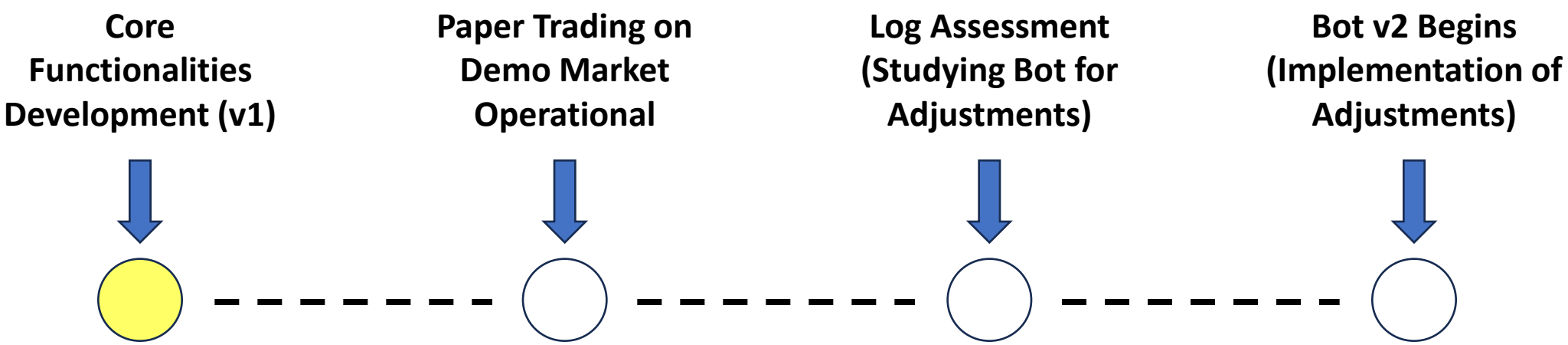
MT4
Trading Bot Roadmap
(Redacted)

Project Roadmap

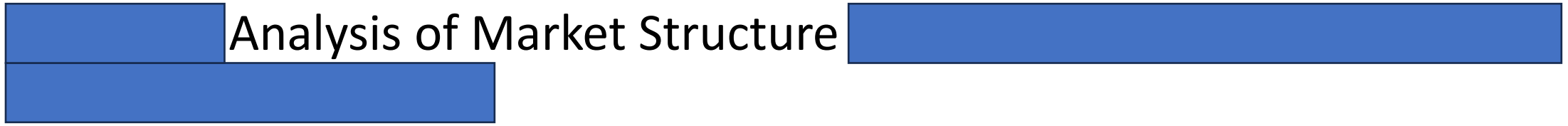


Core Functionalities Development

1) **Detect Market Trend via Market Structure Analysis**

- First, the logic for detecting the market structure must be implemented (see Market Structure Slides).
- By using the Market Structure analysis, we will be able to determine Market Trend.

How?



Core Functionalities Development

1) Determine Market Trend – Analysis (Part 1)

When we determine Market Trend, we need to look to see the alignment of the Market Structure

We will refer to this as

Depending on there will be a different set of criteria we look for in this

In the previous version of this deck, we were utilizing a combination of Market Trend and Market Structure to determine if we should look for demand zones, supply zones, or

In this version of the deck, we will be using Market Structure analysis for the criteria that satisfy

Core Functionalities Development

1) Determine Market Trend – [redacted] (Part 2)

[redacted]

This is an example of [redacted] in action while we are trading on the M15 Time Frame.

Each of these determinations is a reading of the “Market Structure” result.

Core Functionalities Development

1) Determine Market Trend – [redacted] (Part 3)

[redacted]

Each “Market Structure” reading must align in one of the following scenarios to make a determination on the type of zone to be looking for.

[redacted]

Market Indeterminate = Cancel Zones and Wait for Alignment to create new zones.

Trading in M15

Demand Zones:

[redacted] = **Bullish**

Supply Zones:

[redacted] = **Bearish**

Trading in M30

Demand Zones:

[redacted] = **Bullish**

Supply Zones:

[redacted] = **Bearish**

Core Functionalities Development

1) Determine Market Trend – [redacted] (Part 4)

[redacted]

Each “Market Structure” reading must align in one of the following scenarios to make a determination on the type of zone to be looking for.

[redacted]

Market Indeterminate = Cancel Zones and Wait for Alignment to create new zones.

Trading in 1H

Demand Zones:

[redacted] = **Bullish**

Supply Zones:

[redacted] = **Bearish**

Trading in 4H

Demand Zones:

[redacted] = **Bullish**

Supply Zones:

[redacted] = **Bearish**

Core Functionalities Development

2) How to Determine Market Structure

The market structure is a crucial component in determining if we should look for demand zones or supply zones. As previously described,

Market Structure analysis is the engine for determining Market Trend (which helps us determine the type of zones we should create).

How?

Analyze the recent higher high (HH), higher low (HL), lower high (LH), and lower low (LL) of recent market history on the 15-minute interval (aka the interval we will be trading on).

Core Functionalities Development

2) Determine Market Structure

In the image to the left, the orange dots represent the Highs, and the blue dots represent the Lows, all mapped on previously charted market activity.

Core Functionalities Development

2) Determine Market Structure (Part 1) - Definitions

Bullish Market Structure 📈
A bullish structure is defined by the market making a series of **Higher Highs (HH)** and **Higher Lows (HL)**. This shows a clear uptrend.

Logic: IF New High > Previous High AND New Low > Previous Low THEN Structure is Bullish

On The Chart: The entire left and central portion of the previous chart, from the start until the highest peak around Nov 9th, demonstrates a clear bullish structure. Each orange dot is higher than the last, and each blue dot is higher than the last.

Bearish Market Structure 📉
A bearish structure is defined by the market making a series of **Lower Highs (LH)** and **Lower Lows (LL)**. This shows a clear downtrend.
Logic: IF New High < Previous High AND New Low < Previous Low THEN Structure is Bearish
On The Chart: The section on the far right, starting after the highest peak, shows the beginning of a bearish structure. The final orange dot is clearly lower than the one before it (a Lower High), and the price is plunging to create a new Lower Low.

Neutral or Shifting Market Structure sideways
A neutral or shifting structure occurs when the HH/HL or LH/LL pattern is broken. This is often called a **"break of structure"** and signals a potential change in trend.
Logic: IF New High > Previous High BUT New Low < Previous Low (or vice versa) THEN Structure is Shifting/Neutral
On The Chart: The absolute peak around Nov 9th marks the critical shift. After making a final Higher High, the market failed to make a Higher Low. Instead, it broke below the previous low (the blue dot just before the peak). This break was the first major warning sign that the bullish structure was failing and reversing.

Core Functionalities Development

2) Determine Market Structure (Part 1) - Definitions

In the context of a trading bot tracking market structure, these abbreviations represent the key swing points in price action that define a trend.

Foundational Points

H (High): A temporary peak in price before it reverses downwards. It represents the first reference point for the start of our analysis.
L (Low): A temporary trough in price before it reverses upwards. It represents the second reference point for the start of our analysis.

Uptrend Structure

An uptrend, or bullish market structure, is identified by a consistent series of higher highs and higher lows. In a bullish market, there will only be higher highs and lower lows present until structure is broken (aka, a BOS).

HH (Higher High): A new high that is formed at a price **higher** than the previous high. This shows that buying momentum was strong enough to break the previous higher high.

HL (Higher Low): A new low that is formed at a price **higher** than the previous low. This is a crucial confirmation of an uptrend, as it shows that buyers are stepping in sooner and preventing the price from falling to its previous higher low (which in our case would mean the market is stagnating/neutral and could experience a trend reversal into a bearish market).

Core Functionalities Development

2) Determine Market Structure (Part 2) - Definitions

Downtrend Structure

A downtrend, or bearish market structure, is identified by a consistent series of lower highs and lower lows. In a bearish market, only Lower Highs and Lower Lows will be present.

LH (Lower High): A new high that is formed at a price **lower** than the previous high. This indicates that sellers are becoming dominant at progressively lower prices, overwhelming buyers before the previous peak is reached. A lower high represents a high point that is lower than the previous lower high.

LL (Lower Low): A new low that is formed at a price **lower** than the previous low. This confirms the downtrend, showing that selling pressure is strong enough to break below previous lower low. If the lower low fails to be broken, that would mean the market is stagnating/neutral and could experience a trend reversal.

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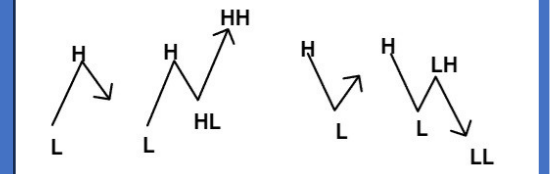
2) Determine Market Structure (Part 3) - Examples

