2020

CAB230 Stocks API – Client Side

CAB230

Stocks API – Client-Side Application

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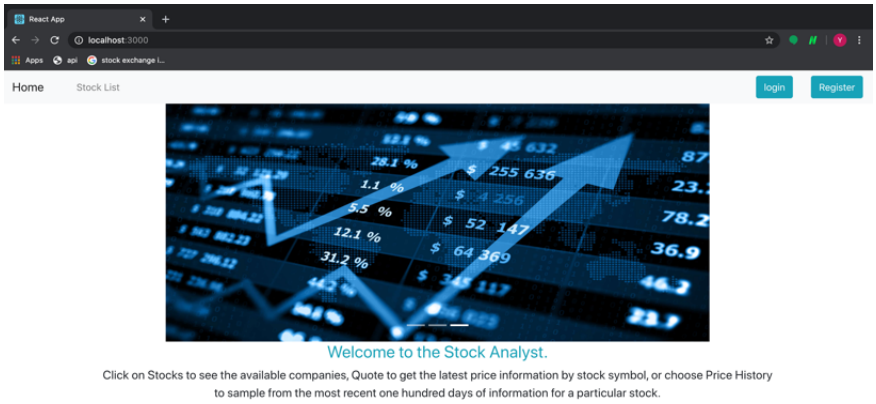
Introduction

Purpose & description

React-based web application allow users to view and analyze stock market statistics data from an American Exchange from November 2019 through to March 2020. Users are able to create an account via register form and simply log in to see stock's price history via Login form. Moreover, users can explore stock list shown in the table via filter option in name, symbol and industry columns. Users can explore particular symbol by clicking on the row in stock list table. Furthermore, users are able to explore particular stock history by selecting date range and the results will appear in table and line chart. In the app home page, there is three dynamic images relates to stock exchange along with welcome message that give users a clue what is the app about.



Completeness and Limitations

[Grade of 6 and 7 level]

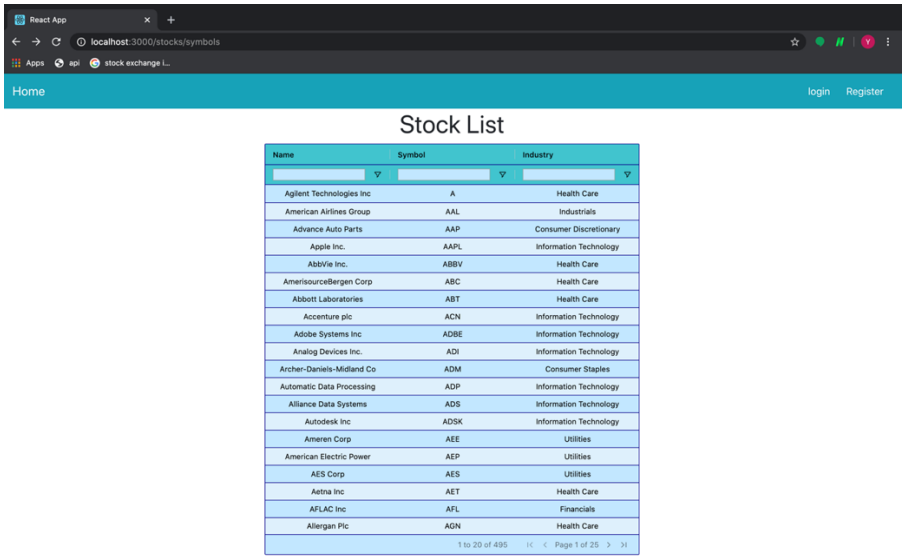
Login and registrations forms works with error handling. Successful implementation of the user endpoints and the authenticated queries. Navigation is handled using React Router, react forms are used for data entry (login and register from). Line charts has been used to show price history by selecting date range. Every button in this app has functionality. For example, when user click on the stock list in the home page, then it routes to stock list page, and if the user clicks on login, register button in the home page then it routes to login page and register page respectively. Also, when user click on the stock list's row, it shows details for that particular symbol. When the user selects dates in stocks/authed/{symbol} route, the table will show all the price history between those selected dates, along with the chart.

Limitation of this app is that; logout button has not been implemented and the date format from API has not been changed in the table.

Use of End Points

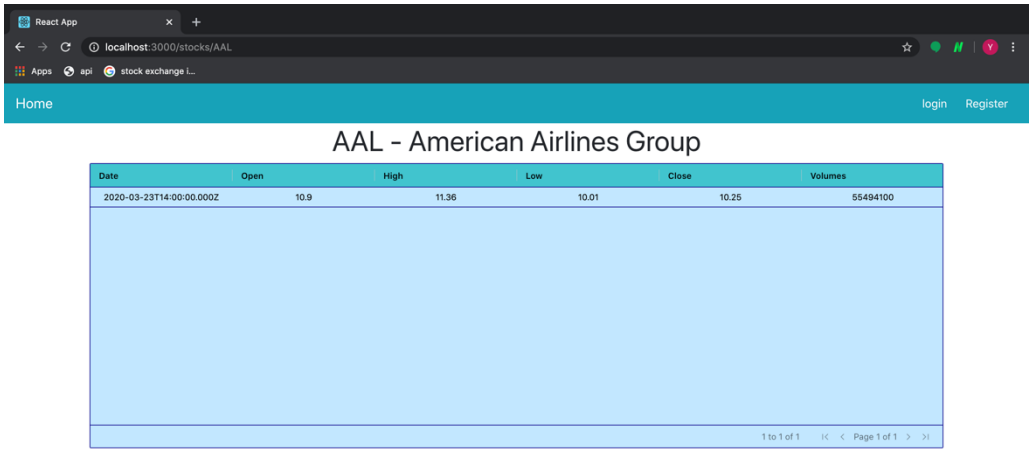
/stocks/symbols

This page shows the dataset consists stock market data drawn from an American exchange including name, symbol and industry. Users are able to filter data by name, symbol or industry. They can click on the row to explore more detail about that particular item. They can use pagination to see next and previous page. From this page they are able to go to login, register and home page.



/stocks/{symbol}

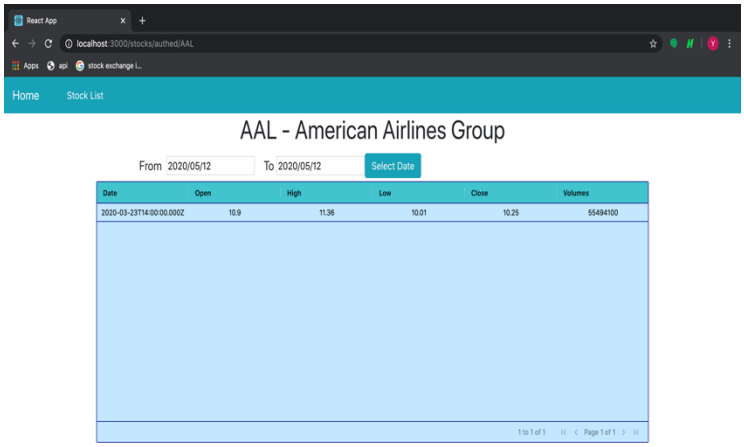
Users are able to see more details about that particular symbol. By clicking on the row, it navigates to stocks/authed/{symbol} page.



