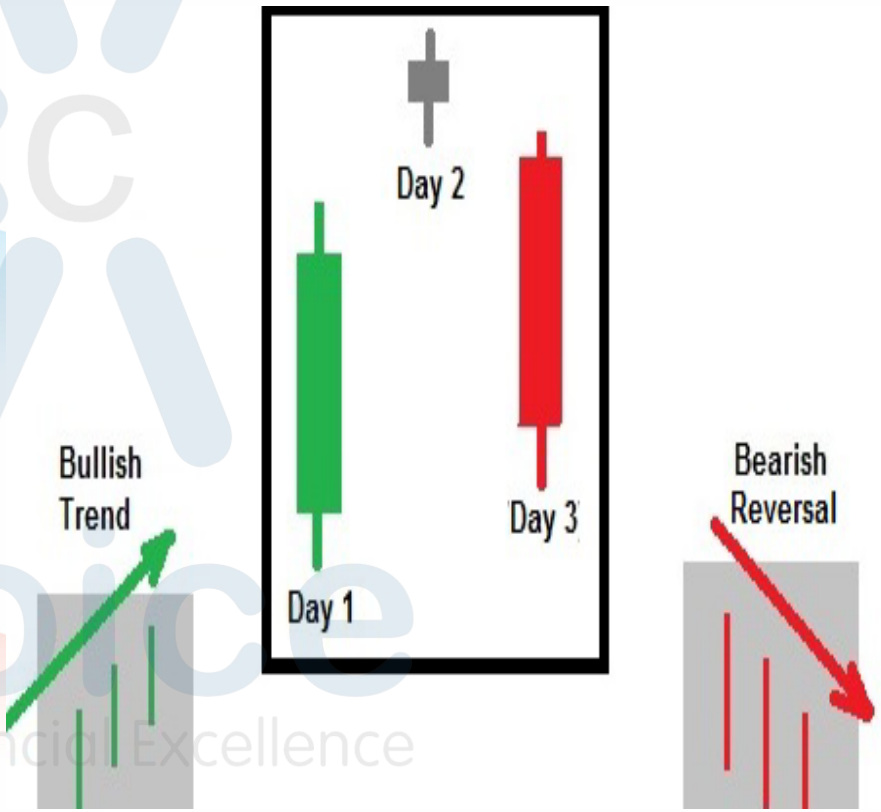
Classic Example of Morning Star



Evening Star

Evening Star

- An evening star is a bearish candlestick pattern consisting of three candles.
- The first candle is a large white bullish candlestick located with an uptrend.
- The middle one is a small bodied candle(bullish or bearish) that close above the first candle.
- The last candle is a large bearish candle that open below the second candle and closes near the first candle's center.



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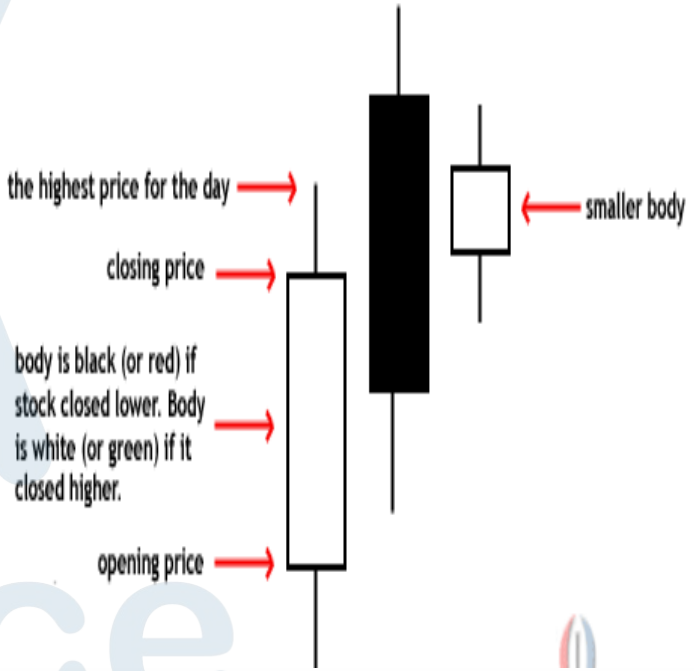
Classic Example of Evening Star

Bearish Harami

- A trend indicated by a large candlestick followed by a much smaller candlestick with that body is located within the vertical range of the larger candle's body.

