Java Programming Test

Create an application in Java, Maven using Binance Java Library. The application should handle orderbook updates and save the updates into a local database of your choice. Binance Java Library can be found here - https://github.com/binance-exchange/binance-java-api

General Steps in your application:

1. Subscribe to depth events and cache any events that are received.
2. Get a snapshot from the rest endpoint and use it to build your initial depth cache.
3. Apply any cache events that have a final updateId later than the snapshot's update id.
4. Start applying any newly received depth events to the depth cache.
5. The example repeats these steps, on a new web socket, should the web socket connection be lost.

Note: Snapshots of the order book can be retrieved from the REST API. Delta changes to the book can be received by subscribing for updates via the web socket API. To ensure no updates are missed, it is important to subscribe for updates on the web socket API before getting the snapshot from the REST API.

Get all BTC pair data (but only that you can buy using BTC ex: ETH/BTC, BNB/BTC) and there are 100+ such pairs and store it in a local database.

The database of your choice should be:

- Accurate, no data loss
- As fast as possible
- Take as least disk space as possible
- **TIP:** Able to handle time series data very well

FAQ:

1. Do I need to code for single BTC pair or all BTC pairs?
   a. All BTC pairs. The library already has tests/example which shows how to get the data for "ETHBTC" combination. You have to figure out how many "XYZBTC" pairs data exist on Binance exchange and create a local cache for all those pairs
2. Where can I find all BTC pairs?
   a. You have to figure this out from Binance exchange listed “XYZBTC” pairs.
3. What information do I need to save in the DB on update events?
   a. The events are BIDs and ASKs order book.
4. Is it still not clear?
   a. Binance is an exchange to buy and sell crypto currency. If you look at this link https://www.binance.com/en/trade/pro/BNB_BTC you will see buy, sell orders for the pair BNB/BTC. They are updated as the new orders come in. Binance exposes API to fetch this data using REST API and websockets, see the examples on github. What we would like you to do is to cache this data for all XYZ/BTC pairs (ex: ETH/BTC, BNB/BTC etc.,) in a local database.

Bonus Points!!

If you can display active order book for a selected pair (Ex:BNB/BTC) like below. The display should have pair selector, sell orders and buy orders. You can see an example from this link - https://www.binance.com/en/trade/pro/BNB_BTC


24h Low
0.0027643
24h Volume
9,587.77 BTC
BNB / BTC
groups
6 decimals
Price(BTC)
Amount(BNB)
Total(BTC)
0.0028839 18.54 0.05346751
0.0028838 39.93 0.11515013
0.0028836 29.96 0.08639266
0.0028834 28.89 0.08330143
0.0028832 36.38 0.10489082
0.0028830 26.12 0.07530396
0.0028828 4.36 0.01256901
0.0028827 47.87 0.13799485
0.0028826 0.19 0.00054769
0.0028826↓ $34.42
0.0028799 0.69 0.00198713
0.0028798 0.51 0.00146870
0.0028790 14.96 0.04306984
0.0028789 16.77 0.04827915
0.0028785 236.90 0.68191665
0.0028782 5.92 0.01703894
0.0028781 140.32 0.40385499
0.0028775 0.64 0.00184160
0.0028771 0.45 0.00129470