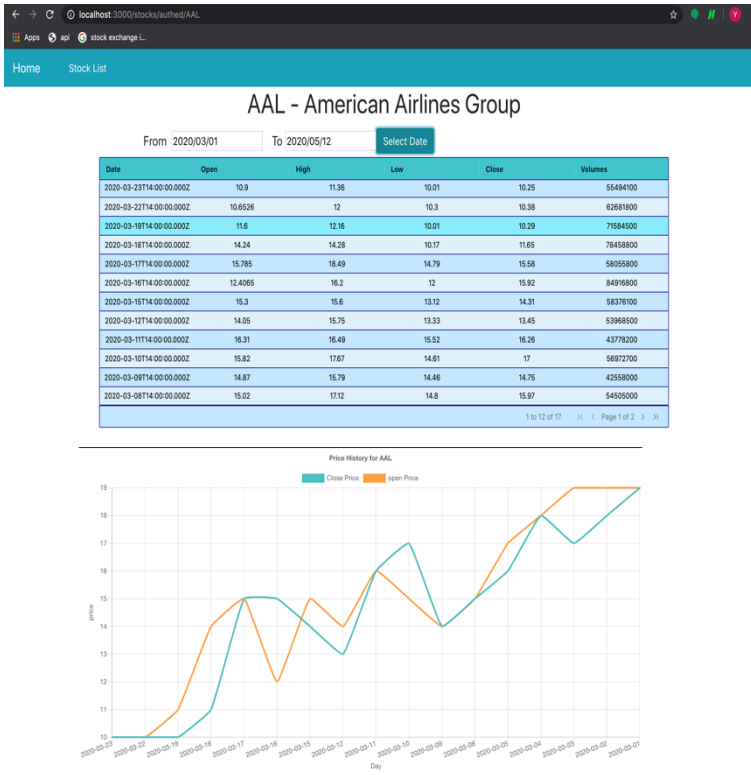
/stocks/authed/{symbol}

In this page if the user is authenticated, she/ he can see all the price history for the particular symbol by selecting date range. Results will be shown via table and a line chart will display closing and opening price between selected dates.

Before user select dates:

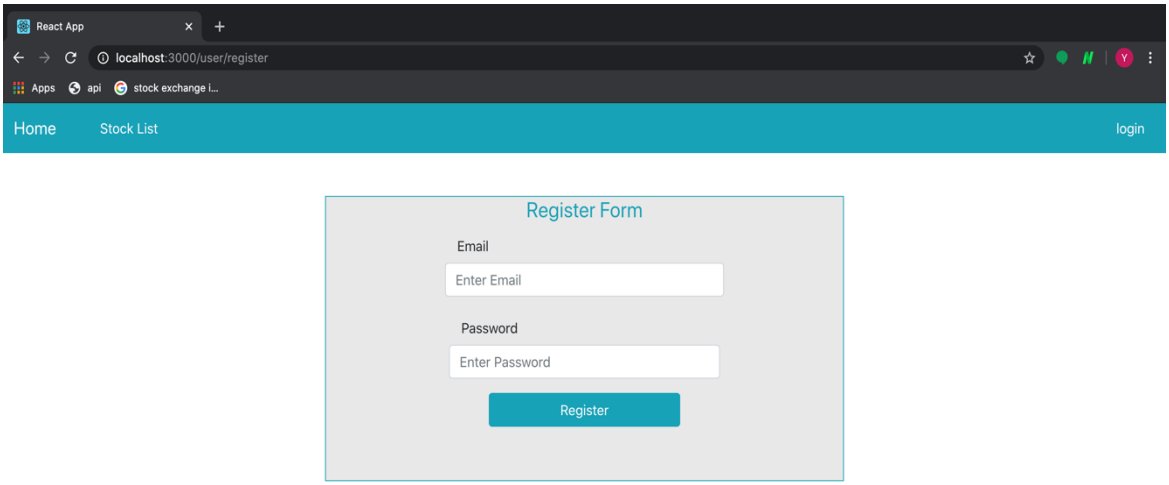


After user select dates:



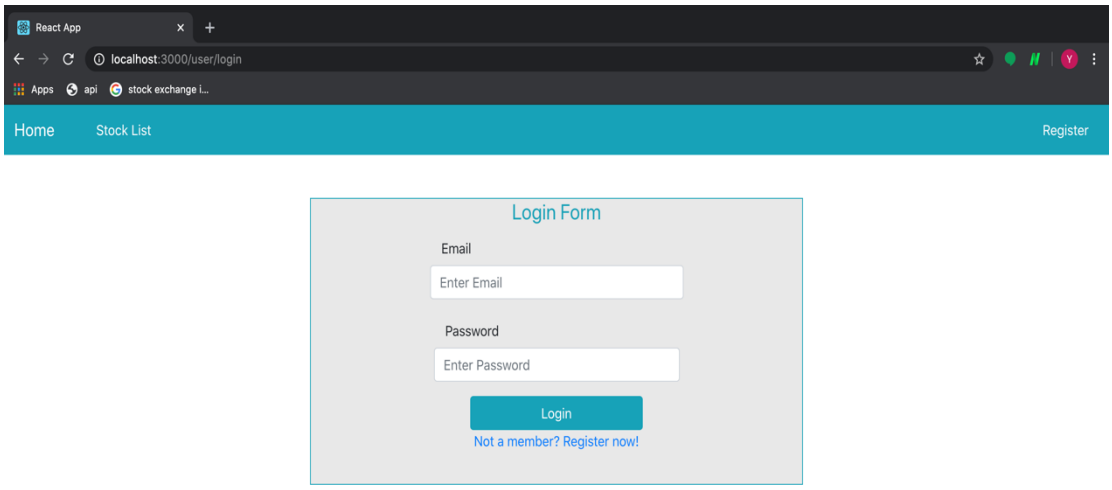
/user/register

In this page, users are able to register. If the registration goes successful it will route to home page if it is not successful it will show related error message. From this page, they can go to Home, stock List and login page directly.



/user/login

In this page, users are able to login if they already register. If the login goes successful it will route to stocks/symbols page if it is not successful it will show related error message. From this page, they can go to Home, stock List and register (via link or register button at top right) page directly.



Modules used

This is just a list of the external modules that you have used. You need not specify core React modules. In each case, ***we want the name, a brief description, and a link to the docs at npm or github or wherever.*** The first one is ag-grid-react as most people will be using this. Just copy that style and add more as necessary.

Ag-grid-react

Module to provide fully-featured table components, including sorting, filtering and pagination.

https://www.ag-grid.com/react-grid/

reactstrap

Module to provide fully-featured form, carousel, navbar to make app looks better and more professional.

https://www.npmjs.com/package/reactstrap

React Datepicker

Module to provide fully-featured which allow user to choose dates(yyyy/mm/dd) and time.

https://reactdatepicker.com

react-router

Module to provide navigation through app to make app smooth.

https://www.npmjs.com/package/react-router

react-router-dom

Module to provide navigation through app to make app smooth.

https://www.npmjs.com/package/react-router-dom

react-chartjs-2

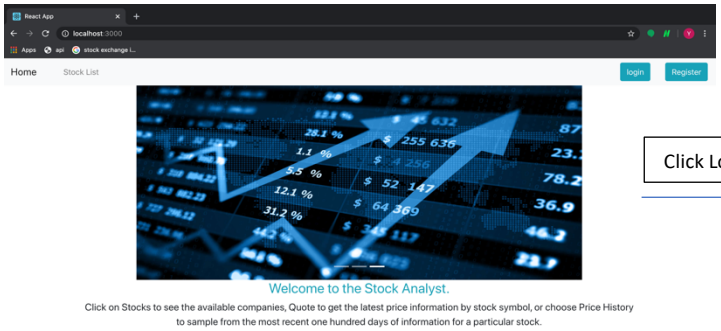
Module to provide fully-featured chart to show data in professional and better way. Line chart has been this to show closing and opening price for a particular symbol.

https://www.npmjs.com/package/react-chartjs-2

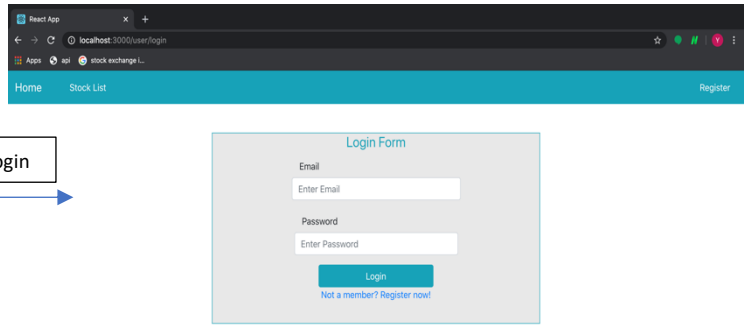
Application Design

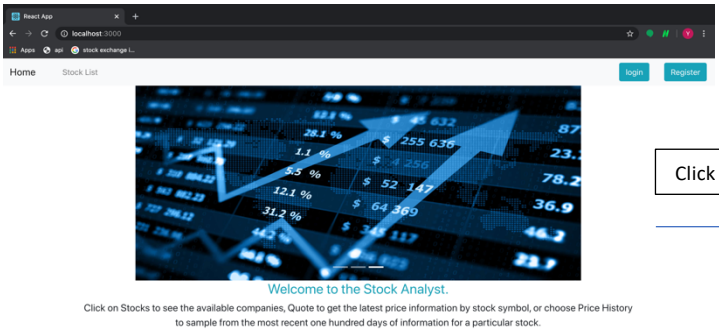
Navigation and Layout

In the app home page user can access to login and register page by clicking button at the top of the page, and They can access to stocks list at the top of the page in navbar. In the stock list page, users can still login and register and also, they can go to home page from stocks/symbols page. Users can explore particular item by searching particular name, symbol or industry. Filter search is integrated with table for the sake of user experience design. Users can also go to next page or previous page to explore the stocks.