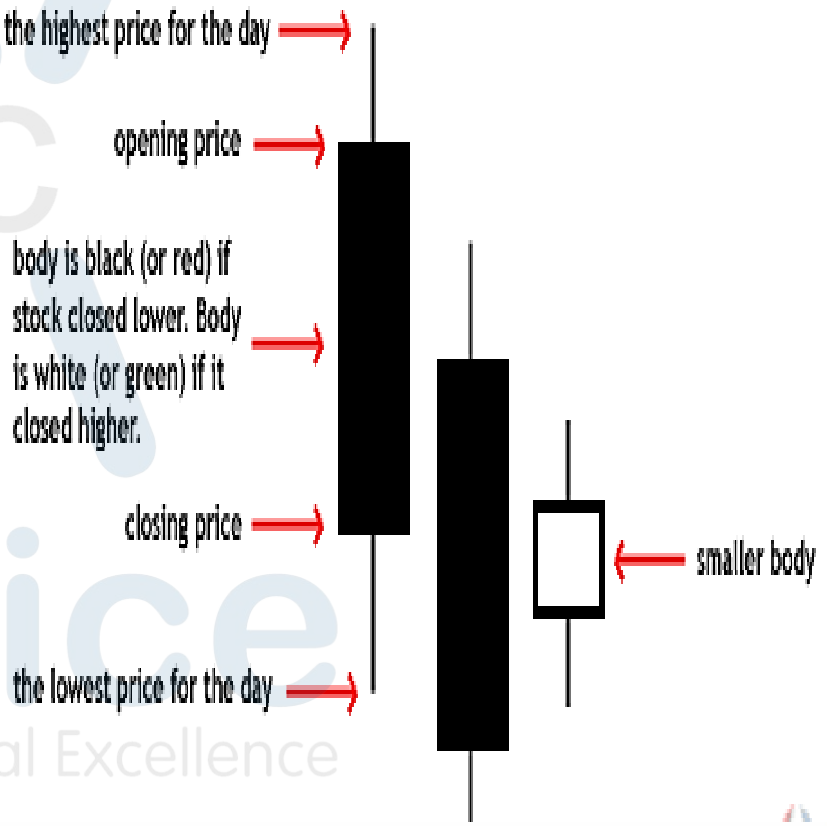
- Such a pattern is an indication that the previous upward trend is coming to an end.



Bearish Harami

Bullish Harami

- A candlestick chart pattern in which a large candlestick is followed by a smaller candlestick whose body is located within the vertical range of the larger body.
- In terms of candlestick colors, the bullish harami is a downtrend of negative-colored (RED) candlesticks engulfing a small positive (GREEN) candlestick, giving a sign of a reversal of the downward trend.



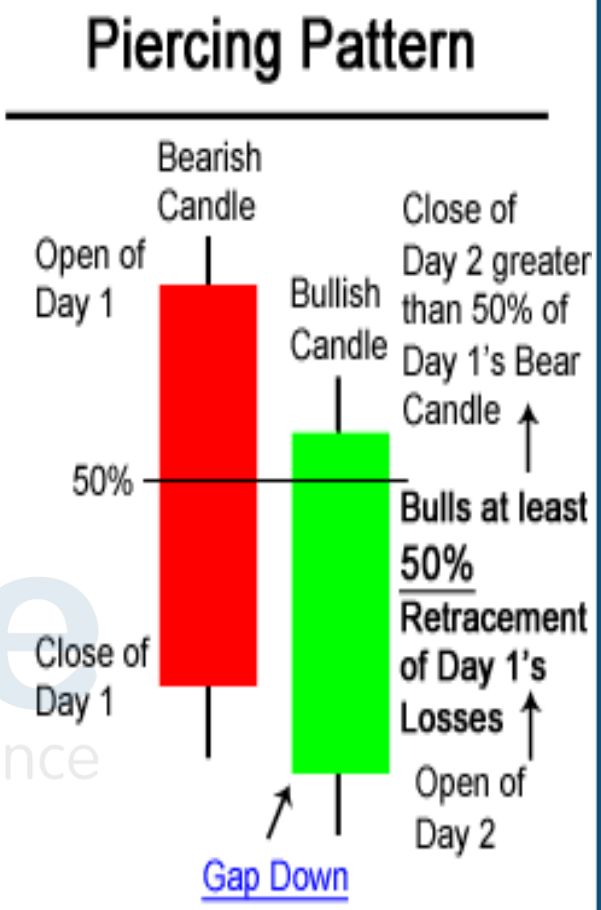
Bullish Harami

Piercing Pattern

- The Piercing Pattern is a bullish candlestick reversal pattern, There are two components of a Piercing Pattern formation:
  - Bearish Candle(day 1)
  - Bullish Candle (day 2)

- Piercing pattern will often end a minor downtrend.

