**Indian Stock Market Live Data Collection**

**Summary:**

I need a python developer who can code to collect the **API Live Feed data** from Angel Broking (Broker) and effectively save the live streaming tick data to local database.

**Detailed Description:**

**Broker Live Feed (API):** I will provide the API credentials. Site: <https://smartapi.angelbroking.com/>

You can refer the below link for documentation of API.

<https://smartapi.angelbroking.com/docs>

<https://github.com/angel-one/smartapi-python>

On collecting WebSocket streaming Live data from the Broker Live Feed API, we need to store the data into any **efficient open-source SQL/any Database\*** *(Which is fast, reliable, efficient, parallel access, easy to backup/export/import between systems)* within the system and the tick/candle data can be accessed parallelly (if needed).

The code/application needs to be developed in Python. If we run the code(anytime), it should wait for Market Hours (09:15:00 AM to 03:30:00 PM) and should automatically start collecting live data from API during Market Hours from First Tick to Last Tick of the day. I will provide the list of instrument tokens (Code and Logic also available with me) for which the data to be collected. You can save the data collected to the respective tables.

Data to be collected is LTP [Last Traded Price] (this value is obtained directly and then to store in tables, we need to save as OHLC (Open-High-Low-Close) of 5-Seconds Timeframe) and Volume (this value is obtained directly and then to store the Volume, we need to subtracting the current volume data received with last volume data). No duplicates should come in. We need to collect data for 3 Index Tokens (NIFTY, BANKNIFTY and FINNIFTY\**(Yet to Finalize this index alone)*) and its available OPTIONS Tokens (Each Index may have around 60 CE and 60 PE Options Tokens).

Table Naming Convention – We can discuss on this for easier identification and efficient storage.

**Received Live Data Feed for BANKNIFTY/NIFTY Index and BANKNIFTY/NIFTY CALL & Put Options:**

**View of Live Tick data:**

Ticks: [{'e': 'nse\_fo', 'ltp': '44.45', 'ltq': '50', 'ltt': 'NA', 'name': 'sf', 'tk': '52931'}]

Ticks: [{'e': 'nse\_fo', 'ltp': '230.30', 'ltq': '50', 'ltt': 'NA', 'name': 'sf', 'tk': '40070'}]

This is example of **Index Data:**

**Ticks:** NIFTY and BANKNIFTY:

[{'name': 'tm', 'tvalue': '12/10/2022 14:44:07'}, {'c': '16983.55', 'cng': '138.05', 'e': 'nse\_cm', **'ltp': '17121.60'**, 'ltt': 'NA', 'name': 'sf', 'nc': '00.8128'**, 'tk': '26000'**},

{'c': '38712.45', 'cng': '332.95', 'e': 'nse\_cm', **'ltp': '39045.40'**, 'ltt': 'NA', 'name': 'sf', 'nc': '00.8601', **'tk': '26009'**}]

These are some examples of **Options Data:**

Ticks: [{'ap': '178.57', 'bp': '230.05', 'bq': '225', 'bs': '125', 'c': '174.05', 'cng': '56.45', 'e': 'nse\_fo', 'lo': '123.00', **'ltp': '230.50',** 'ltq': '25', 'ltt': '12/10/2022 14:44:07', 'name': 'sf', 'nc': '32.4332', 'sp': '230.55', 'tbq': '310750', **'tk': '40070'**, 'to': '8314674553.50', 'tsq': '319825', **'v': '46562550'**}, {'ap': '76.68', 'bp': '44.35', 'bq': '600', 'bs': '450', 'c': '115.35', 'cng': '-70.85', 'e': 'nse\_fo', 'lo': '42.50', 'ltp': '44.50', 'ltq': '100', 'ltt': '12/10/2022 14:44:06', 'name': 'sf', 'nc': '-61.4218', 'sp': '44.45', 'tbq': '978650', 'tk': '52931', 'to': '18387840996.00', 'tsq': '1938000', 'v': '239799700'}]

Ticks: [{'e': 'nse\_fo', 'ltp': '44.45', 'ltq': '100', 'ltt': 'NA', 'name': 'sf', 'tk': '52931'}]

Ticks: [{'e': 'nse\_fo', 'ltp': '229.40', 'ltq': '75', 'ltt': 'NA', 'name': 'sf', 'tk': '40070'}]

Ticks: [{'name': 'tm', 'tvalue': '12/10/2022 14:44:08'}, {'c': '16983.55', 'cng': '137.15', 'e': 'nse\_cm', 'ltp': '17120.70', 'ltt': 'NA', 'name': 'sf', 'nc': '00.8075', 'tk': '26000'}, {'c': '38712.45', 'cng': '332.35', 'e': 'nse\_cm', 'ltp': '39044.80', 'ltt': 'NA', 'name': 'sf', 'nc': '00.8585', 'tk': '26009'}]

Ticks: [{'ap': '178.57', 'bp': '228.55', 'bq': '125', 'bs': '150', 'c': '174.05', 'cng': '55.00', 'e': 'nse\_fo', 'lo': '123.00', **'ltp': '229.05'**, 'ltq': '25', 'ltt': '12/10/2022 14:44:08', 'name': 'sf', 'nc': '31.6001', 'sp': '228.95', 'tbq': '312375', **'tk': '40070'**, 'to': '8315170085.25', 'tsq': '327475', **'v': '46565325'**}, {'ap': '76.67', 'bp': '44.70', 'bq': '1150', 'bs': '900', 'c': '115.35', 'cng': '-70.70', 'e': 'nse\_fo', 'lo': '42.50', 'ltp': '44.65', 'ltq': '50', 'ltt': '12/10/2022 14:44:08'**,** 'name': 'sf', 'nc': '-61.2917', 'sp': '44.85', 'tbq': '982300', 'tk': '52931', 'to': '18386581548.50', 'tsq': '1932200', 'v': '239814550'}]

Ticks: [{'e': 'nse\_fo', 'ltp': '44.80', 'ltq': '100', 'ltt': 'NA', 'name': 'sf', 'tk': '52931'}]

Ticks: [{'e': 'nse\_fo', **'ltp': '229.20'**, 'ltq': '25', 'ltt': 'NA', 'name': 'sf', **'tk': '40070'**}]

**tk =** respectivetoken of the instrument.

**ltp** = last traded price (This is the price data we need to collect for both NIFTY and BANKNIFTY Index and its respective CE and PE Options)

**ltt** = Last Traded Time (This is the time when the instrument was last traded). (Available only for Options)

**v** = volume (Available only for Options)

If there is any need for multithreading/multiprocessing for efficiency, we need to use it. This is for making instant availability of data for further processing.