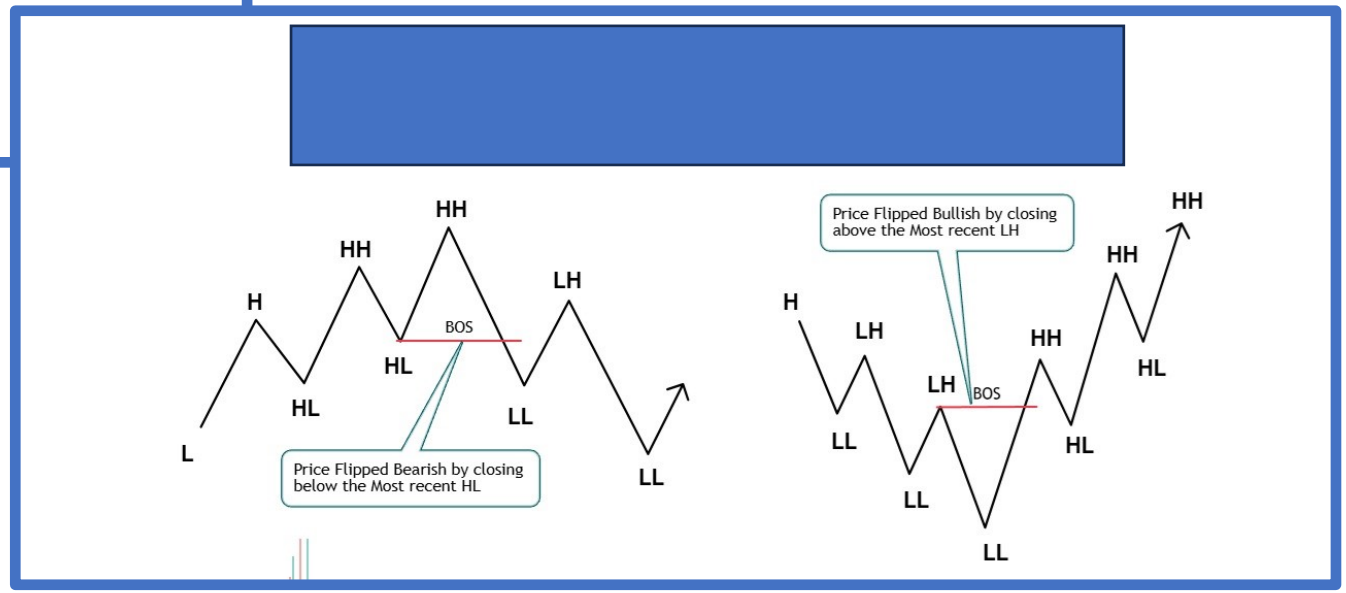
1



The only time structure is broken when the market structure is **bullish** is when a Higher Low is broken, meaning the chart goes bearish.

The only time structure is broken when the market structure is **bearish** is when a Lower High is broken, meaning the chart goes bullish.

2

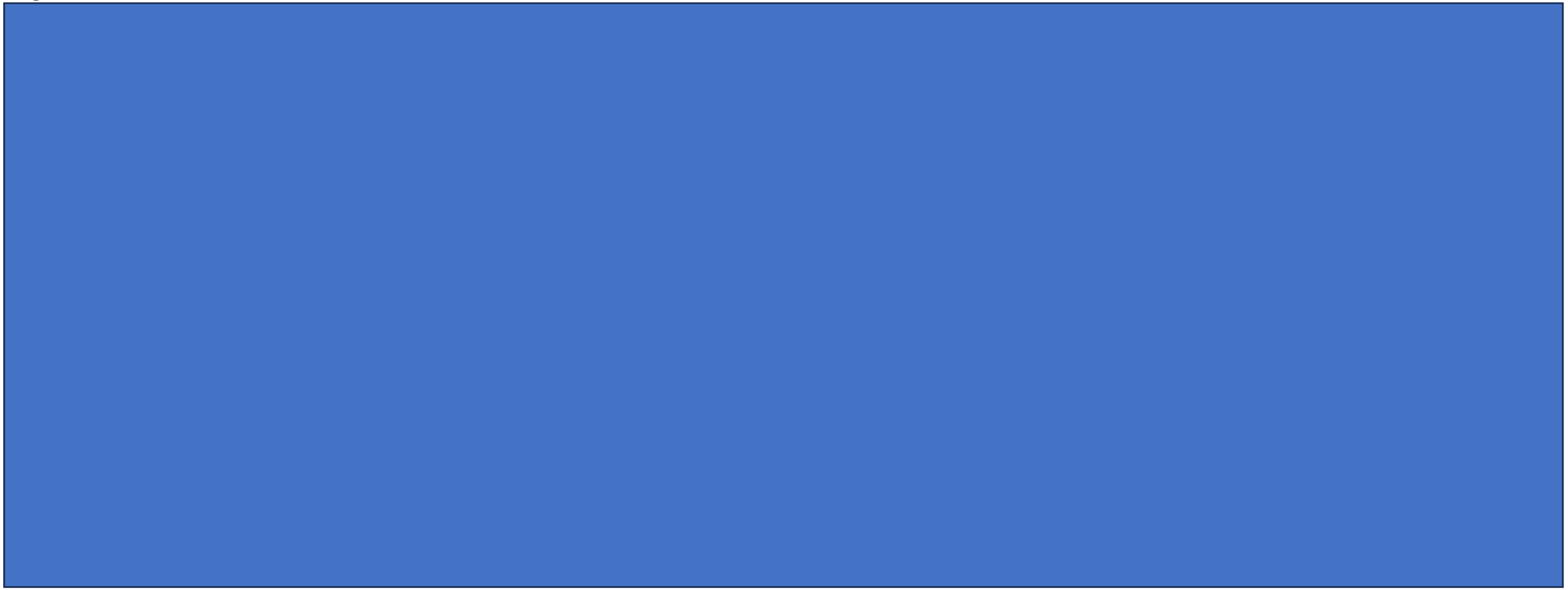


Core Functionalities Development

2) Determine Market Structure (Part 4) - Examples

3

4



Core Functionalities Development

How Market Trend and Market Structure Work Together:

By using Market Structure  we can determine the Market Trend and decide what kind of zones we will look for:

Logic:

If Market Trend = Bullish Alignment, look for Demand Zones

If Market Trend = Bearish Alignment, look for Supply Zones

If Market Trend = Indeterminate  **cancel zones and wait for alignment to create new zones.**

Core Functionalities Development

3) Creating Zones (and Setting Limit Orders):

Once we have a definitive Market Trend by means of [redacted] Market Structure lined up as [redacted] we can begin searching for zones to create – in turn, setting limit orders for potential trade opportunities.

Limit Order: A Trip Wire that gets set that will enter a trade once the market reenters the zone.

Demand Zone: A zone that we look for in a bullish market to trigger a long option (anticipating the market to move upwards from the zone after reentry.

Supply Zone: A zone that we look for in a bearish market to trigger a short option (anticipating the market to move downwards from the zone after reentry.

[redacted]

Core Functionalities Development

3a) Demand Zones (Bullish Opportunities)

In the image below, we see the unfolding of a demand zone at the start of the blue rectangle. This zone was created by an indecision candle and strong volume out of the zone while the Market Trend determination

The demand zone is set at the top of the top wick of the indecision candle, and the bottom of the bottom wick.

The top of the zone will represent our limit order threshold (aka the Trip Wire).

(See more about indecision candles and strong volume out in later slides)

Once a demand zone is created, our limit order gets set.

The limit order will trip and enter the trade once the market returns back to the zone by touching it with either a wick or a candle body.

Once a trade is entered, we wait for the market to either hit our take profit, or stop at a loss.

Core Functionalities Development

3b) Supply Zones (Bearish Opportunities)

In the image below, we see the unfolding of a demand zone at the start of the blue rectangle. This zone was created by an indecision candle and strong volume out of the zone while the Market Trend determination

The supply zone is set at the bottom of the bottom wick of the indecision candle, and the top of the top wick.

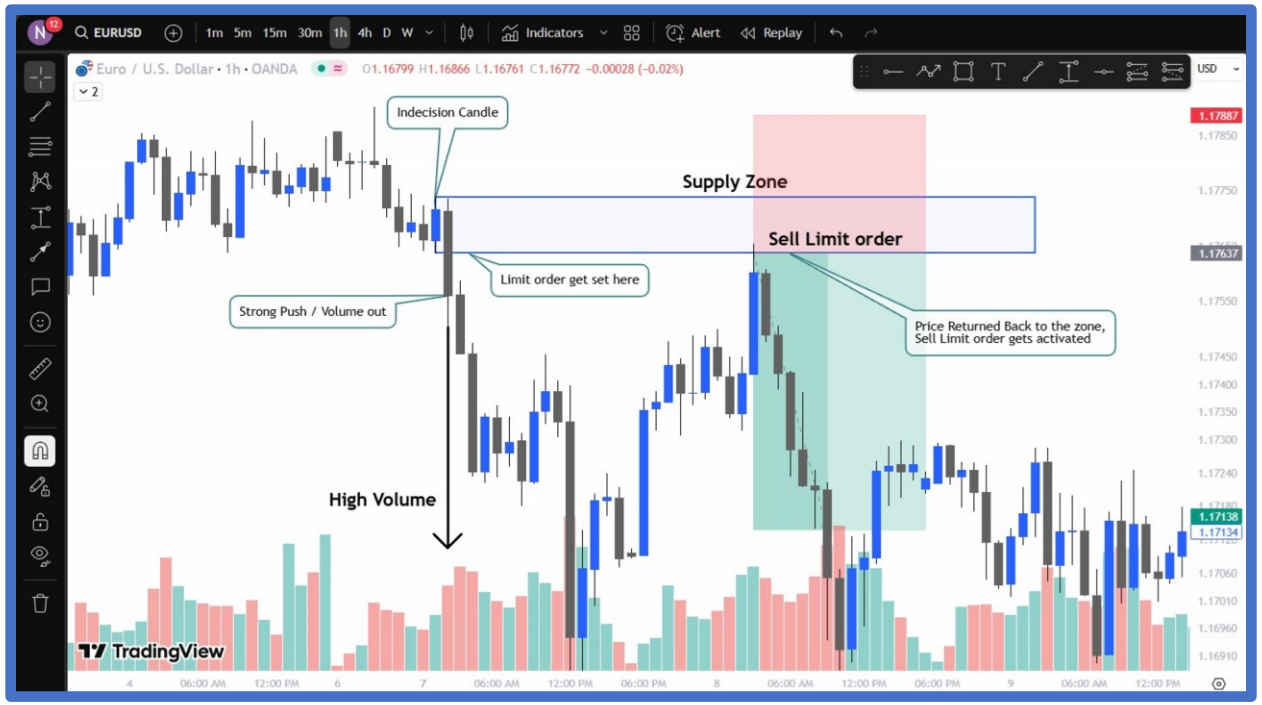
The bottom of the zone will represent our limit order threshold (aka the Trip Wire).