- Green candle will close above the midpoint and opening of the bearish candle ,i.e. more than halfway up the Red candle.



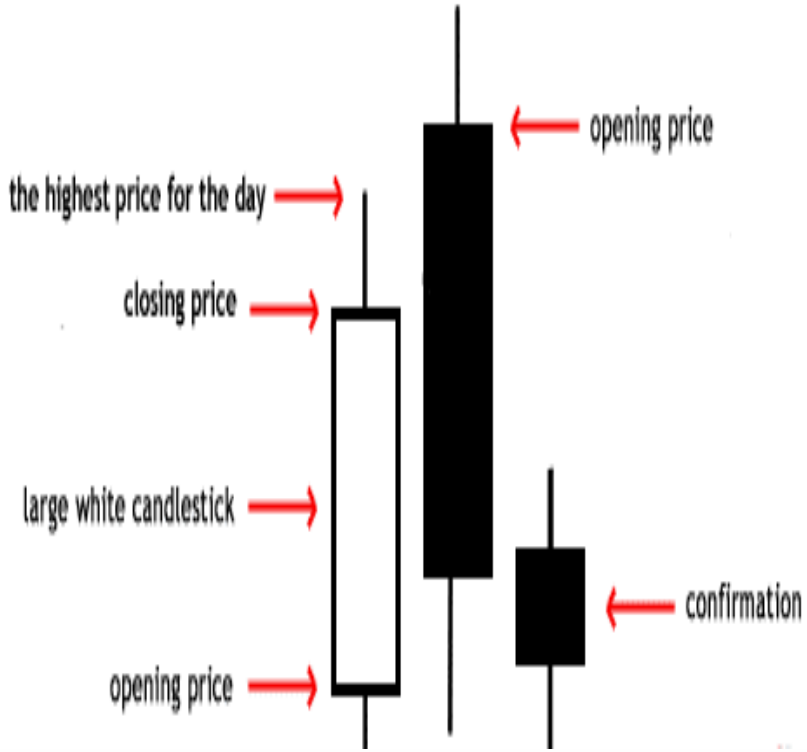
Piercing Pattern

Dark Cloud Cover

- A pattern where a black candlestick follows a long white candlestick. It can be an indication of a future bearish trend.

- Essentially, the large black candle is forming a "dark cloud" over the preceding bullish trend.

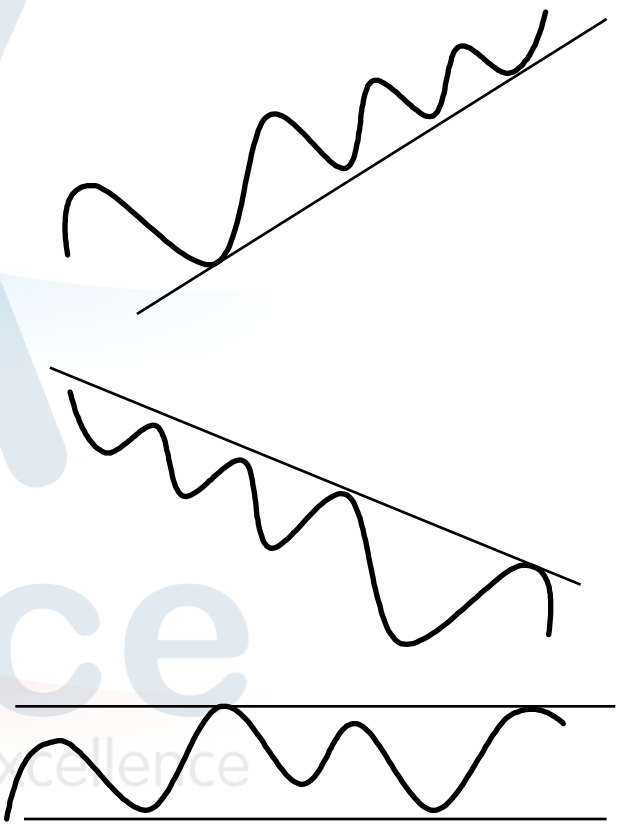
  The dark cloud must have a closing price that is:
  - within the price range of the previous day.
  - But below the mid-point between open and closing prices of the previous day.