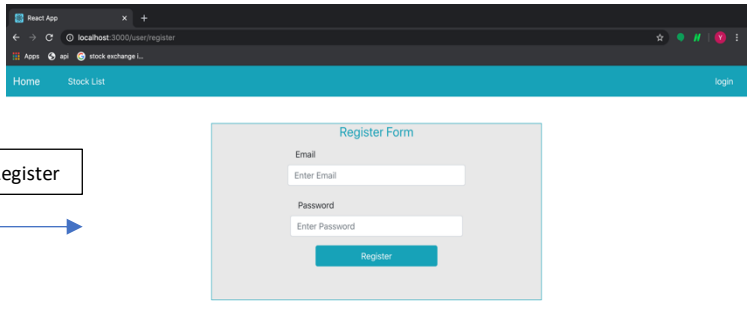


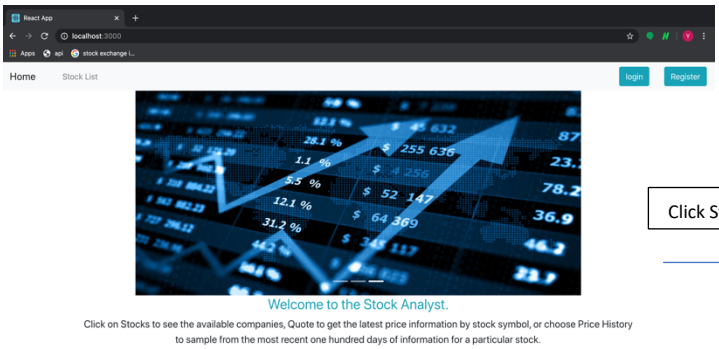
Click Login



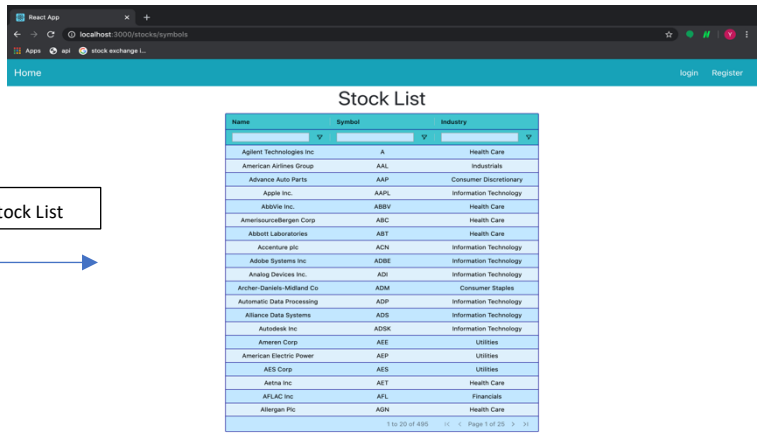


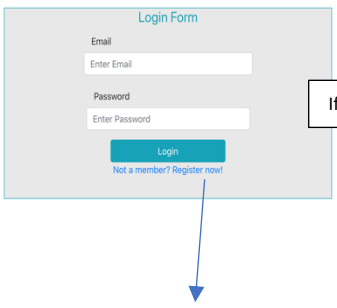
Click Register



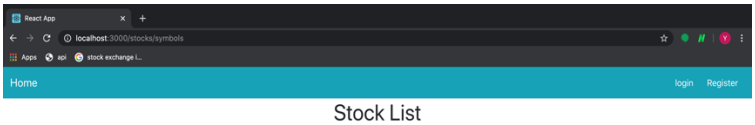


Click Stock List



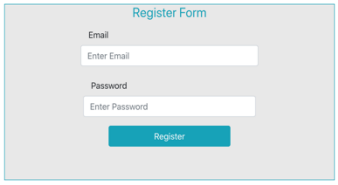


If the user login successfully, it routes to

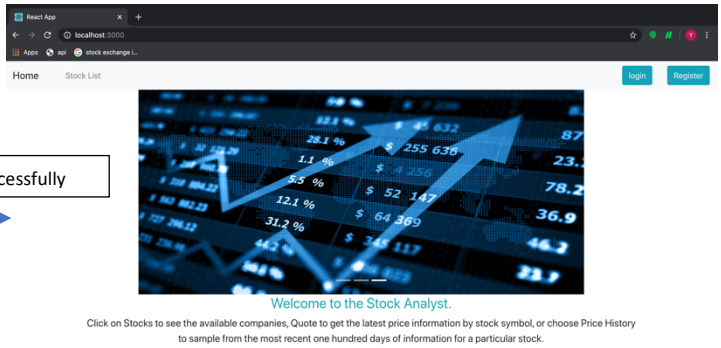


Stock List

If the user clicks on the link, it routes to register page



If the user registers successfully



Stock List

Name	Symbol	Industry
		hea
Agilent Technologies Inc	A	Health Care
AbbVie Inc.	ABBV	Health Care
AmerisourceBergen Corp	ABC	Health Care
Abbott Laboratories	ABT	Health Care
Aetna Inc	AET	Health Care
Allergan Plc	AGN	Health Care
Align Technology	ALGN	Health Care
Alexion Pharmaceuticals	ALXN	Health Care
Amgen Inc	AMGN	Health Care
Anthem Inc.	ANTM	Health Care
Baxter International Inc.	BAX	Health Care
Becton Dickinson	BDX	Health Care
Biogen Inc.	BIIB	Health Care
Bristol-Myers Squibb	BMY	Health Care
Boston Scientific	BSX	Health Care
Cardinal Health Inc.	CAH	Health Care
Celgene Corp.	CELG	Health Care
Cerner	CERN	Health Care
CIGNA Corp.	CI	Health Care
Centene Corporation	CNC	Health Care

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Stock List

Name	Symbol	Industry
		health OR informa
Agilent Technologies Inc	A	
Apple Inc.	AAPL	Inf
AbbVie Inc.	ABBV	
AmerisourceBergen Corp	ABC	
Abbott Laboratories	ABT	
Accenture plc	ACN	Information Technology
Adobe Systems Inc	ADBE	Information Technology
Analog Devices Inc.	ADI	Information Technology
Automatic Data Processing	ADP	Information Technology
Alliance Data Systems	ADS	Information Technology
Autodesk Inc	ADSK	Information Technology
Aetna Inc	AET	Health Care
Allergan Plc	AGN	Health Care
Akamai Technologies Inc	AKAM	Information Technology
Align Technology	ALGN	Health Care
Alexion Pharmaceuticals	ALXN	Health Care
Applied Materials Inc	AMAT	Information Technology
Advanced Micro Devices Inc	AMD	Information Technology
Amgen Inc	AMGN	Health Care
ANSYS	ANSS	Information Technology

Contains: health
AND / OR
Contains: informa

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In the stock list page, users can still login and register and also, they can go to home page from stocks/symbols page (stock List). Users can explore particular item by searching particular name, symbol or industry. Filter search is integrated with table for the sake of user experience design. Users can also go to next page or previous page to explore the stocks. Users are able to search two industries at the same time by clicking on the filter icon as shown above in the right picture.

