A PROJECT-BASED REPORT ON

Citi Bridge Project #4

BSE/NSE Arbitrage Recommendation System

**A report submitted
by Group 5**

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1. <u>INTRODUCTION</u>

a. <u>Purpose:</u>

The purpose of this project is to construct a trade recommendation system based on Arbitrage opportunity between BSE and NSE (from Nifty stocks). Also it will give the option to save stocks and stats for the user so that he/she can refer to it later.

b. <u>Scope:</u>

This project will be useful for the user to get recommendations for the arbitrage opportunity between BSE and NSE so that users can work accordingly and get benefitted. Along with the recommendation saving option will help users to see the saved stocks and data later.

c. <u>Overview:</u>

Using the API the proper prediction for the arbitrage opportunity is done which will recommend the user for arbitrage opportunity within BSE and NSE. Users will be given an option to save any of the recommended arbitrage trades with quantity and current market price. The Data will be persisted in the DataBase. Hence data will not be not lost after the user closes the browser.

2.   <u>GENERAL DESCRIPTION</u>

- The objective of the user is to get a trade recommendation from the application which uses real time APIs to calculate the arbitrage value.
- Users in this case can also save recommendations so that they can get back to it later.
- The general functions of this application includes:
  - ☐ A login system for the user,
  - ☐ Display of NSE and BSE stocks,
  - ☐ Calculation of arbitrage,
  - ☐ Recommendation of stocks,
  - ☐ Option to save recommendations,
  - ☐ Option to view saved recommendations.

3. <u>FUNCTIONAL REQUIREMENTS</u>

a. <u>Fetching Data From API</u>

market data is used to take the Nifty stocks and their prices on the BSE and the NSE. We have used the yahoo finance API for fetching the data. (link: https://finance.yahoo.com/quote/WU/history?ltr=1)

b. <u>Recommendation of Stocks</u>

On the basis of the difference between the two prices a set of recommendations is made where arbitrage opportunities exist.

c. <u>Designing of User Interface for Display</u>

User Interface is designed for the output to display key statistics alongside suggestions.

d. <u>Saving the Data in Database</u>

User can select to save any of the recommended arbitrage trades with quantity and current market price. The Data is persisted in Database so that the data is not lost after the user closes the browser.
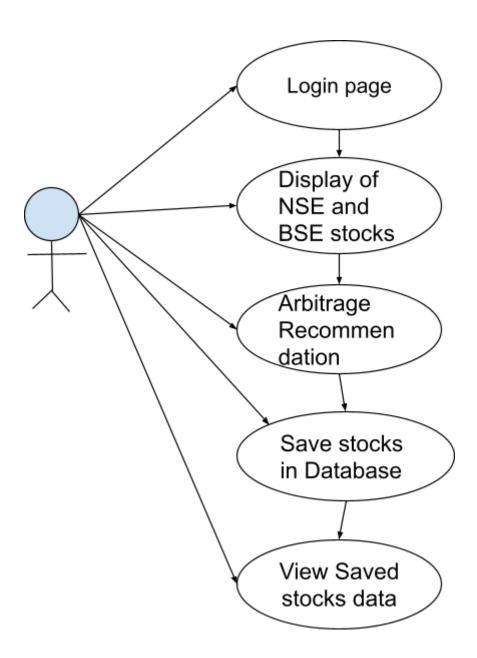
e. <u>Login for Every User</u>

Login page is provided for every user to log in to system with a username and a password.

4. <u>INTERFACE REQUIREMENTS</u>

- Login Page software:

  Here, the users have to enter their details to log in to the system.

- APIs to fetch NSE and BSE values:

  The NSE and BSE values are fetched from the yahoo finance

  API (which is a open source module)

- Interface that connects to database to save recommendations:

  Finally, users will find an option 'save' recommendations, further

  they'll be stored into the database via API calls.
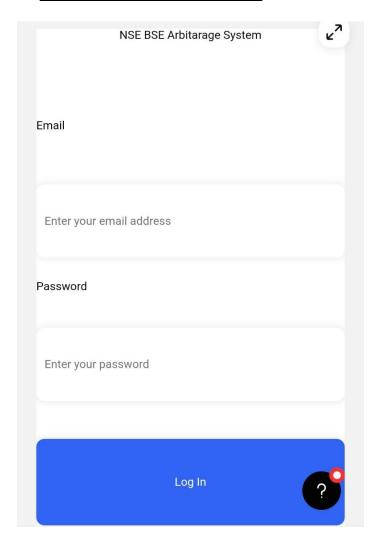
5. <u>SYSTEM MODEL</u>

