

DOCUMENTATION ON
NSE/BSE ARBITRAGE
RECOMMENDATION SYSTEM

Table no. 16

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1. Problem Statement:

Arbitrage Recommendation System - Create a trade recommendation system. Fetch the live stock market data and calculate the arbitrage to recommend to the user buying and selling of stocks.

2. Approach:

Arbitrage trading is an opportunity to make profits from differences in values between the two markets of same script. In Indian stock market stocks are traded in two major exchanges- NSE (National Stock Exchange) and BSE (Bombay Stock Exchange). Usually arbitrage values are fluctuating. They tend to change very quickly. Due to this quick changes it is difficult to do all calculation for arbitrage manually. Recommendation system can consider changes really quickly and suggest appropriate option. No possibility of errors while calculations. So having a recommendation system is more efficient than manual work.

Basic approach was to understand the problem statement and requirements of the system. The next step was to explore the technologies which will be suitable and efficient. Deciding the model and work flow of the project. Next step was to look for suitable API. Exploring MyBatis for connectivity of database with spring and on API part extraction of real time data.

3. Solution:

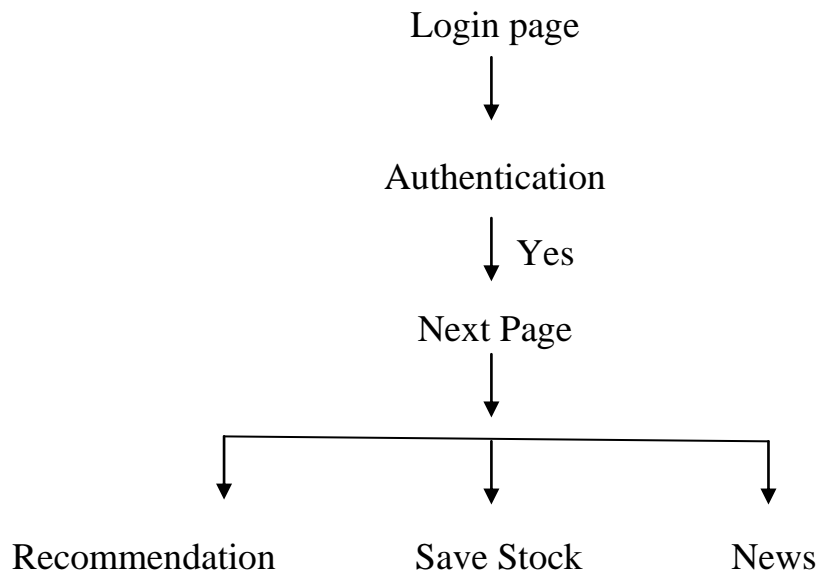
The arbitrage recommendation system makes it easier for the common users to decide on the buying and selling of stocks according to current stock market situation. This product allows the user to save the recommended stocks in the form of a user wish list.

Technologies used:

- ANGULAR 7
- SPRING FRAMEWORK
- ORACLE
- ALPHA VANTAGE API
- MYBATIS
- NEWS API

Oracle data base is used and its connected with spring using MyBatis. For live stock market data extraction Alpha Vantage Time Series Intraday API is used. Front end is developed in angular. Real time business news is displayed using a Newsapi. The password is encrypted for security measures. This is done by CryptoJs.

Flow chart:



4. User Guide:

- User must login with valid user name and password for accessing website.
- Once logged in user gets redirected to home page.

- On home page, the side bar contains options like Arbitrage, Save Stock, News and Log out.
- When clicked on “Arbitrage” user will be asked to enter company name and buy/sell from the provided drop down list. After submitting the details by clicking on “Submit” button NSE and BSE values, arbitrage and recommendation will be displayed.
- “Save Stock” button enables the user to save the company along with number of stocks for future references.
- In “News” tab, top business news is displayed.
- Log out

5. Conclusion and Future Scope:

This product provides the common user with an easy way to get recommendations on investing in stock market. Since the stock market keeps fluctuating, it is difficult to make decisions about investment. This product brings ease of life in that aspect by automating the whole process.

Currently the product is for selected few companies. Recommendation system for other companies will be added in the future. Sector based trade recommendation can also be implemented.