Stock List

Name	Symbol	Industry
Agilent Technologies Inc	A	Health Care
American Airlines Group	AAL	Industrials
Advance Auto Parts	AAP	Consumer Discretionary
Apple Inc.	AAPL	Information Technology
AbbVie Inc.	ABBV	Health Care
AmerisourceBergen Corp	ABC	Health Care
Abbott Laboratories	ABT	Health Care
Accenture plc	ACN	Information Technology
Adobe Systems Inc	ADBE	Information Technology
Analog Devices Inc.	ADI	Information Technology
Archer-Daniels-Midland Co	ADM	Consumer Staples
Automatic Data Processing	ADP	Information Technology
Alliance Data Systems	ADS	Information Technology
Autodesk Inc	ADSK	Information Technology
Ameren Corp	AEE	Utilities
American Electric Power	AEP	Utilities
AES Corp	AES	Utilities
Aetna Inc	AET	Health Care
AFLAC Inc	AFL	Financials
Allergan Plc	AGN	Health Care

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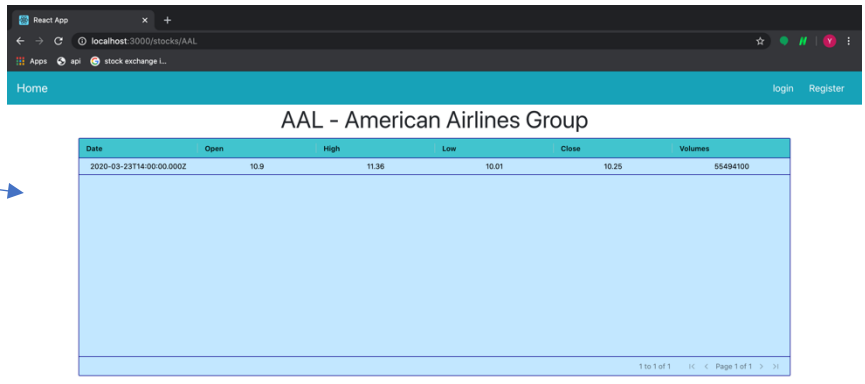
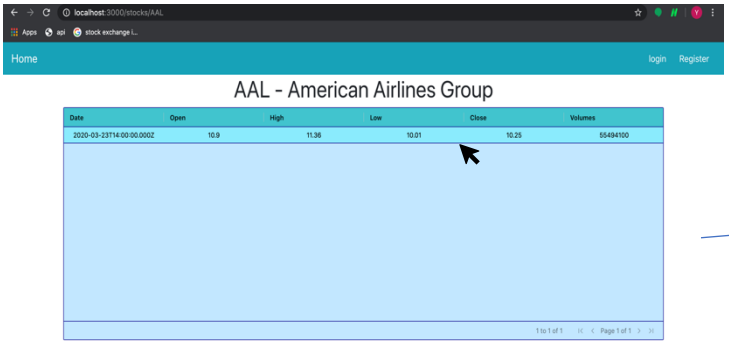


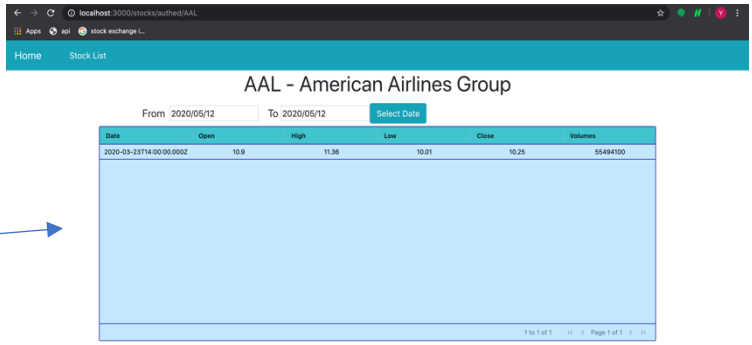
Row colour will change on mouse hover for better user experience.

If the user clicks on the row it navigates to stocks/{symbol} page as shown above.

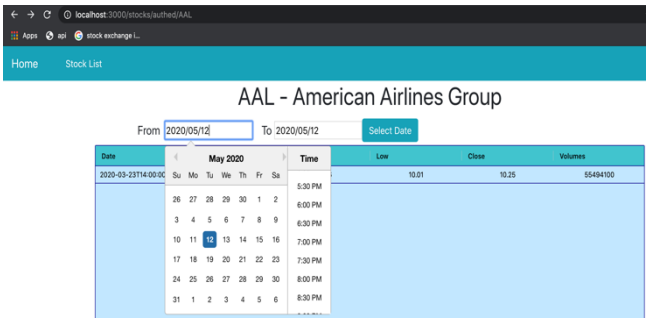
Colour of even and odd rows are different, so the user can investigate easily.

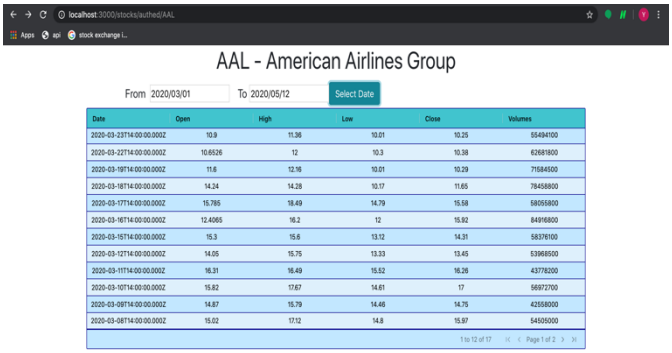
Although there is only one result in the table, I keep the size of table as similar as table in stocks/authed/{symbol} page for consistency of the app.

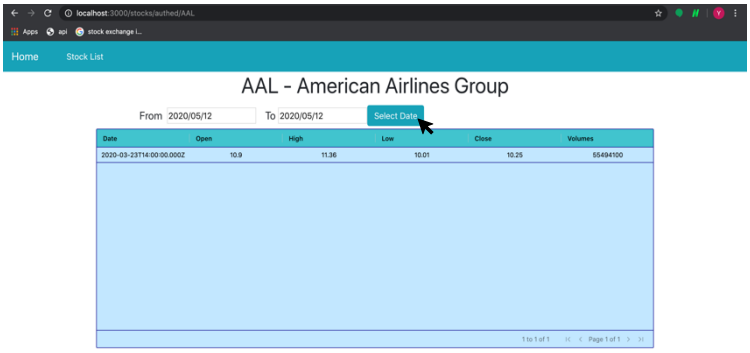


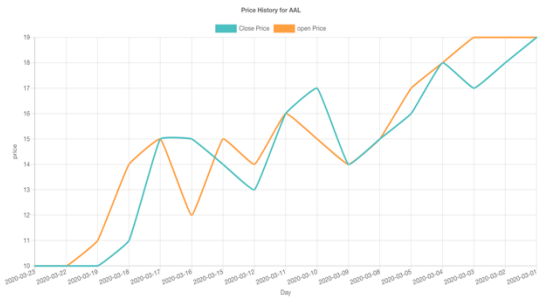


When the user clicks on the row in the stocks/{symbol} page it will navigates to stocks/authed/{symbol} route. If the user valid (user must login successfully) it will show data in the table if not will not show data in the table.