Dark Cloud Cover

Trend Lines

- There are three basic kinds of trends:
  - An Up trend where price are generally increasing.
  - A Down trend where price are generally decreasing.
  - A Trading Range.



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Simple Moving Averages

- Moving averages are used to identify current trends and trend reversals as well as to set up support and resistance levels.

- Moving averages can be used to quickly identify whether a stock is moving in an uptrend or a downtrend depending on the direction of the moving average. when a moving average is heading upward and the price is above it, the stock is in uptrend. Conversely, a downward sloping moving average with the price below can be used to signal a downtrend.

- Another method of determining momentum is to look at the order of a pair of moving averages. When a short-term average is above a longer-term average, the trend is up. On the other hand, a long-term average above a shorter-term average signals a downward movement in the trend.

Conti…

Simple Moving Averages

- Moving averages are a powerful tool for analyzing the trend in a stock. They provide useful support and resistance points and are very easy to use. The most common time frames that are used when creating moving averages are the 200-day, 100-day, 50-day, 20-day and 10-day.

- 200-days average is a good measure of trading year, a 100-day average for half a year, a 50-day average for quarter, a 20-day average for month and 10-day average for two weeks.

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Price & Moving Average Crossover

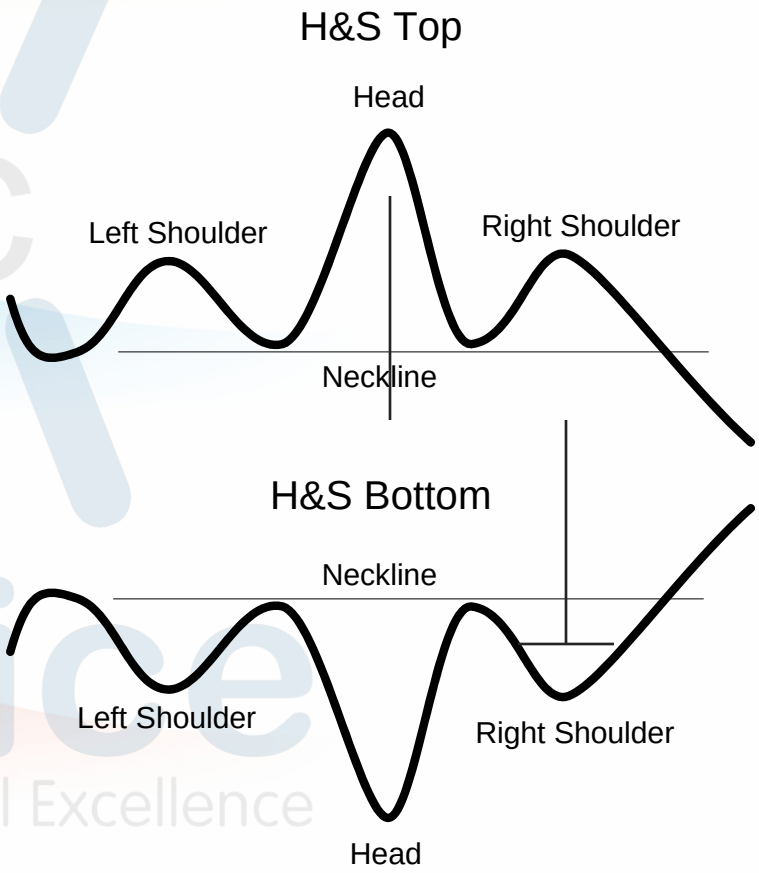
- Moving average trend reversals are formed in two main ways:
  - When the **price moves through a moving average** and when it **moves through moving average crossovers**. The first common signal is when the price moves through an important moving average. For example, when the price of a security that was in an uptrend falls below a 50-period moving average, it is a sign that the uptrend may be reversing and vice-versa.

Moving Averages Crossover

- The other signal of a trend reversal is when one moving average crosses through another. For example, **if the 50-day moving average crosses above the 200-day moving average, it is a positive sign that the price will start to increase.**

Head and Shoulder

- This formation is characterized by two small peaks on either side of a larger peak.
- This is a reversal pattern, meaning that it signifies a change in the trend.