Once a supply zone is created, our limit order gets set.

The limit order will trip and enter the trade once the market returns back to the zone by touching it with either a wick or a candle body.

Once a trade is entered, we wait for the market to either hit our take profit, or stop at a loss.

(In the example to the right, the trade took profit successfully, reaching the lower take profit boundary)



Core Functionalities Development

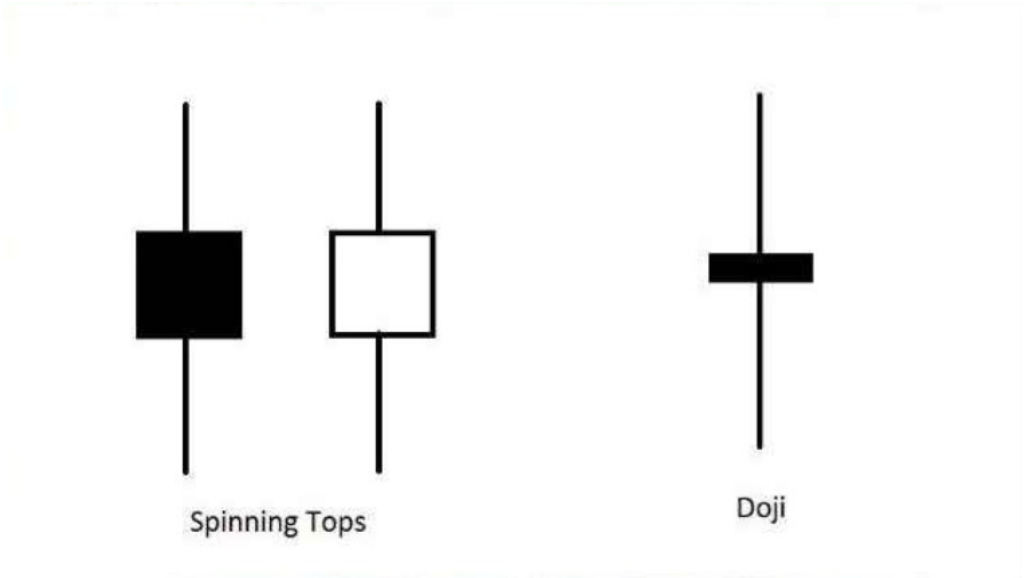
3c) Indecision Candles

In previous slides, we mentioned the creation of the zone by **i)** the occurrence of an indecision candle and **ii)** strong volume out.

An indecision candle can be defined as the below:

Doji Candle

Spinning Top Candle



(For our use case, we have implemented flexible ranges for the formation of these indecision candles)

Core Functionalities Development

3d) Strong Volume Out

For the sake of creating zones, our indecision candles should be paired with strong volume out of the zone.

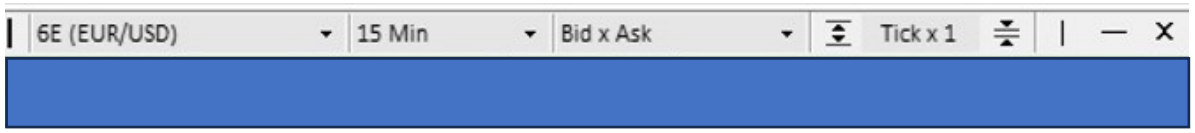
If the Market Trend is Bullish, we're looking for [redacted] volume in the candle that comes after the indecision candle up and out of the zone.

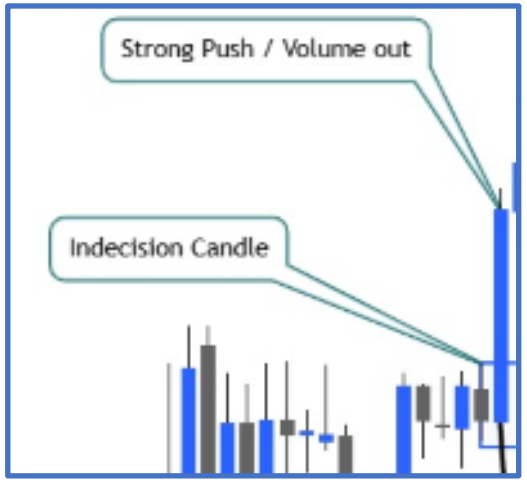
If the Market Trend is Bearish, we're looking for [redacted] volume in the candle that comes after the indecision candle down and out of the zone.

Strong Volume:
15m Time Frame – EURUSD: [redacted]

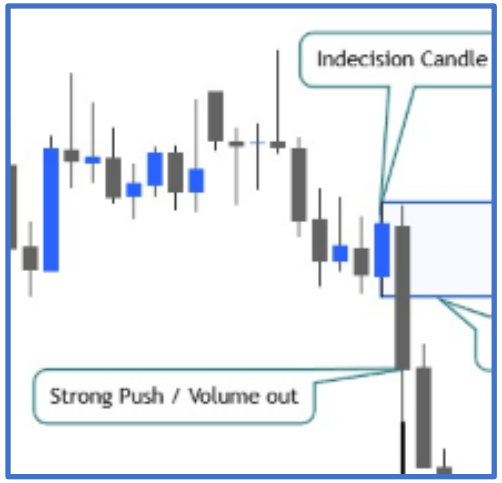
This [redacted] volume is represented by the large candles that are to come after we identify indecision candles.

(In the bar below, we see [redacted] volume)





Bullish



Bearish

Core Functionalities Development

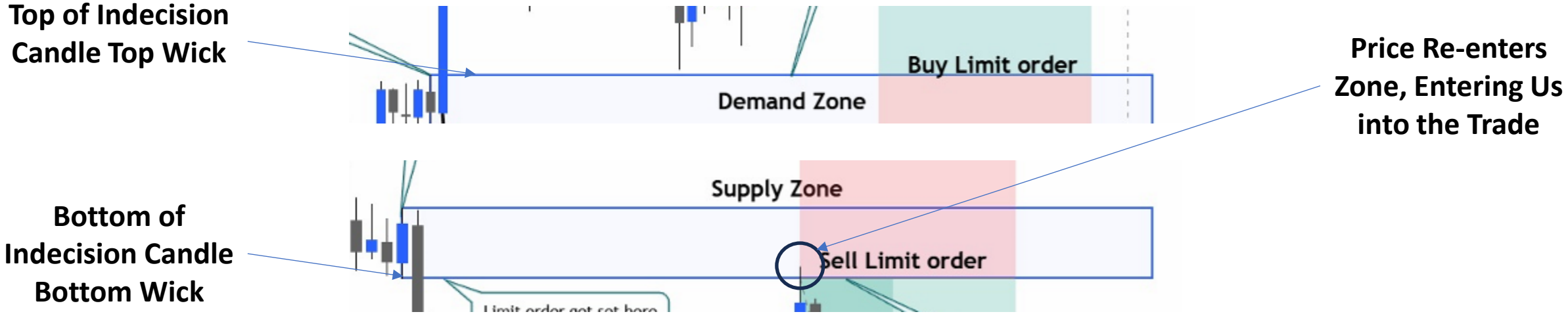
3e) Setting Limit Orders (Part 1)

As mentioned previously, the Limit Order will be set at either the top or bottom of the zone.

If Demand Zone, Limit Order set at top of zone.

If Supply Zone, Limit Order set at bottom of zone.

To reiterate, limit orders are the **<u>trip wires</u>** that get set upon zone creation that will enter us into a trade (trip) once the market touches the line.



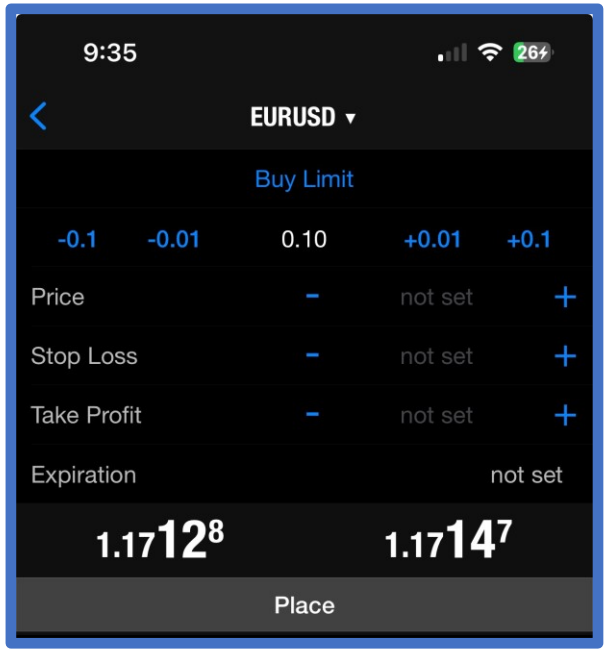
Core Functionalities Development

3e) Setting Limit Orders (Part 2)

**We will NOT

The limit order will have four parameters that need to be set:

- Price: the level the limit order is set at (top or bottom of zone)
- Take Profit: the level the trade will be exited at for profit
- Stop Loss: the level the trade will be exited at for a loss
- Expiration: when the trade will automatically exit (no matter the price level)

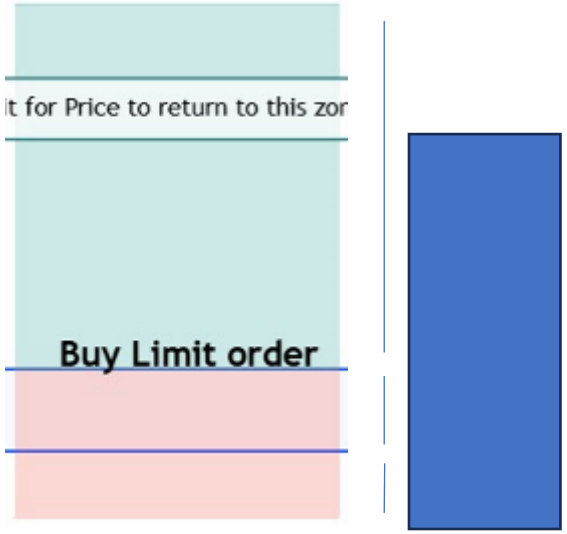


Calculating Stop Loss:

Calculating Take Profit:

- For the trading bot, the take profit will be set as

Example:



Core Functionalities Development

3f) Trade Entry

For the bot, once we enter a trade by our previous limit order trip wire being tripped, we will wait until:

1) Take Profit is reached
2) Stop Loss is triggered
3) 

**In the bot v2, we can work with exiting trades “early”, aka before take profit is fully reached.

Once a trade is entered, 

Core Functionalities Development

4) Confluence (Part 1)

Confluence is a sign that the zone we have created is a strong zone.