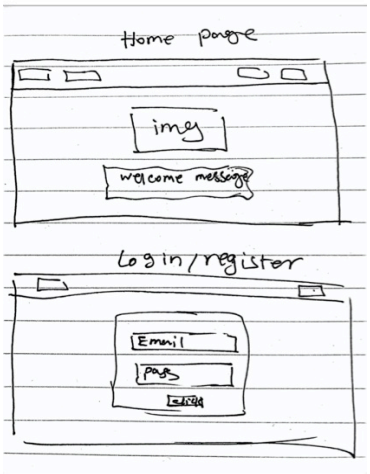


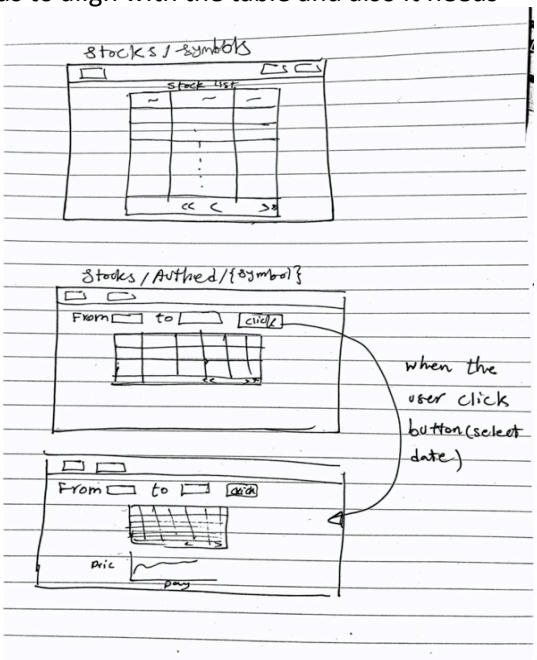


User is able to select date by clicking on From and To boxes, then by clicking on select date button, data will be shown on table and the charts below table will appear to display open and close price between the selected dates

In the stocks/authed/{symbol} page From and to needs to align with the table and also it needs logout button.

Some sketching of the app:





Technical Description

Architecture

All of the code files are under source Folder.

I split the code between 7 pages. App.js handles routing. Home.js represents home page of the app. Login.js handles login page code. Register.js handles register page of the app. Stocks.js handles stocks/symbols page of the app. Symbol.js handles stocks/{symbol} page of the app. PriceHistory.js handles stocks/authed/{symbol} page of the app which includes selecting date update table and display line chart for the app.

Test plan

Task	Expected Outcomes	Result	Screenshots (Appendix A)
Click stock List in home page to view info	routes to stocks/symbols page	PASS	1
Click Login btn in home page to Log in	Routes to Login page	PASS	2
Click Register btn in homepage to register	Routes to Register page	PASS	3
Handel Login error	Display pop up message for corresponding error	PASS	4
Handel register error (body incomplete)	Display pop up message for corresponding error	PASS	5
Handel register error (user already exist)	Display pop up message for corresponding error	PASS	6
If user register successfully go home page	It routes to home page	PASS	7
Handel auth page error if no data available	Display pop up message for corresponding error	PASS	8
Limit number of results	Filter the data by name, symbol or industry	PASS	9
Click on stock list table row	Routes to stocks/{symbol} for the corresponding symbol	PASS	10
Click on login btn in login page	Routes to stocks/symbols page if login is successful	PASS	11
Click on the link below login btn in login page	Routes to register page	PASS	12
Click on table row in stocks/{symbol}	Routes to stocks/authed/{symbol} page	PASS	13
Click on select date in stocks/authed/{symbol} page	Update table with all the results between selected dates (if available) and display line chart	PASS	14
Click on next arrow in pagination of table	Goes to next page of table	PASS	15

Difficulties / Exclusions / unresolved & persistent errors /

Topics to include here could be:

I got a jwt malformed error which takes me quite long time to fix the issue.

Extensions (Optional)

Where could you take this:

I will add logout button later on.

User guide

Tell us how to use your application

Please look at appendix B.

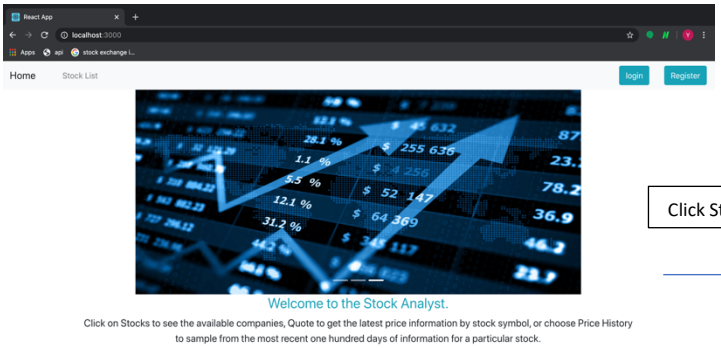
References

ag-Grid Ltd. (2015-2020). *Documentation* Retrieved from https://www.ag-grid.com/javascript-grid-row-styles/

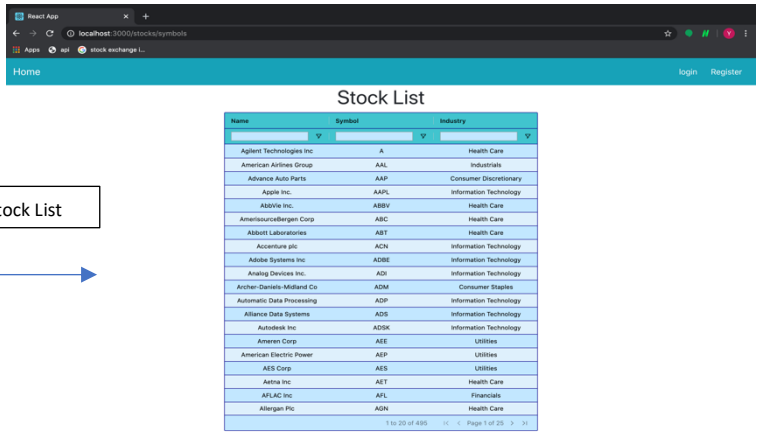
Appendices as you require them

Appendix A

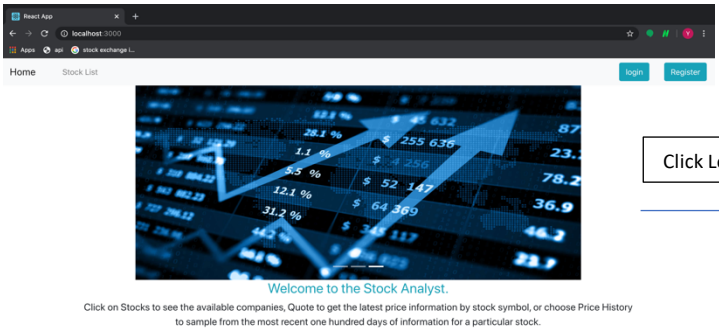
1.



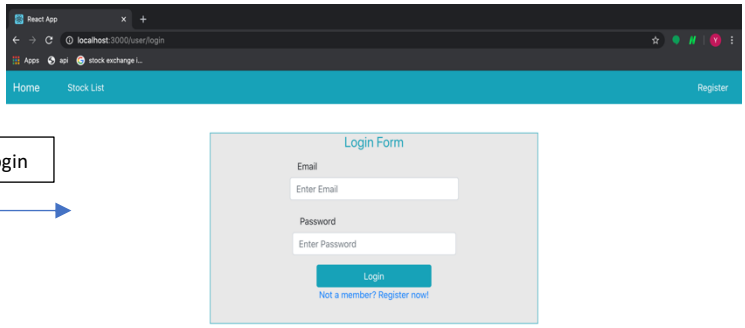
Click Stock List



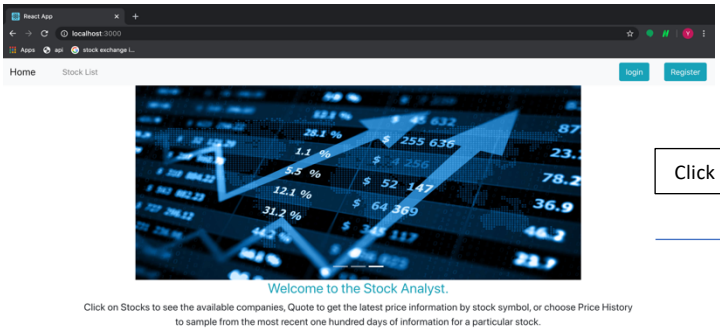
2.