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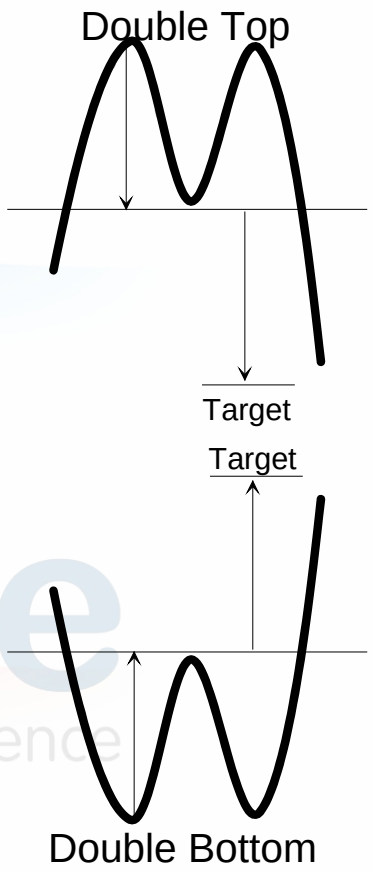
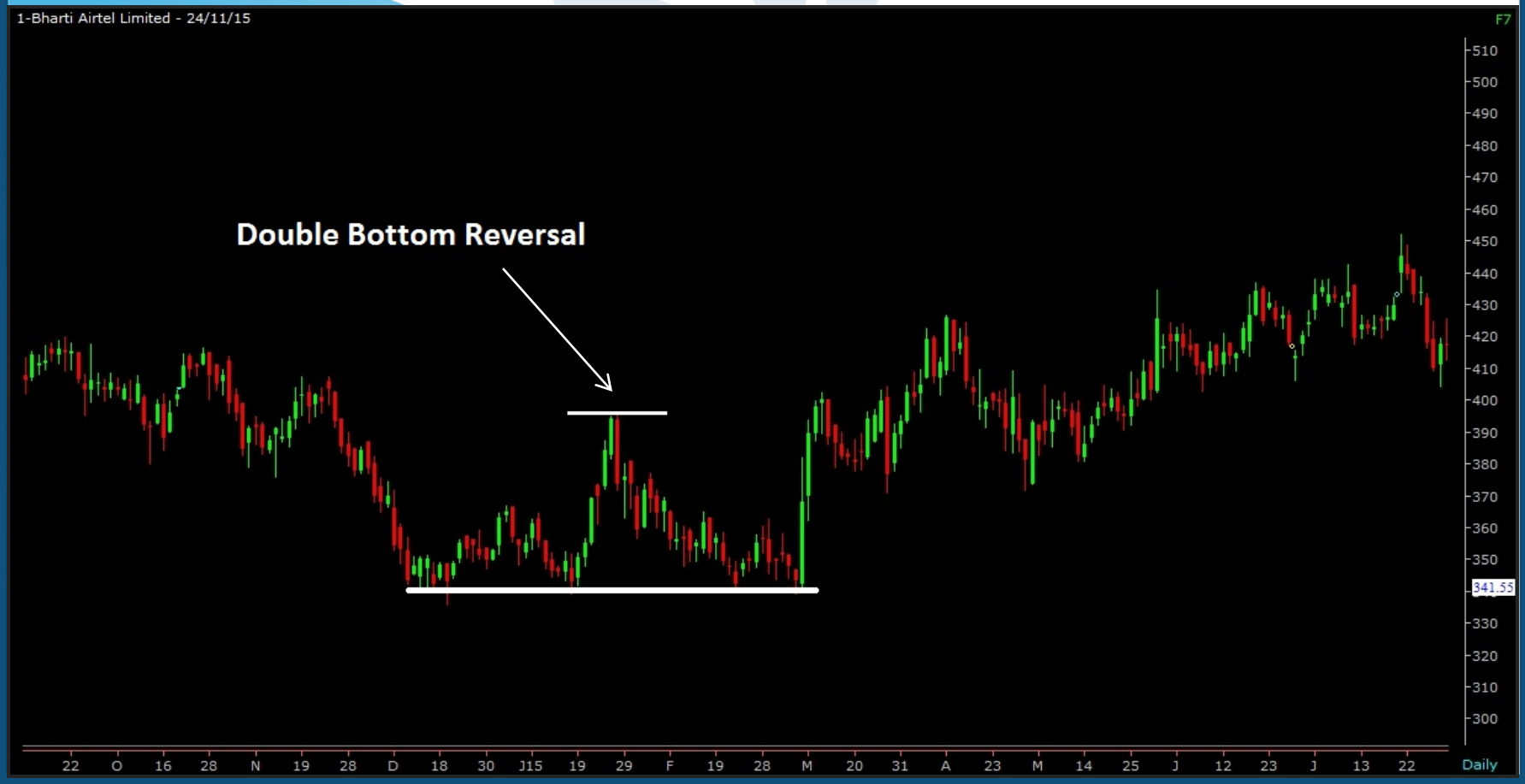
Example of Head & Shoulder