6. <u>**CONCLUSION**</u>

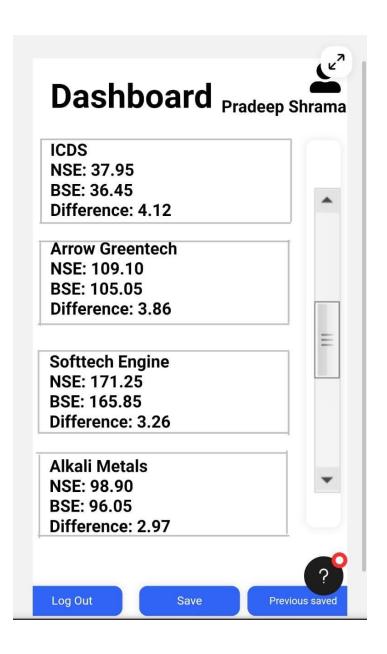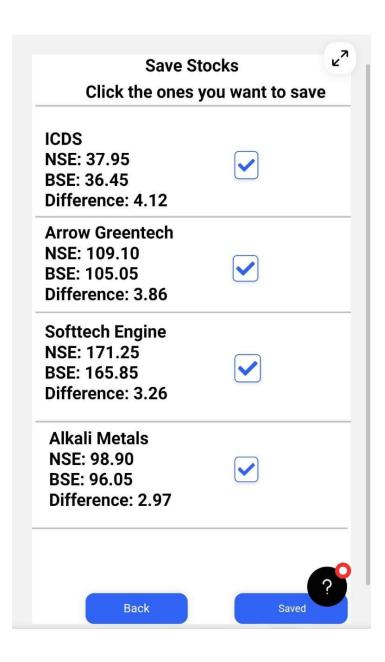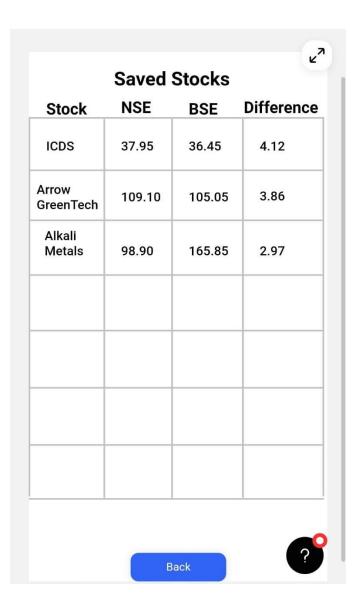In conclusion, the aim of this project is to create a system that makes the work of the users easy by not only providing NSE and BSE statistics but also trade recommendations to the user. The users can choose to invest accordingly and save the recommendations they want.

7. <u>SCREENSHOTS</u>

NSE BSE Arbitarage System

Email

Enter your email address

Password

Enter your password

Log In

Dashboard

Pradeep Shrama

ICDS
NSE: 37.95
BSE: 36.45
Difference: 4.12

Arrow Greentech
NSE: 109.10
BSE: 105.05
Difference: 3.86

Softtech Engine
NSE: 171.25
BSE: 165.85
Difference: 3.26

Alkali Metals
NSE: 98.90
BSE: 96.05
Difference: 2.97

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Log Out | Save | Previous saved

Save Stocks

Click the ones you want to save

ICDS
NSE: 37.95
BSE: 36.45
Difference: 4.12
☑

Arrow Greentech
NSE: 109.10
BSE: 105.05
Difference: 3.86
☑

Softtech Engine
NSE: 171.25
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☑

Alkali Metals
NSE: 98.90
BSE: 96.05
Difference: 2.97
☑

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Back

Saved

Saved Stocks

Stock	NSE	BSE	Difference
ICDS	37.95	36.45	4.12
Arrow GreenTech	109.10	105.05	3.86
Alkali Metals	98.90	165.85	2.97

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8. REFERENCES

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4) http://finance.yahoo.com/quote/WU/history?ltr=1
5) http://www.investopedia.com/
6) https://www.youtube.com/
7) https://www.geeksforgeeks.org/software-requirement-specifi
   cation-srs-format/