In order for there to be lower zone confluence, we need to see the indecision candle with strong volume out occur

Example:

Step 1)

We created a zone based on our desired pattern

Step 2)

Step 3)

Core Functionalities Development

4) [redacted] Confluence (Part 2)

[redacted]

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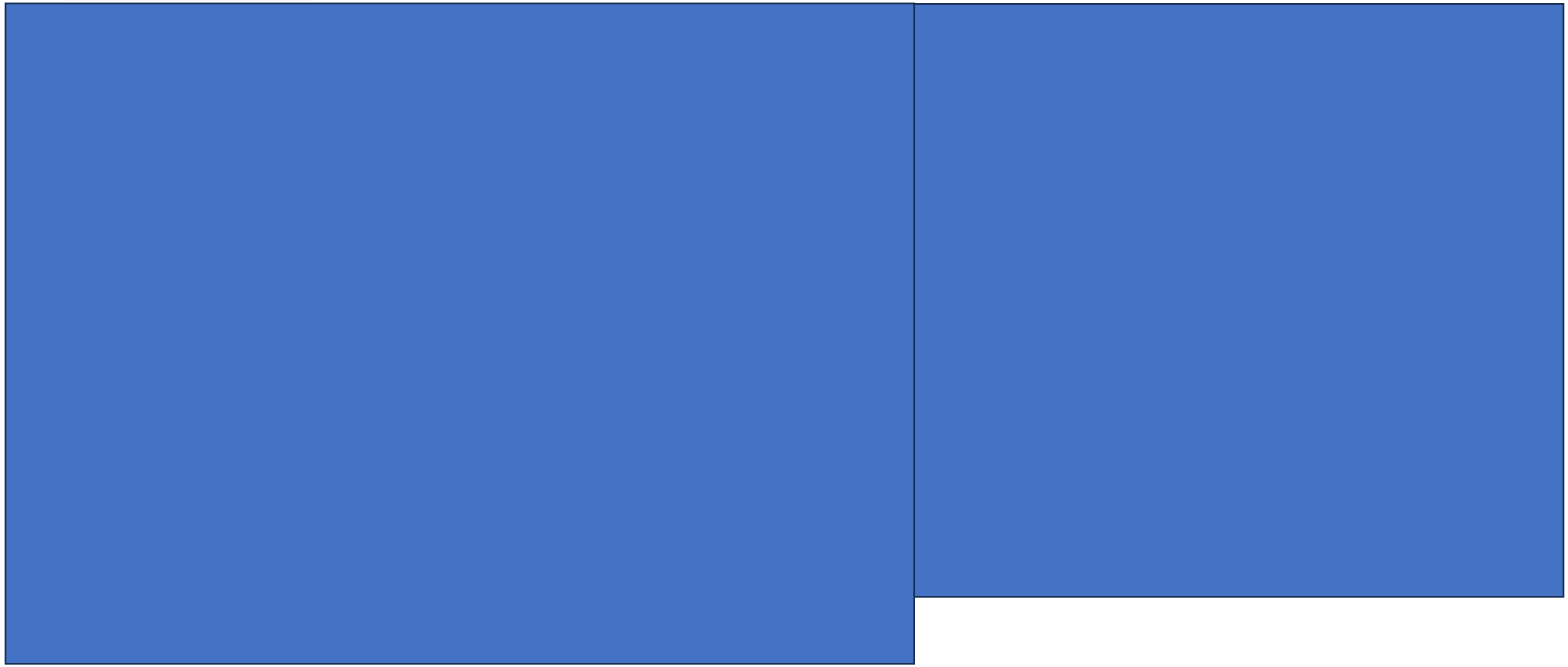
4) [redacted] Confluence (Part 3)



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4) [redacted] Confluence (Part 4)

For the sake of the logic:

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5) Zone Cancellations

The bot will actively scan for zones up until the point a limit order is triggered, entering a trade.

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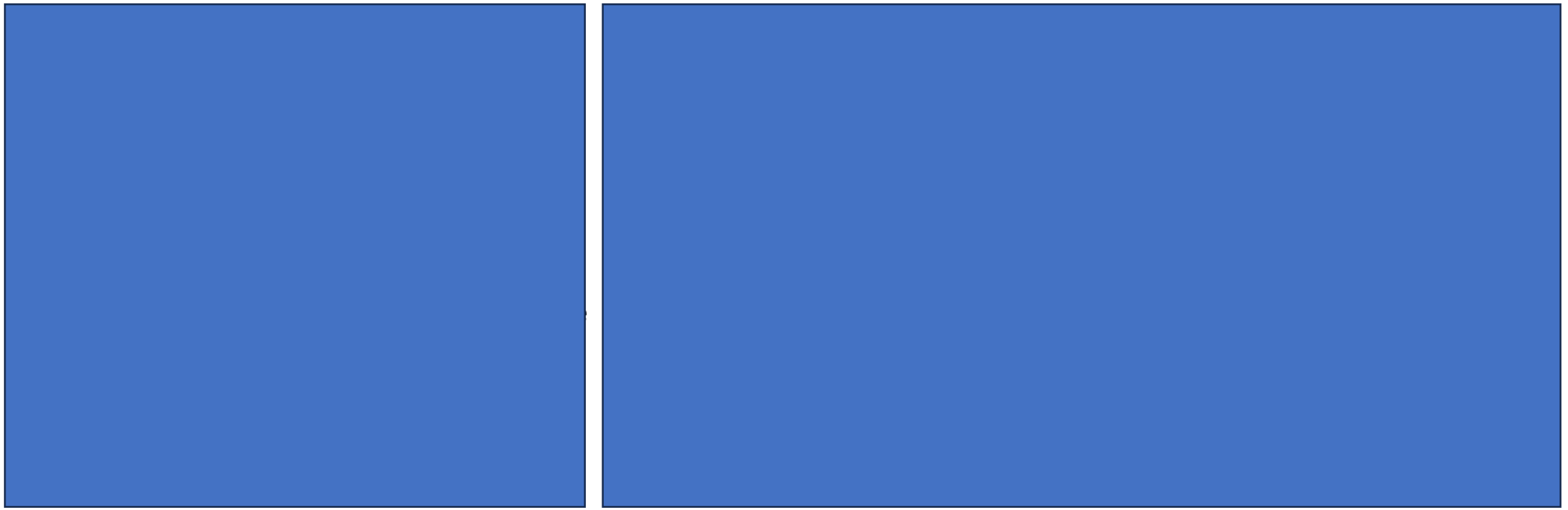
5a) Zone Cancellations

1) with Strong Volume Out that have



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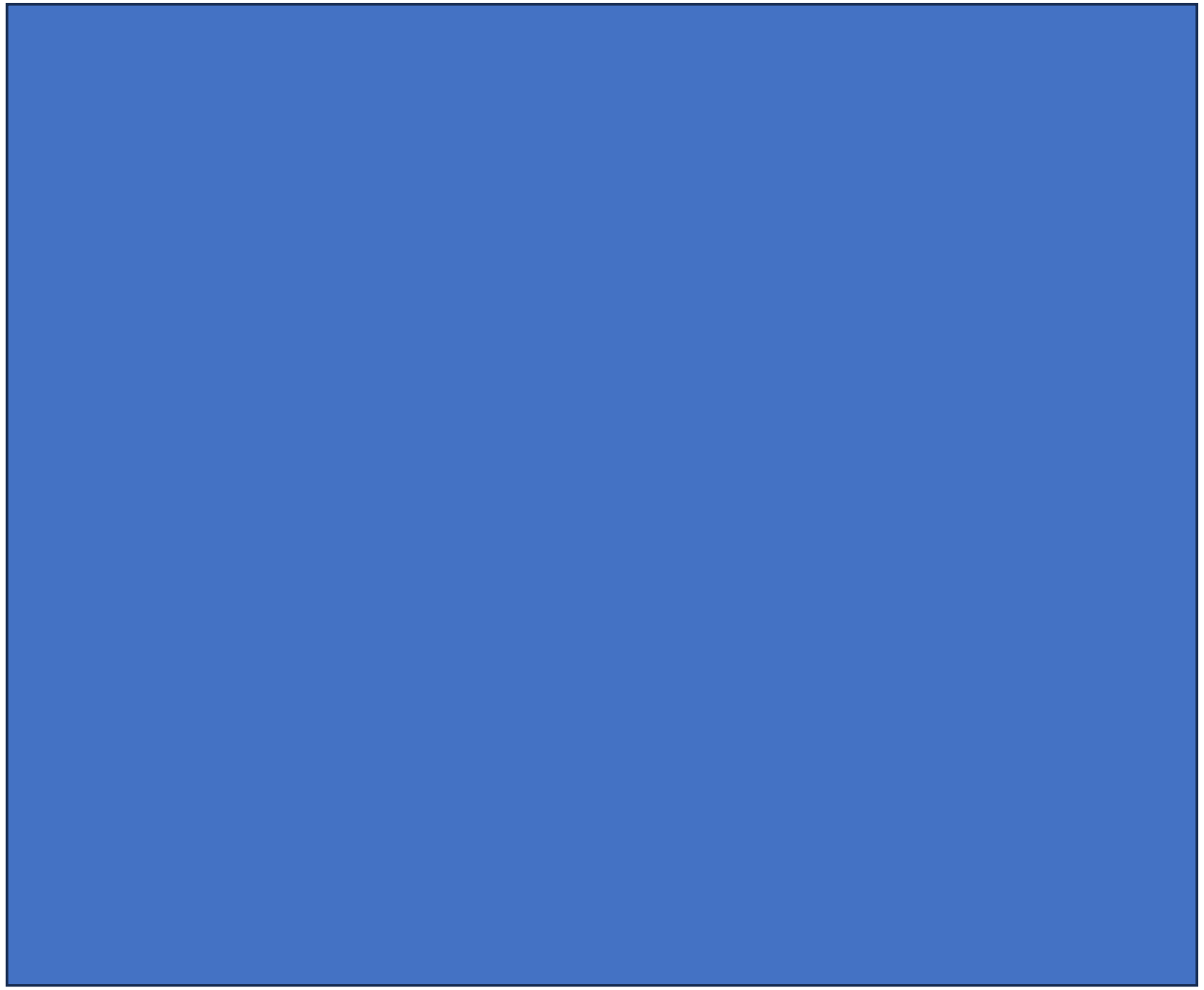
5a) Zone Cancellations [redacted] - Part 2)