Double Top & Double Bottom

- These formations are similar to the H&S formations, but there is no head.
- These are reversal patterns with the same measuring implications as the H&S.
- The **Double Top** is a frequent price formation at the end of a bull market. It appears as two consecutive peaks of approximately the same price on a price-versus-time chart of a market.
- The **Double Bottom** describes as the drop of a stock a rebound, another drop to the same level as the original drop, and finally another rebound.



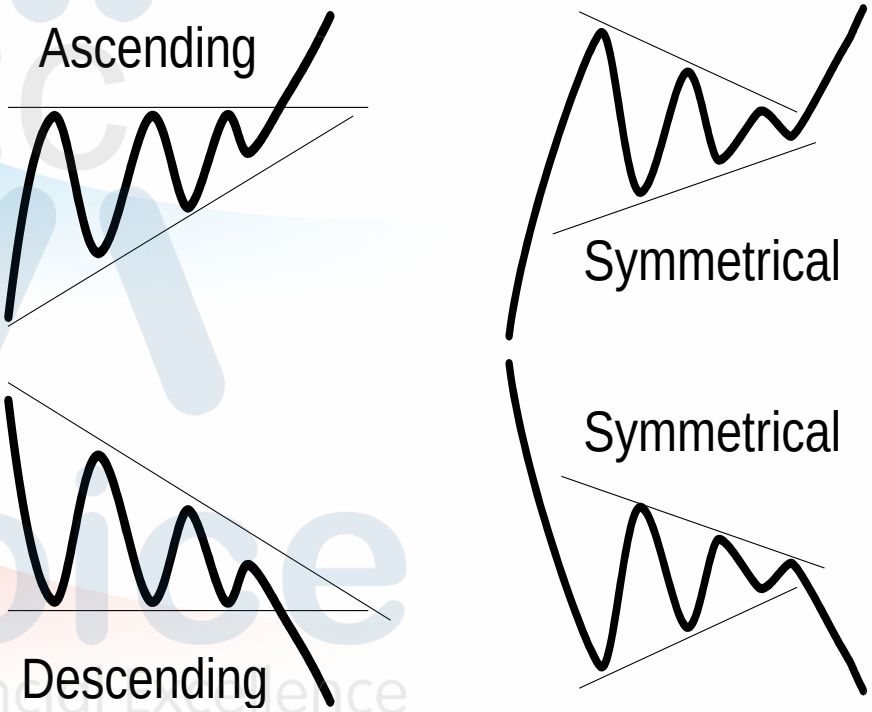
Example of Double Bottom



Example of Double Top

Triangles

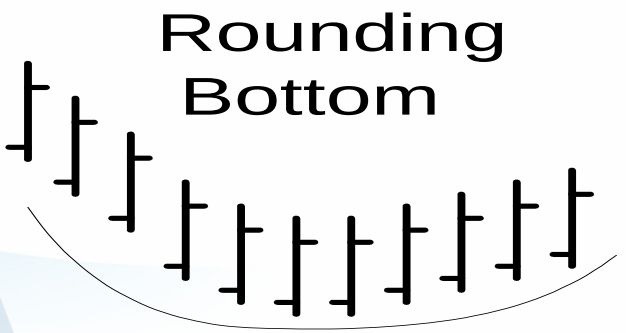
- Triangles are continuation formations.
- Three types:
  - Ascending
  - Descending
  - Symmetrical
- Typically, price should give break out near the apex, and typically breakout would be in the direction of the prior trend.

