

# Historic Quote provider

## Historic Quote Provider

This is one module that will be providing continuous candle data, when triggered from the caller. It implements a class. With the following APIs.

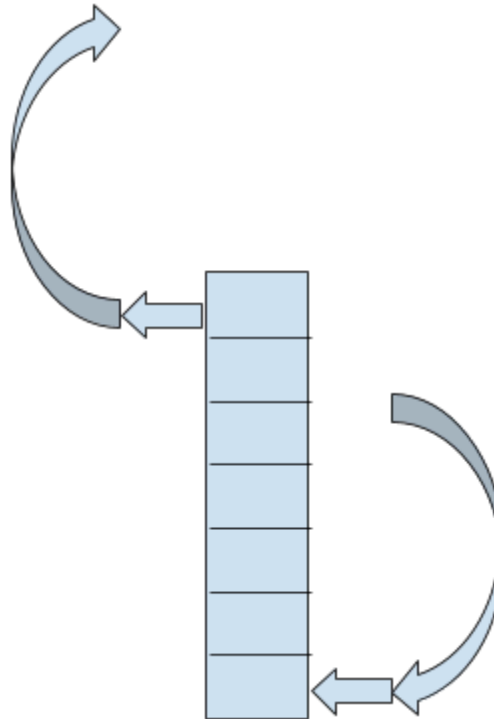
### Implementation:

This would be implemented with 2 threads.

- **Processor Thread** : HistQuoteProvider class will not create this thread. This module would use the callers thread as processor thread.
- **Fetcher Thread** : HistQuoteProvider class would create this thread when candle providing is initiated (API call InitCandles()). This thread is responsible for fetching the candles data either from web APIs or through file read from the storage.
- There are 2 possible sources of data.
  1. Excel sheets, where the data is pre-fetched and collected.
  2. Fetch data from web directly (using y-finance, tvdata, angle smartAPI or icici direct breeze APIs)

**Processor Thread:**

Picks candle data from queue and calls callback with candle data

**Fetcher Thread:**

Gets historical candle data from web or collection excel sheet and adds to queue.

## Class HistCandleProvider

### Attributes

- Queue
- QueueSize
- Simbol
- StartTime
- EndTime
- Interval
- IsSessionActive = false
  - To make it true when InitCandles is called.
  - To make false when all data fetched or stopped by user

# APIs

## InitCandles

### Params

- Instrument (Symbol)
- Start time
- End time
- interval

### Return

- SUCCESS
- ERROR - only if IsSessionActive is already true

### Process

- If IsSessionActive is true return ERROR
- Make IsSessionActive = true
- Create the queue. The queue size to be decided based on the interval, start time and end time.
- Identify the source if it should read from the file or get data from the web.
- Start the fetcher thread that fetches the data and start filling in the queue.
- Return

## GetCandle

### Params

### Return

- Candle

### Process :

- Pick the first candle from the queue
- This API will block if queue is empty and IsSessionActive is true
- This API will return None if queue is empty and IsSessionActive is false

## PopCandle

### Params

### Return

- None

Process :

- Remove the first candle from the candle

## GetCurrentTime

Params

Return

- time

Process :

- Pick the first candle from the queue and return the current candle time
- This API will block if queue is empty and IsSessionActive is true
- This API will return None if queue is empty and IsSessionActive is false

## MoveToTime

Params

- time

Return

- SUCCESS
- ERROR - if the time is not in range

Process :

- Remove candles till the candle with specified time is reached.
- This API will block if time is not in queue

## StopCandles

Params

Return

- None

Process :

- Stop the fetcher thread
- Make IsSessionActive = false
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