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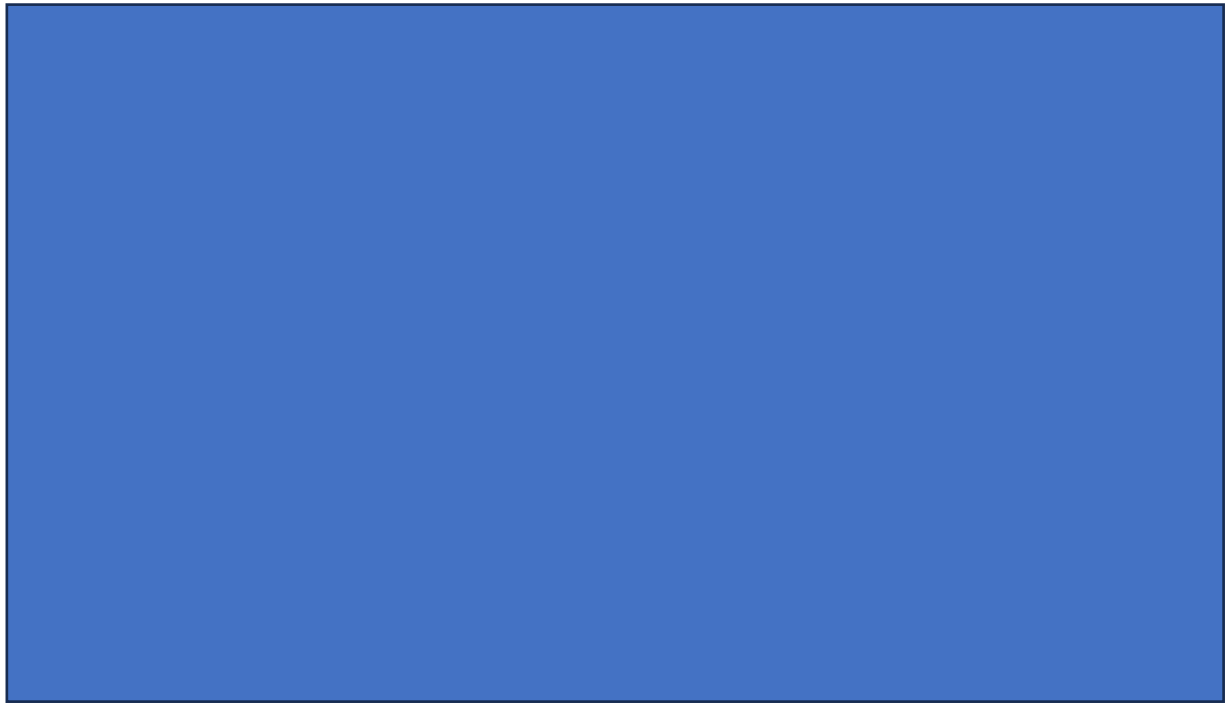
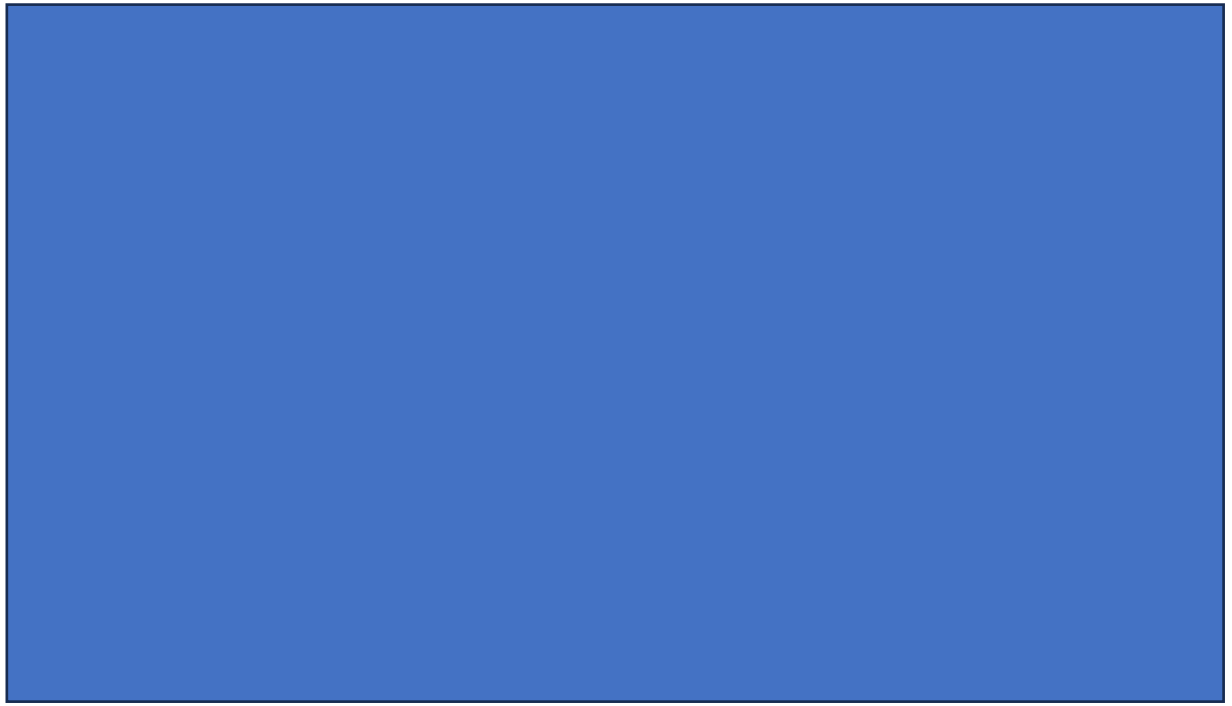
5b) Zone Cancellations (Market Candle

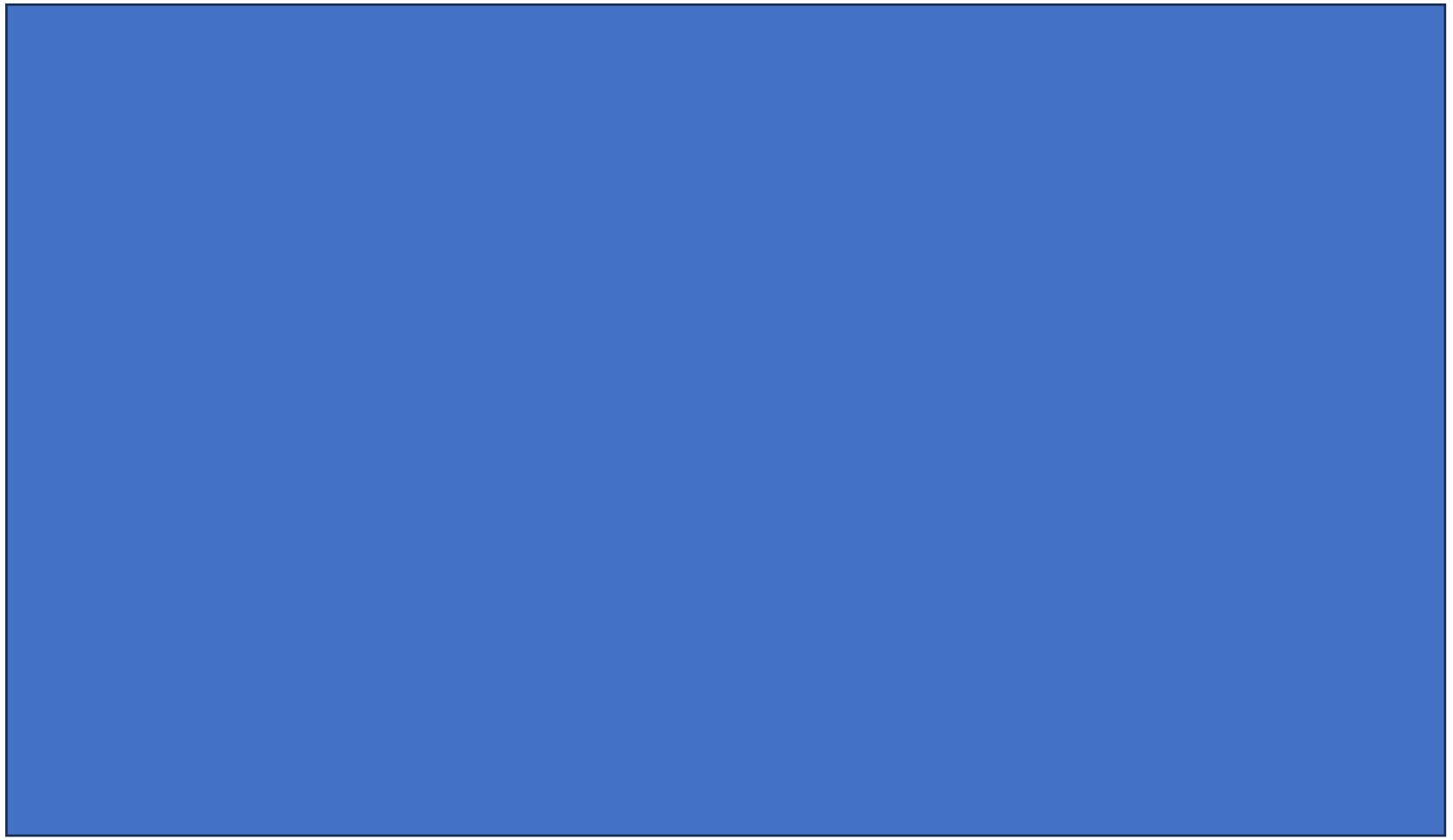
The second situation that will cancel a zone is if there is a