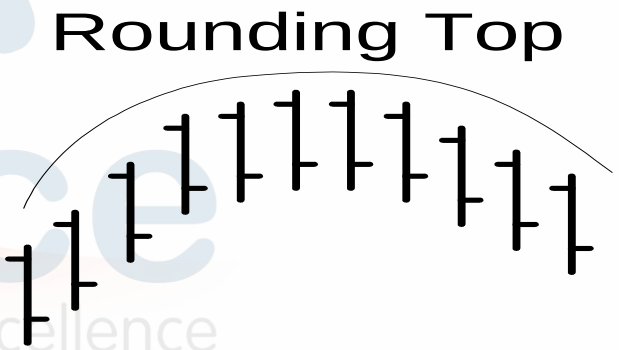


Ascending Triangles

Rounding Top & Bottom

- Rounding formations are characterized by a slow reversal of trend.
- The Rounding Bottom is a long-term reversal pattern that is best suited for weekly charts. It is also referred to as a saucer bottom, and represents a long consolidation period that turns from a bearish bias to a bullish bias.
- A Rounding Top may form at the end of an extended upward trend and indicates a reversal in the long-term price movement. The pattern can develop over several weeks, months or even years, and is considered a rare occurrence by many traders.

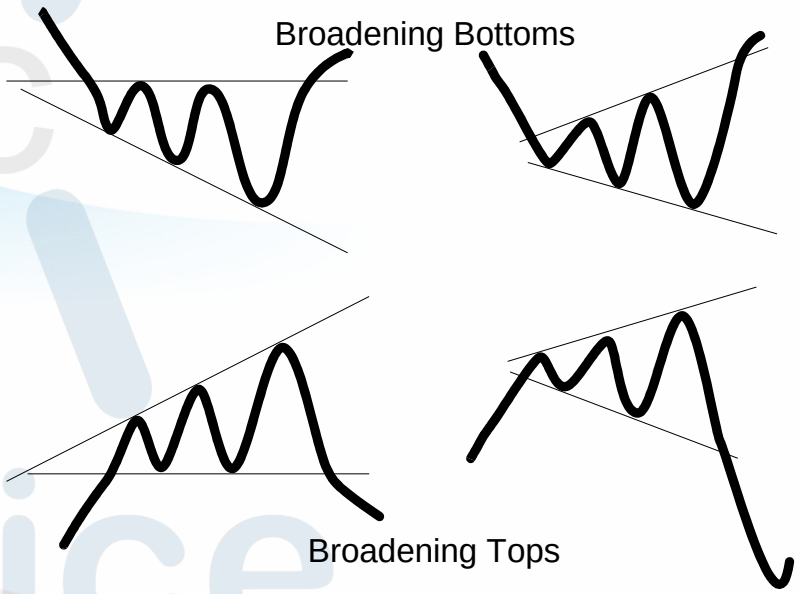




Example of Rounded Bottom

Broadening Formation

- These formations are like reverse triangles.
- These formations usually signal a reversal of the trend.



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Technical Indicators

- There are, literally, hundreds of technical indicators used to generate buy and sell signals.

- We will look at few of the major indicators:
  - Moving Average Convergence/Divergence (MACD)
  - Relative Strength Index (RSI)
  - Bollinger Bands

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MACD

- MACD was developed by Gerald Appel as a way to keep track of a moving average crossover system.
- The MACD fluctuates above and below the zero line as the moving averages converge, cross and diverge.
- Traders can look for signal line crossovers, centerline crossovers and divergences to generate signals.
- When the signal line goes from negative to positive, a buy signal is generated.
- When the signal line goes from positive to negative, a sell signal is generated.
- MACD is best used in choppy (trendless) markets, and is subject to whipsaws (in and out rapidly with little or no profit).

Example of MACD

Relative Strength Index (RSI)

- RSI was developed by Welles Wilder as an oscillator to gauge overbought/oversold levels.
- The most important thing to understand about RSI is that a level above 70 indicates a stock is overbought, and a level below 30 indicates that it is oversold (it can range from 0 to 100).
- Also, realize that stocks can remain overbought or oversold for long periods of time, so RSI alone isn't always a great timing tool.

