**Grid Trading Bot Design**

**1. Foundation Design**

* **Core Components**:
  + **Grid Trading Mechanism**:
    - Establishes multiple buy and sell orders around based on the dynamic **range with auto re-center line (Range Hybrid)**.
* **Key Indicators**:
  + **Range Hybrid**: Identifies significant price peaks and troughs to set grid levels and the center line.
  + **Trend Signal**: Determines the prevailing market trend (bullish or bearish).  
    It can combine multiple indicators to determine the trend with coherence.  
    We can use supertrend with user selected timeframe as Trend Signal initially.
  + **Squeeze Signal**: Measures volatility to identify ranging market.  
    It can combine multiple indicators to determine the Squeeze condition with coherence  
    We can use squeeze index with user selected timeframe and user defined threshold as Squeeze Signal initially.
* **Basic Logic**:
  + **Order Placement**:
    - Place buy and sell orders based on the grid.
  + **Trend Confirmation**:
    - Execute trades only in the same direction indicated by the Trend Signal.
  + **Volatility Filtering**:
    - Pause new trades if the Squeeze Signal indicates low volatility.
  + **Breakeven Logic**:
    - Prioritize breakeven close trade to eliminating risk on open positions.
    - Basket Trade Closure with breakeven profit
      * Can be opposite direction breakeven: N buy trade to close N sell trade with sum > breakeven profit amount (defined user)
      * Can be same direction breakeven: N buy trade close N buy trade with sum > breakeven profit amount (defined user)
      * Can be same direction breakeven: N sell trade close N sell trade with sum > breakeven profit amount (defined user)
  + **Take Profit Logic:**
    - Remaining Trade can base on TP amount or Profit %
  + **User Input:**
    - All configurations can be input by users and avoid hardcode in program