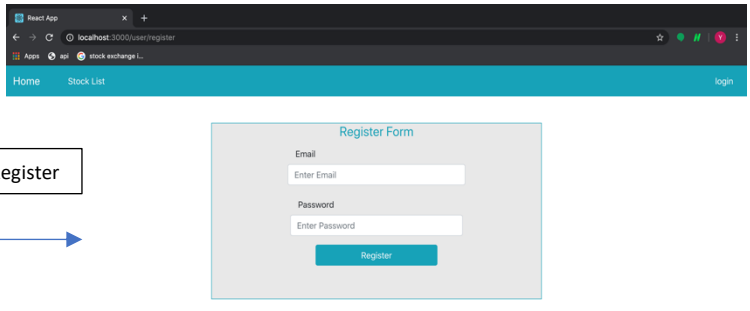
Click Login



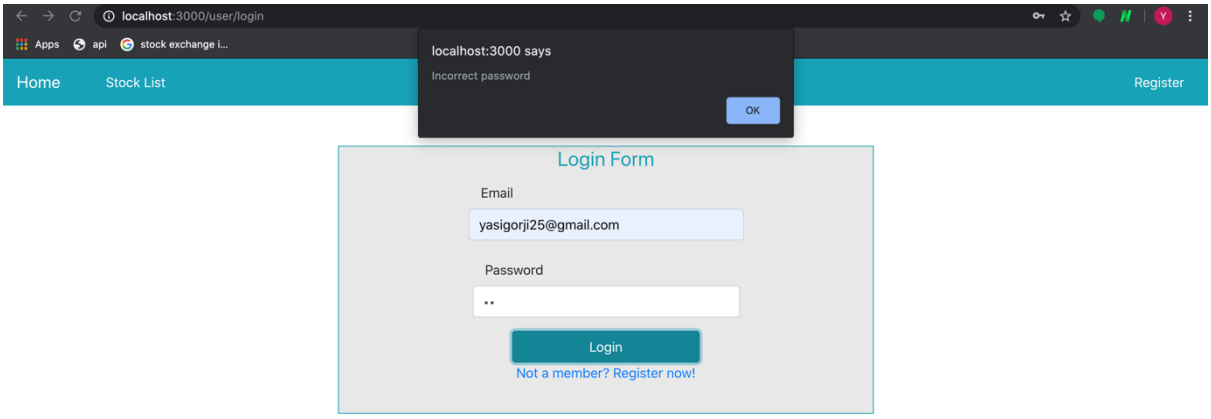
3.



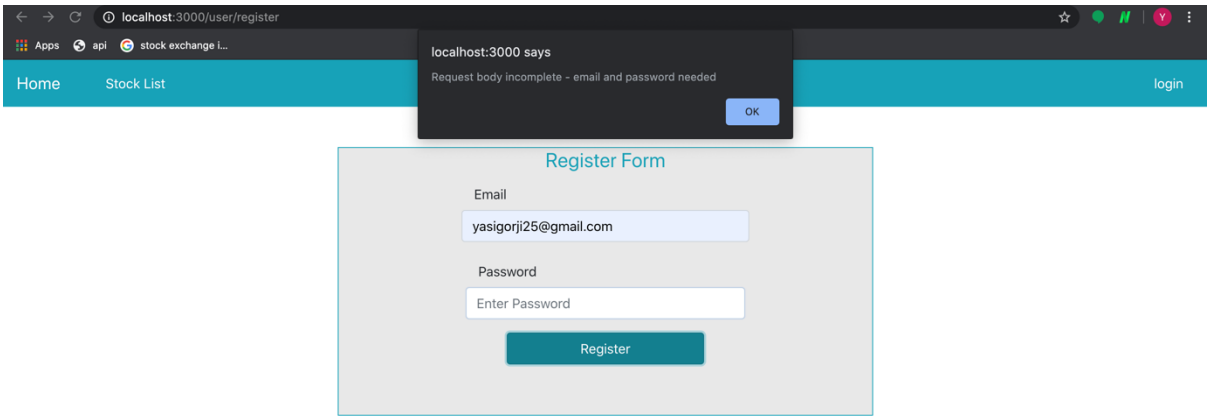
Click Register



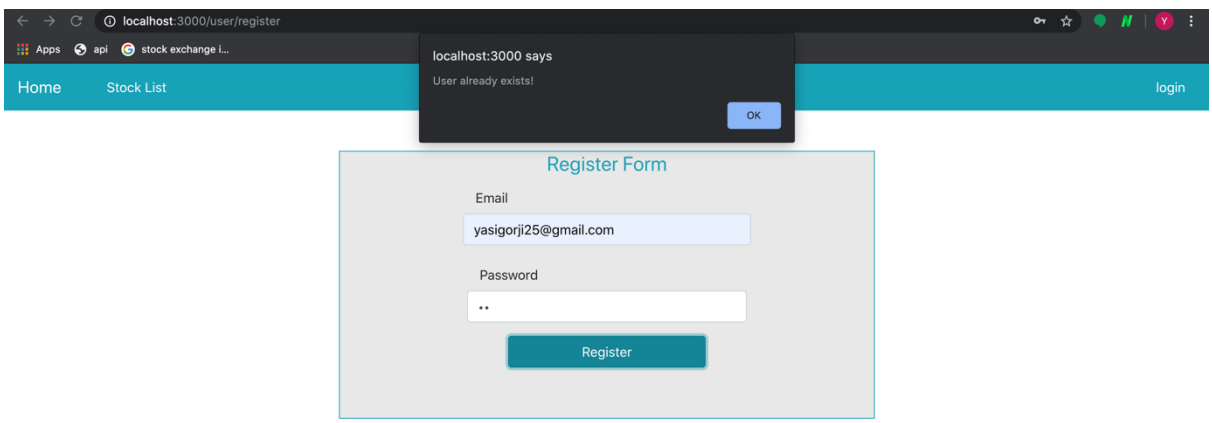
4.


localhost:3000/user/login
Apps
api
stock exchange i...
localhost:3000 says
Incorrect password
OK
Home
Stock List
Register
Login Form
Email
yasigorji25@gmail.com
Password
Login
Not a member? Register now!

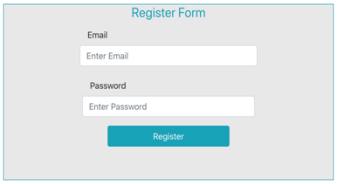
5.


localhost:3000/user/register
Apps
api
stock exchange i...
localhost:3000 says
Request body incomplete - email and password needed
OK
Home
Stock List
login
Register Form
Email
yasigorji25@gmail.com
Password
Enter Password
Register

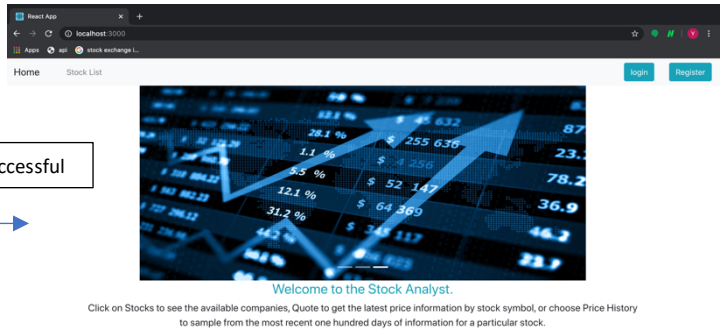
6.


localhost:3000/user/register
Apps
api
stock exchange i...
localhost:3000 says
User already exists!
OK
Home
Stock List
login
Register Form
Email
yasigorji25@gmail.com
Password
Register