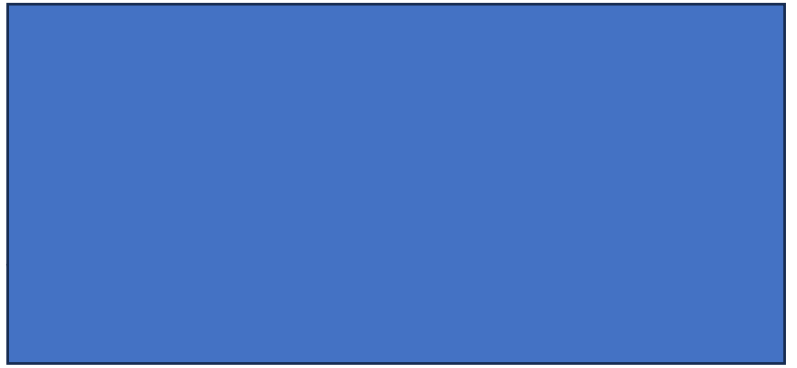


Core Functionalities Development

5b) Zone Cancellations (Market Candle [redacted] - Part 2)



1) Here we see [redacted] an indecision candle and strong volume out.



After this, we observe a new zone being created

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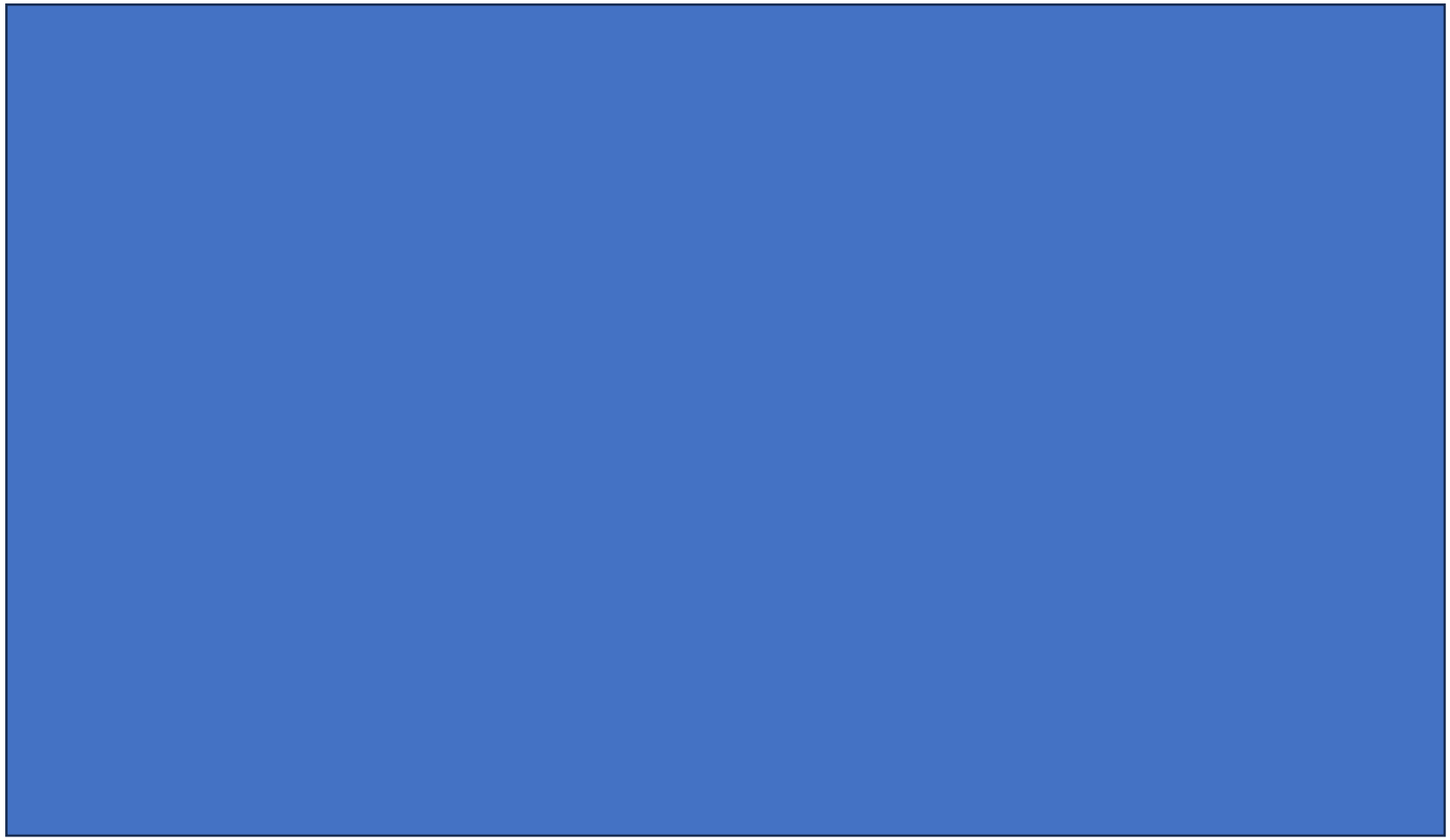
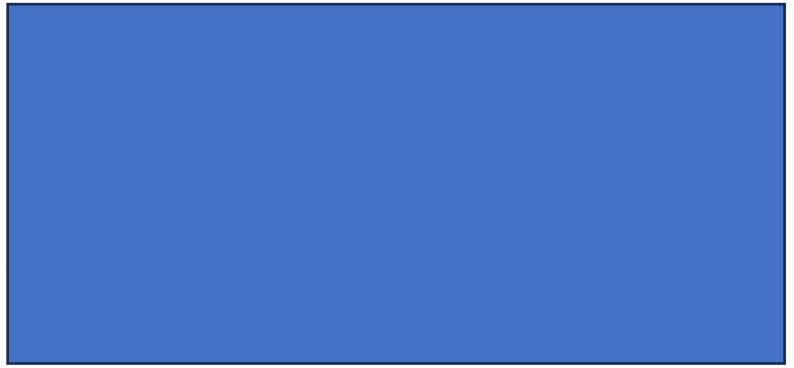
5b) Zone Cancellations (Market Candle [redacted] - Part 3)



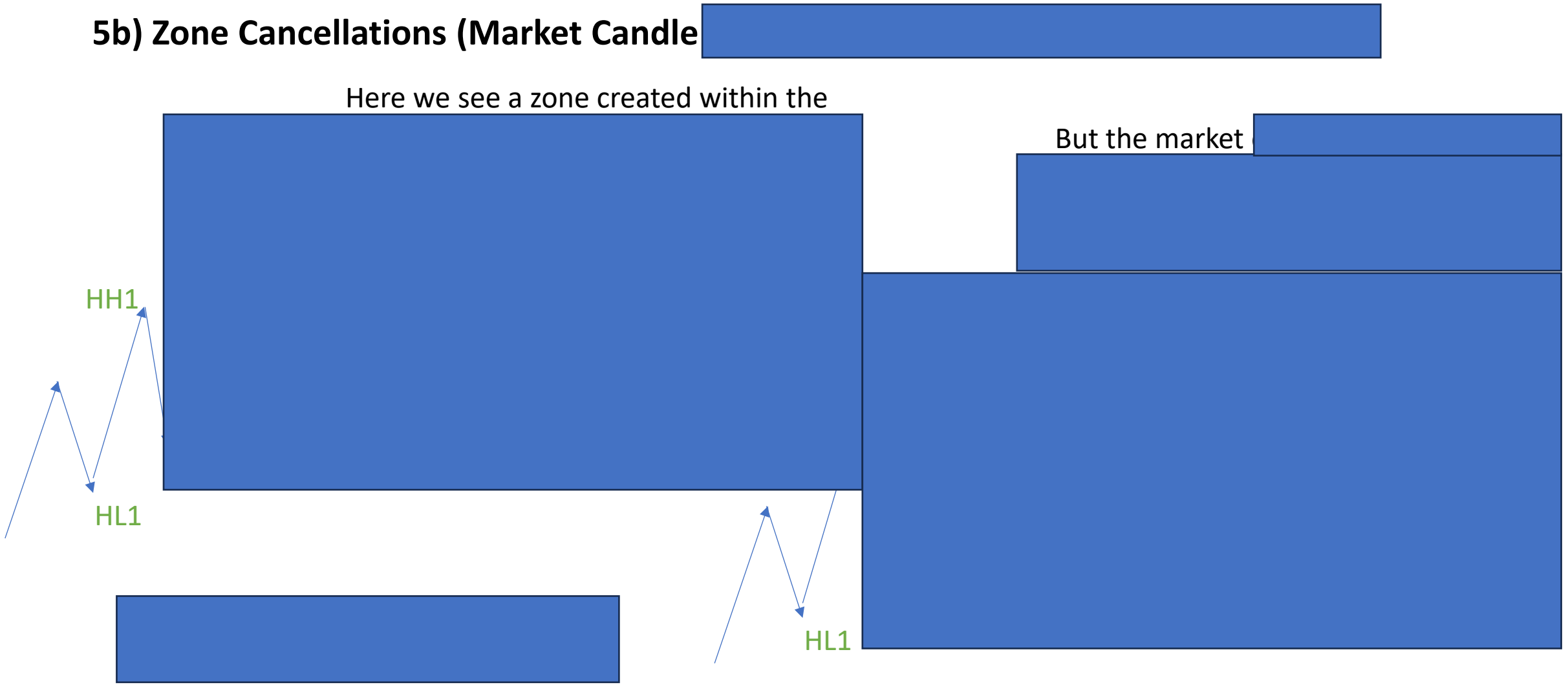
1) Here we see [redacted] an indecision candle and strong volume out.



