您是一位資深專業的金融程式設計師,熟悉 Pine Script v5, 您知道如何編寫指標和策略,並且了解它們在程式碼中的差異。現在的任務是將以下的編寫指示及指標轉換為策略,再寫成一個 Pine Script v5 indicator for Trading View的檔案,利用 1-minute trading strategy,包括integrates the following technical elements:

## 編寫指示

- MACD with configurable input parameters to detect bullish and bearish signals.
- One or more moving averages to determine trend direction.
- Dynamic automatic identification and plotting of support (bottom) and resistance (top) levels on the chart.

The strategy should generate clear buy signals when the MACD shows bullish momentum near support levels, and sell signals when the MACD shows bearish momentum near resistance levels. The code must be well-commented, efficient, and follow Pine Script best practices, optimized specifically for a 1-minute timeframe.

## # 何時買入和何時賣出 Steps:

- 1. Define user input parameters for MACD (fast length, slow length, signal smoothing) and moving averages (type and length).
- 2. Calculate the MACD line and signal line according to input parameters.
- 3. Compute the selected moving averages to reflect trend direction.
- 4. Dynamically identify support and resistance levels by analyzing recent price action, possibly incorporating multi-timeframe data using request.security if appropriate.
- $5.\ \mbox{Implement}$  logic to generate buy signals when MACD indicates bullish momentum near identified support levels.
- 6. Implement logic to generate sell signals when MACD indicates bearish momentum near identified resistance levels.
- 7. Plot MACD lines, moving averages, support and resistance levels, and buy/sell signals clearly on the chart with distinct colors and labels.

請遵循以下說明:將所有指標專用程式碼轉換為策略專用程式碼。請勿使用任何策略不支援的程式碼, 尤其是時間週期和缺口。請在程式碼中定義這些程式碼, 使其語義與之前一致。

- 如有時間週期邏輯, 請保留。填補缺口。
- 如果指標正在繪製某些內容, 策略代碼也應繪製相同的內容, 以保留視覺效果。
- 只需設定多頭、空頭和持平。
- 您可以使用 50-100% 的資金。
- 將佣金設定為 0.1%
- 將滑點設為 0。
- 將所有其他策略設定保留為預設值(即完全不要設定它們)。
- Ensure the script maintains high efficiency and responsiveness on the 1-minute timeframe.
- Include comprehensive comments within the code to explain the functionality of each section.
- Utilize best practices for Pine Script v5 including proper variable naming and use of built-in functions.
- Consider edge cases where support/resistance levels may shift rapidly due to volatility.

## 注音要點

- \*輸出格式: Provide a complete Pine Script v5 code snippet that is ready to be copied and pasted directly into TradingView's Pine Editor.
- \* 對PineScript 可以參考《Pine Script® User Manual》https://www.tradingview.com/pine-script-docs/,《Trading View Pine Script 教學》

https://www.quants.hk/%E5%AD%B8%E7%94%A8trading-view-pine-script%E5%AF%AB%E4%BA%A4%E6%98%93%E7%AD%96%E7%95%A5/, https://quantpass.org/pine-script/,又或是參考《MQL5 Programming for Traders》by Stanislav Korotky 這本書,又或是參考《零基礎學Pine Script:基於TradingView平台的量化分析》by 閻英姿 這本書,又或是參考《TradingView Pine Script Programming From Scratch: Build indicators, signal generators, backtest and automate trading logic》by Achal 這几本書的內容去編寫Pine Script

\*基於以上腳本,能否加入一些程式碼來管理風險並停損,從而實現利潤最大化?