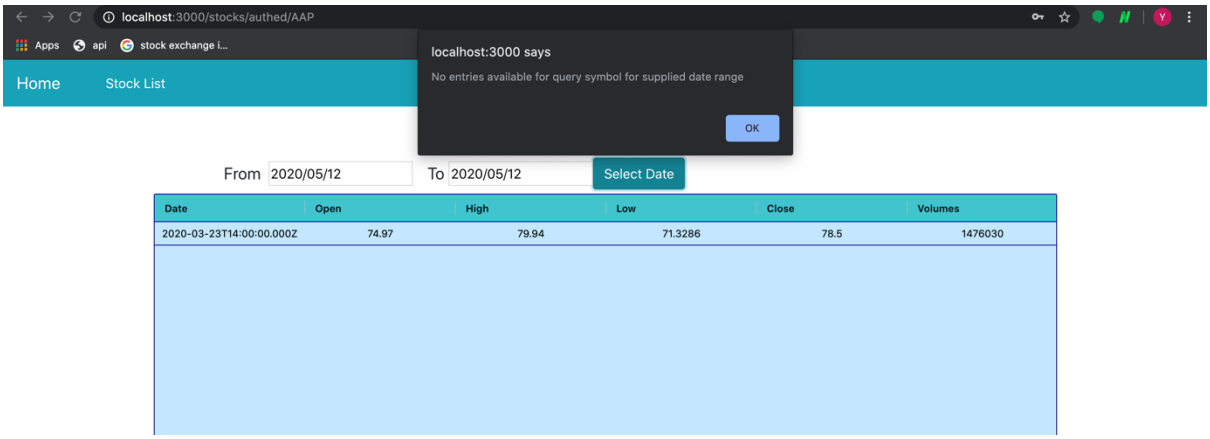
7.



Click Register if successful

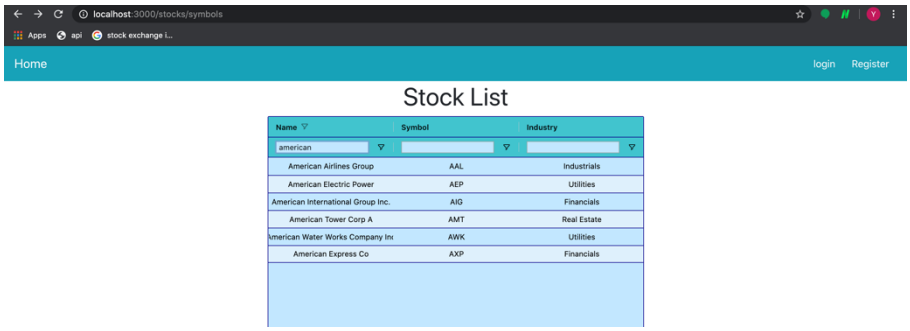


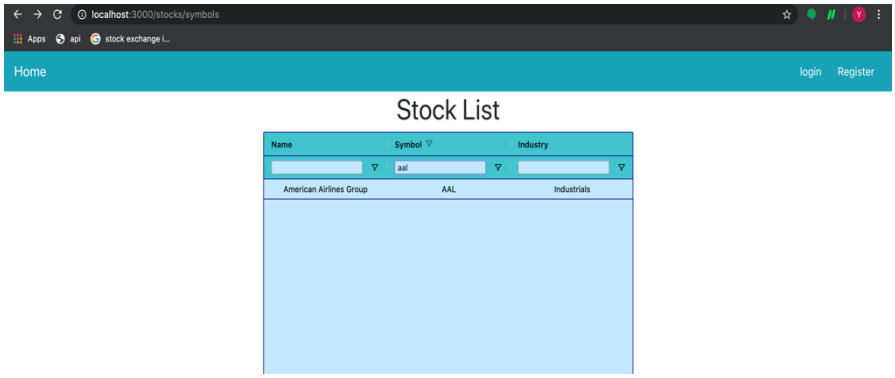
8.



9.

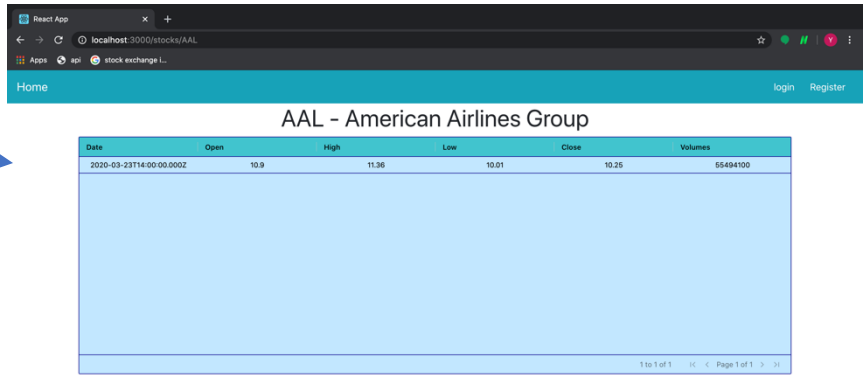
Stock List
Name
Symbol
Industry
hea
Agilent Technologies Inc A Health Care
AbbVie Inc. ABBV Health Care
AmerisourceBergen Corp ABC Health Care
Abbott Laboratories ABT Health Care
Aetna Inc AET Health Care
Allergan Plc AGN Health Care
Align Technology ALGN Health Care
Alexion Pharmaceuticals ALXN Health Care
Amgen Inc AMGN Health Care
Anthem Inc. ANTM Health Care
Baxter International Inc. BAX Health Care
Becton Dickinson BDX Health Care
Biogen Inc. BIIB Health Care
Bristol-Myers Squibb BMY Health Care
Boston Scientific BSX Health Care
Cardinal Health Inc. CAH Health Care
Celgene Corp. CELG Health Care
Cerner CERN Health Care
CIGNA Corp. CI Health Care
Centene Corporation CNC Health Care
1 to 20 of 61
Page 1 of 4


localhost:3000/stocks/symbols
Apps
api
stock exchange i...
Home
login
Register
Stock List
Name
Symbol
Industry
american
American Airlines Group AAL Industrials
American Electric Power AEP Utilities
American International Group Inc. AIG Financials
American Tower Corp A AMT Real Estate
American Water Works Company Inc AWK Utilities
American Express Co AXP Financials

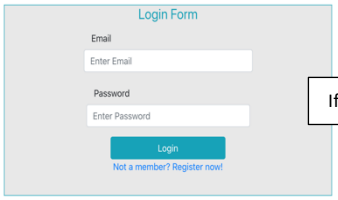

localhost:3000/stocks/symbols
Apps
api
stock exchange i...
Home
login
Register
Stock List
Name
Symbol
Industry
aal
American Airlines Group AAL Industrials

10.

Stock List
Name
Symbol
Industry
Agilent Technologies Inc A Health Care
American Airlines Group AAL Industrials
Advance Auto Parts AAP Consumer Discretionary
Apple Inc. AAPL Information Technology
AbbVie Inc. ABBV Health Care
AmerisourceBergen Corp ABC Health Care
Abbott Laboratories ABT Health Care
Accenture plc ACN Information Technology
Adobe Systems Inc ADBE Information Technology
Analog Devices Inc. ADI Information Technology
Archer-Daniels-Midland Co ADM Consumer Staples
Automatic Data Processing ADP Information Technology
Alliance Data Systems ADS Information Technology
Autodesk Inc ADSK Information Technology
Ameren Corp AEE Utilities
American Electric Power AEP Utilities
AES Corp AES Utilities
Aetna Inc AET Health Care
AFLAC Inc AFL Financials
Allergan Plc AGN Health Care
1 to 20 of 495
Page 1 of 25

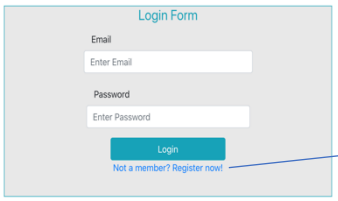

React App
localhost:3000/stocks/AAL
Apps
api
stock exchange i...
Home
login
Register
AAL - American Airlines Group
Date
Open
High
Low
Close
Volumes
2020-03-23T14:00:00.000Z 10.9 11.36 10.01 10.25 55494100
1 to 1 of 1
Page 1 of 1

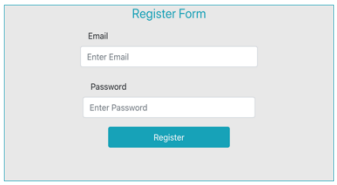
11.