After this, we observe a new zone being created

Core Functionalities Development

5b) Zone Cancellations (Market Candle



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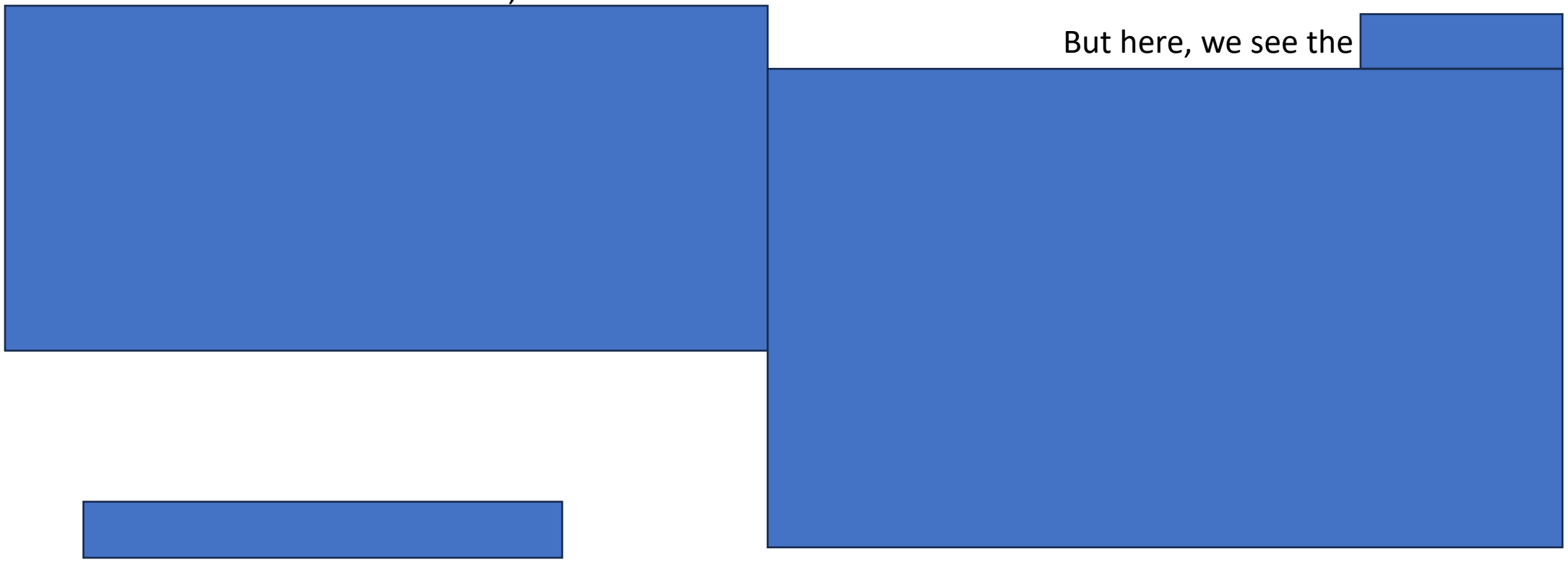
5b) Zone Cancellations (Market Candle [redacted] - Part 5)

In this case, there is no need to cancel this zone, because the [redacted]

But here, we see the [redacted]



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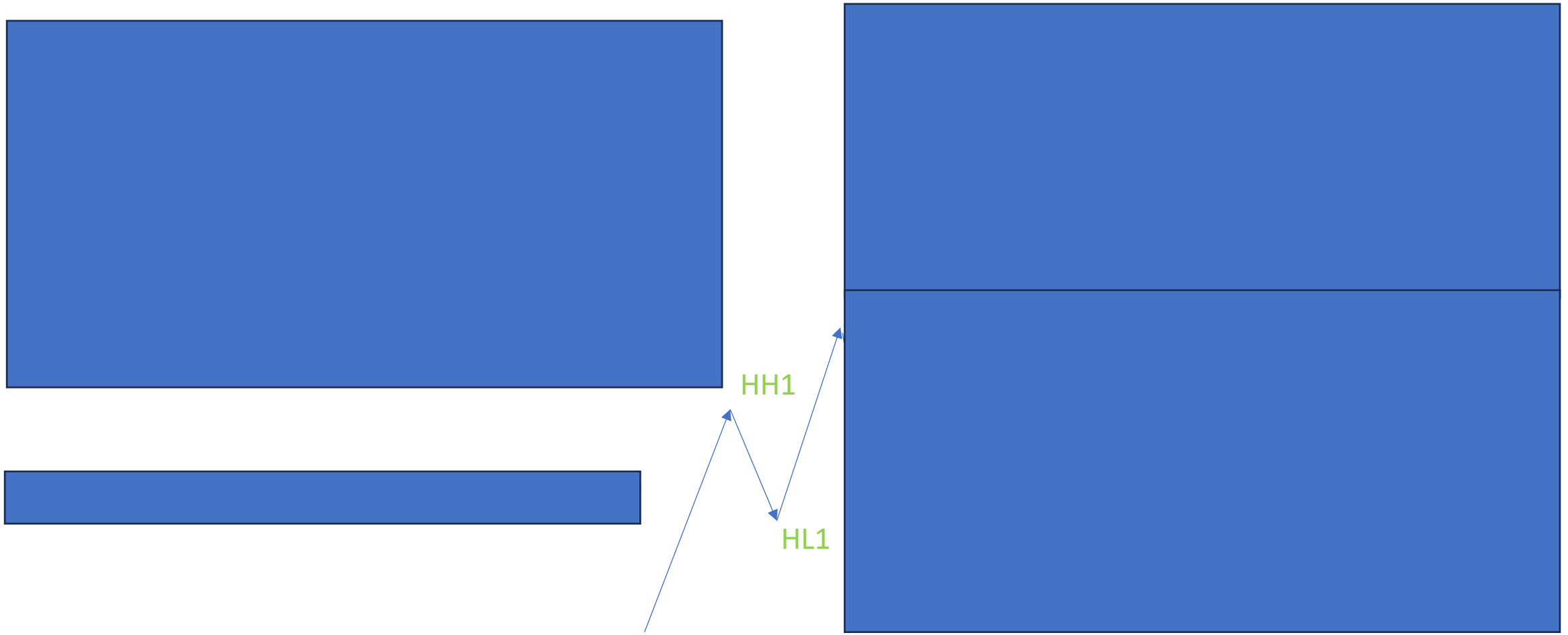
5b) Zone Cancellations (Market Candle - Part 6)

The previous examples show the



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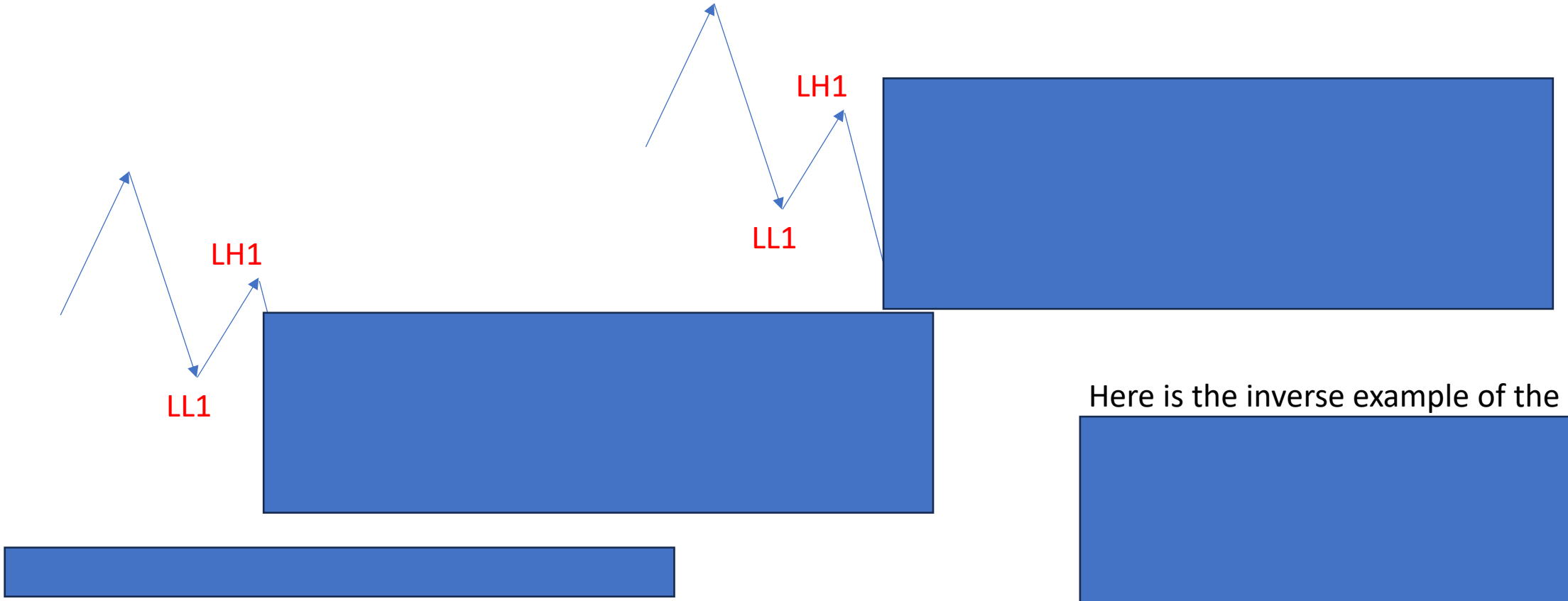
5b) Zone Cancellations (Market Candle - Part 7)

