UI Flow.

1. In UI we will have Optimization Container above Strategy. This will display as per Strategy selection (Which Deepak will show in Excel , Green – Always present , Yellow – Conditional display
2. UI will send 3 requests.
3. 1st Request. With Json , we need to generate key (**Datetimehourssec+Strategyname**) and send that with Request json.
4. We need to store that key local in UI with status pending. (This should not wipe out even if Machine is shutdown).
5. When you send the First request with key to API that time you will get response as count of combination generate from Optimization Parameters (API Name (**GeneratKey**)
6. Then After that call 2nd API one by one. Send (**key and count number**) Once you get the response. (API Name (**runOptimization**). Which you need display in grid.
7. Suppose Machine got Shutdown or Page got Refresh. That when User Open that strategy from optimization Screen that time UI should smart enough to popup by staying “**PREVIOUS Optimization is pending**”). You want to run yes or no.
8. If yes then Call 3rd API (**retryOptimization**) with Key Generate in 1st Request by passing to API. This will again send you a complete combination of the response with pending count.
9. Then Completed combination response with display in grid and counter will start for pending one.
10. Once all counter is FINISH and got response from api then delete the key from local storage.
11. UI should able to run multiple strategy for Optimization parallel on different browser.
12. UI Should be able to see all the response displayed in grid. and user should also be able to see which strategy combination he has ran the Optimization.
13. We need to export CSV for grid display.
14. When Existing Strategy details are required then call 5th API (**getStrategyDetails)**

Backend

1. When we get 1st API call that generates Combination and save it in table with key, counter number, combination key and status.
   1. **We also need to save JSON which given on request. With Strategy and Optimization.**
   2. **Strategy JSON, Optimization JSON and Key – This is one FullJSON**
2. When we get 2nd API call that time first check we have got database in local. If not then get it else use local database
   1. Same get all the list from Optimization key for that key and keep in local if we don’t have list in local. So next time we will not call DB for list
   2. Then run the Back testing with key combination send by api.
   3. Once Back testing response is ready then update (**Optimization table status SUCCESS** for that counter number.
3. When we get 3rd Api all that get all combination of from Optimization table and return response of result for which back testing is completed , ,Counter which is pending **and JSON which is saved in 1st API Request**.
4. We need to create 4th Api for return tradebook details for particular sequence and key
5. 5th Api (**getStrategyDetails**), Create with parameter StrategyID (Optional). When Strategy ID is provided then filter records with only strategy ID . When the Strategy ID is not provided then send all the strategy details with status

**List in Record**

1st Id , 2nd . Strategy Name, 3rd Strategy Key 4th Status 5th Last Run date. 6th Optimization Name (Optional)

**Optimization Details**

1. Id
2. opid
3. Combination Key
4. Status (Success/Pending)
5. Response Result.
6. Datetime stamp
7. User

**Optimization**

1. opid
2. Strategy ID.
3. Key
4. FullJSON

**Future Enhancement**

1. This should work on multiple tab in a single browser.