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RSI

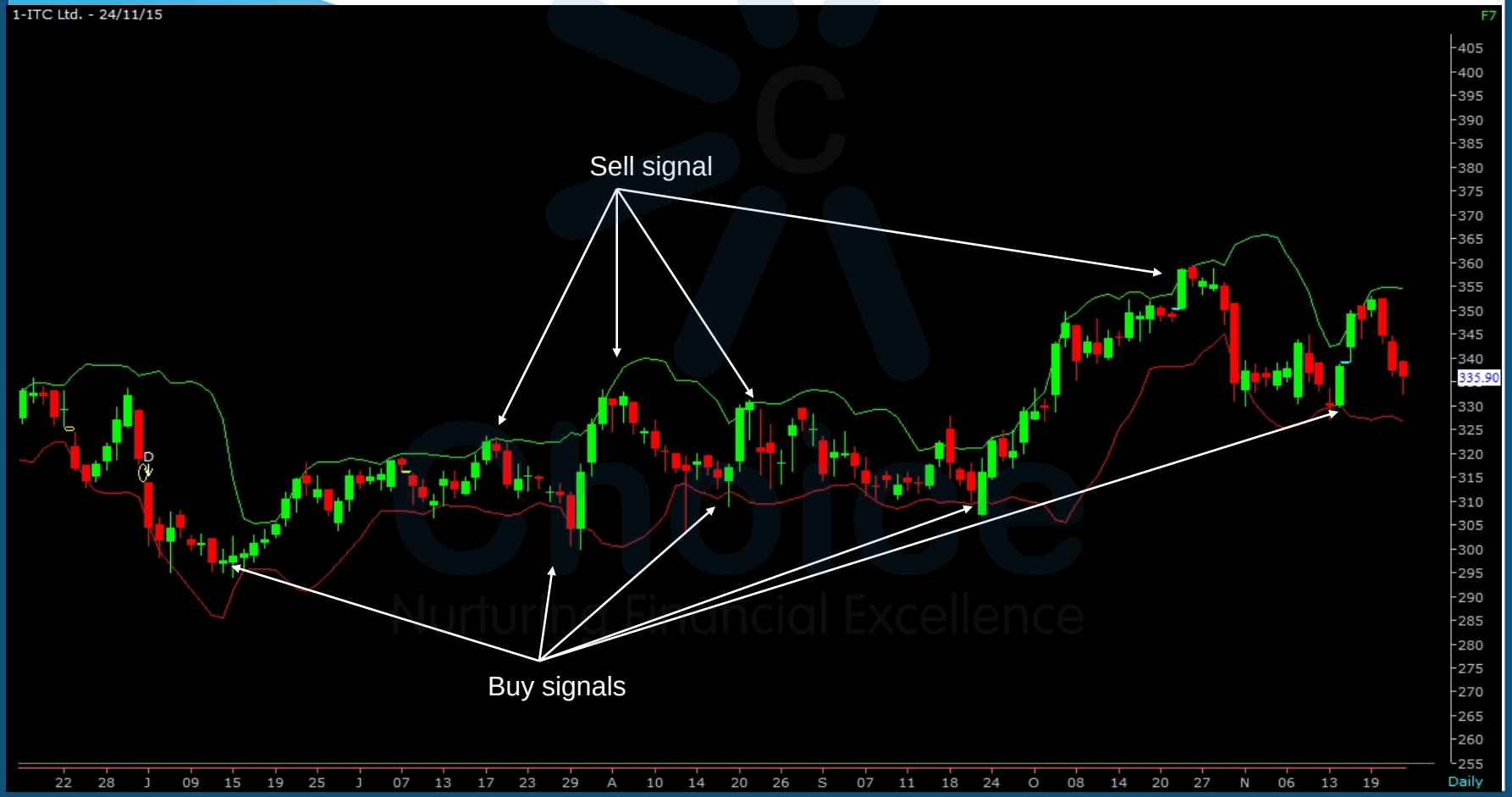
- A technical analysis tool that is banded between two extreme values and built with the results from a trend indicator for discovering short term overbought and over sold conditions. As the value of the oscillator approach the upper extreme value, the stock seem to be over bought and as it approaches to lower extreme level, it seems to be over sold.

Example of RSI

Bollinger Band

- Bollinger bands were created by John Bollinger (former FNN technical analyst, and regular guest on CNBC).
- Bollinger Bands are based on a moving average of the closing price.
- They are two standard deviations above and below the moving average.
- A buy signal is given when the stock price closes below the lower band, and a sell signal is given when the stock price closes above the upper band.
- When the bands contract, that is a signal that a big move is expecting, but it is impossible to say if it will be up or down.

Example of Bollinger Band



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Thank you