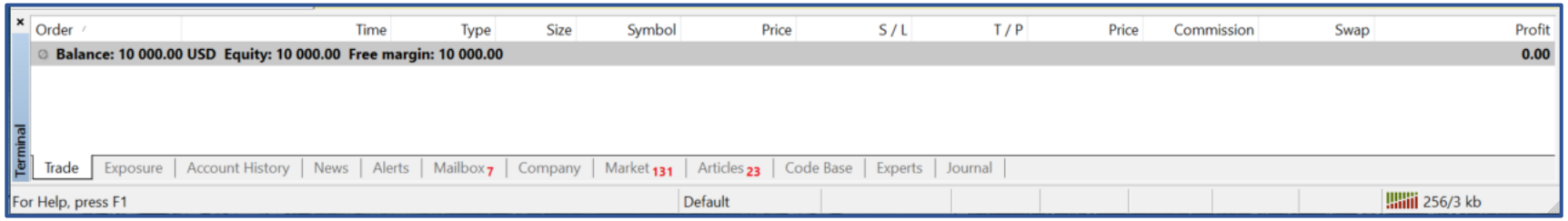


Here is the inverse example of the

Core Functionalities Development

6) How to Determine a Trade Win or a Trade Loss – (Part 1)

1) View the Trade Tab (crtl + t)



An empty trade tab shows that there are no current trades OR prospective trades active. This means we don't have any limit orders set, nor do we have any limit orders that were triggered.

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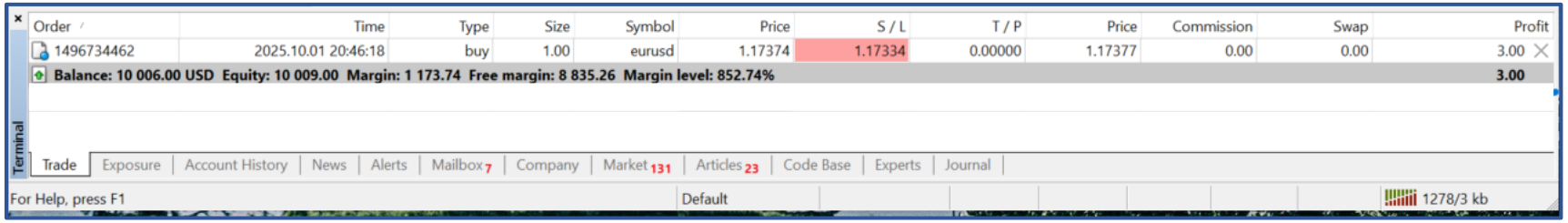
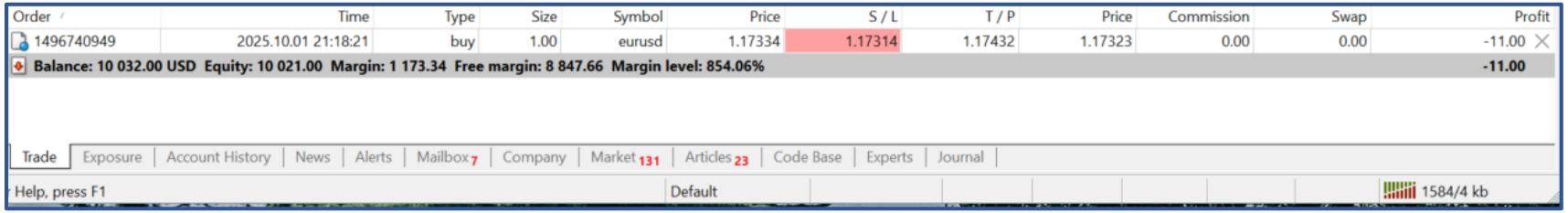
6) How to Determine a Trade Win or a Trade Loss – (Part 2)

2) Placed Limit Orders/Active Trades Enter the Trade Tab



2a) Once a limit order is set, it will appear in the trade screen.
In this example, we see a buy limit order set at 1.17374, with a Stop Loss of 1.17334, and a take profit of x.xxxxx (that wasn't set at the time of entering the limit order, ignore this.)
- *This trade will go on to **win** in later slides.*



2b) In this example, we see a buy limit order set at 1.17334, with a Stop Loss of 1.17314, and a take profit of 1.17432
- *This trade will go on to **lose** in later slides.*

Core Functionalities Development

6) How to Determine a Trade Win or a Trade Loss – (Part 3)

3) Resolved Trades (Win, Loss, or Closed Early) Show in Account History

Order	Time	Type	Size	Symbol	Price	S / L	T / P	Time	Price	Swap	Profit
1496734462	2025.10.01 20:46:18	buy	1.00	eurusd	1.17374	1.17334	1.17400	2025.10.01 20:48:40	1.17400	0.00	26.00
1496740949	2025.10.01 21:18:21	buy	1.00	eurusd	1.17334	1.17314	1.17432	2025.10.01 21:21:37	1.17314	0.00	-20.00
Profit/Loss: 12.00 Credit: 0.00 Deposit: 10 000.00 Withdrawal: 0.00											**10 012.00**

Terminal | Trade | Exposure | Account History | News | Alerts | Mailbox 7 | Company | Market 131 | Articles 23 | Code Base | Experts | Journal

For Help, press F1 | Default | 1861/4 kb

In this example here, we see the result of our two limit orders that triggered and closed out in Account History

Based on the left most time stamp of the first row, this corresponds to the trade on the previous slide in our initial example. This trade closed at a profit at the right most time stamp of this screenshot.

Based on the left most time stamp of the second row, this corresponds to the trade on the previous slide in our second example. This trade closed at a loss at the right most time stamp of this screenshot.

The resulting colors represent the result of the trades: Green = Win | Red = Loss

**The third case not shown here would be an early trade exit: Gray = Premature Exit.

Core Functionalities Development

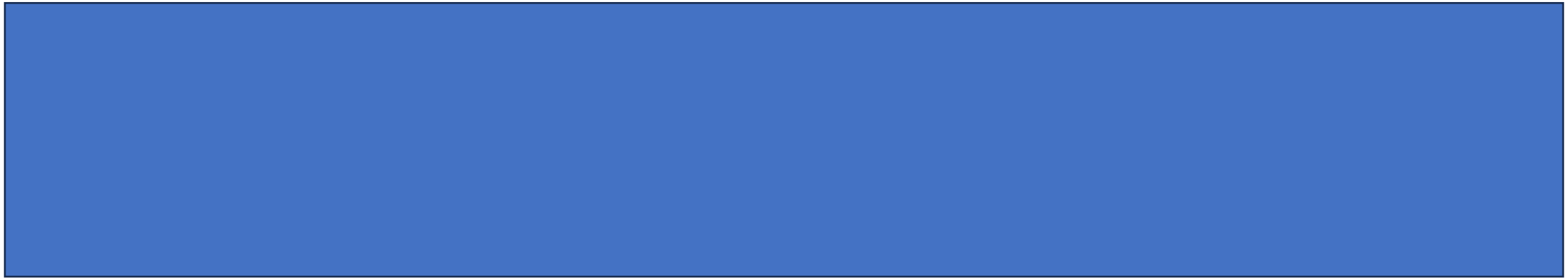
7) Logging Functionalities (Part 1)

The bot logs should provide us visuals and data of when key decisions are made during the course of running the bot.
Demand Zones should be BLUE | Supply Zones should be ORANGE | Cancelled Zones should be RED

Key Decisions Include:

1) Creating Zones/Limit Orders

- Show a visual of the 15m chart with the new zone created being all the way to the right of the snapshot so that we can study the market structure that preceded it.
- Show a visual of the zone that gets created on the indecision candle based on the colors above.
- Provide a snapshot of the following data:



Core Functionalities Development

7) Logging Functionalities (Part 2)

Key Decisions (continued):

2) Switch of Market Trend

3) When a Trade is Entered

4) When a Zone is Cancelled

Core Functionalities Development

7) Logging Functionalities (Part 3)

Key Decisions (continued):

5) When a Trade is Won or Lost

- Provide Log Data on when the trade that was entered via Limit Order is Won
- Provide Log Data on when the trade that was entered via Limit Order is Lost

6) When Daily Trade Limit is Reached

- Provide data when the bot reached its configured trade limit for the day
- Provide data describing the result of the trades for the day

  Example:

  Trade 1 – 5:17am – Result: Win

  Trade 2 – 11:17am – Result: Loss

Core Functionalities Development

7) Logging Functionalities (Part 4)

Overall Bot Performance Logs:

1) Overall Trade Performance

- Log the gross profits of the bot (Total Profits)
- Log the gross losses of the bot (Total Losses)
- Log the net proceeds of the bot (Total Profits – Total Losses)
- Calculate the Bot's Win Rate
  (This will calculate wins as any trade that ended profitably)
- Calculate the Bot's **Absolute** Win Rate
  (This will calculate wins only as trades that reached the take profit level).

$$\text{Win Rate}(\%) = \left(\frac{\text{Total Winning Trades}}{\text{Total Trades Executed}}\right) \times 100$$

- **Total Winning Trades:** The number of trades closed with any amount of profit.
- **Total Trades Executed:** The total number of completed trades (both winners and losers).

Core Functionalities Development

Bot Logic Snapshot Review

1) Check when an indecision candle shows up

2) Once the candle next to the indecision candle finishes drawing, check if its volume is >= our threshold

3)

4)

5)

6)

Project Roadmap