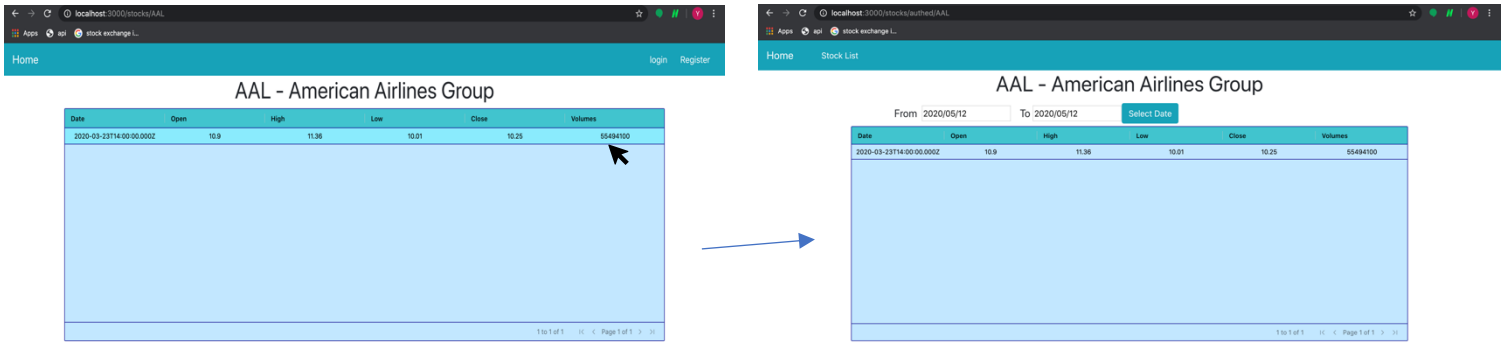
If the user login successfully, it routes to

12.

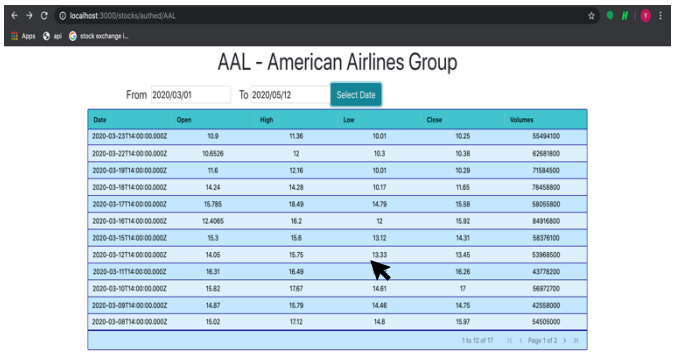


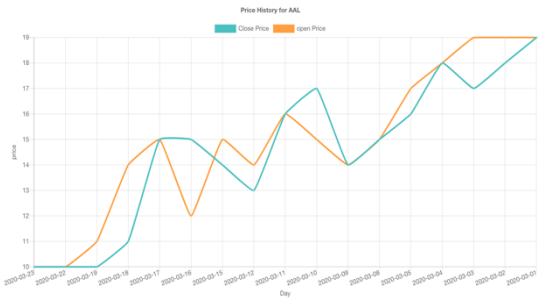


13.


localhost:3000/stocks/AAL
Home
login
Register
AAL - American Airlines Group
Date
Open
High
Low
Close
Volumes
2020-03-23T14:00:00.000Z
10.9
11.36
10.01
10.25
55494100
localhost:3000/stocks/authed/AAL
Home
Stock List
AAL - American Airlines Group
From 2020/05/12
To 2020/05/12
Select Date

14.


localhost:3000/stocks/authed/AAL
AAL - American Airlines Group
From 2020/03/01
To 2020/05/12
Select Date
Date
Open
High
Low
Close
Volumes
2020-03-23T14:00:00.000Z 10.9 11.36 10.01 10.25 55494100
2020-03-22T14:00:00.000Z 10.6526 12 10.3 10.38 62681800
2020-03-19T14:00:00.000Z 11.6 12.16 10.01 10.29 71584500
2020-03-18T14:00:00.000Z 14.24 14.28 10.17 11.65 78458800
2020-03-17T14:00:00.000Z 15.785 18.49 14.79 15.58 58055800
2020-03-16T14:00:00.000Z 12.4065 16.2 12 15.92 84916800
2020-03-15T14:00:00.000Z 15.3 15.6 13.12 14.31 58376100
2020-03-12T14:00:00.000Z 14.05 15.75 13.33 13.45 53968500
2020-03-11T14:00:00.000Z 16.31 16.49 16.26 43778200
2020-03-10T14:00:00.000Z 15.82 17.67 14.61 17 56972700
2020-03-09T14:00:00.000Z 14.87 15.79 14.46 14.75 42558000
2020-03-08T14:00:00.000Z 15.02 17.12 14.8 15.97 54505000
1 to 12 of 17
Page 1 of 2


Price History for AAL
Close Price
open Price
price
Day

15.

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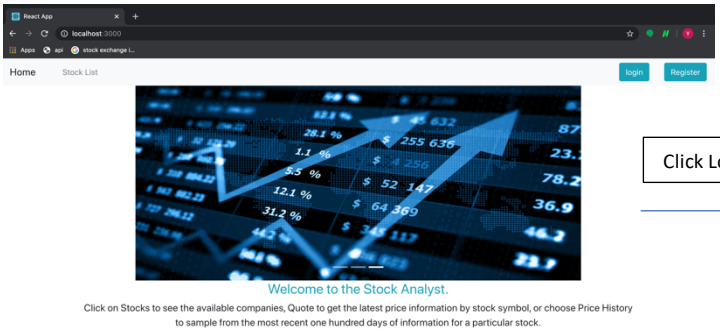
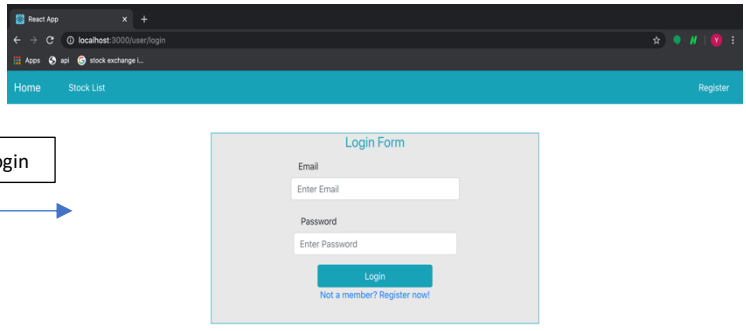
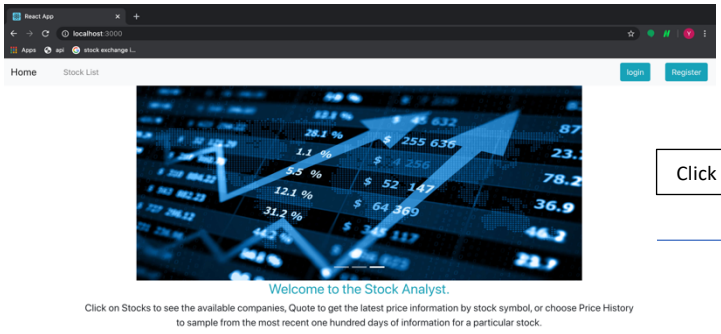
Appendix B

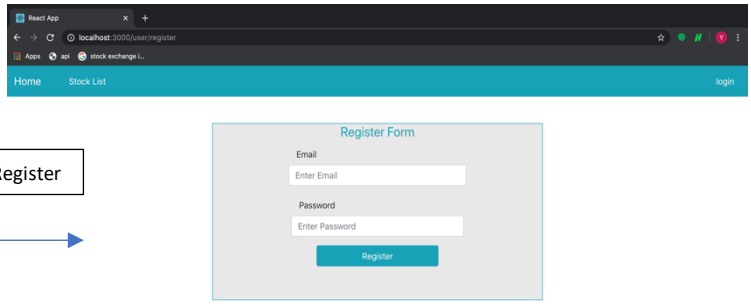


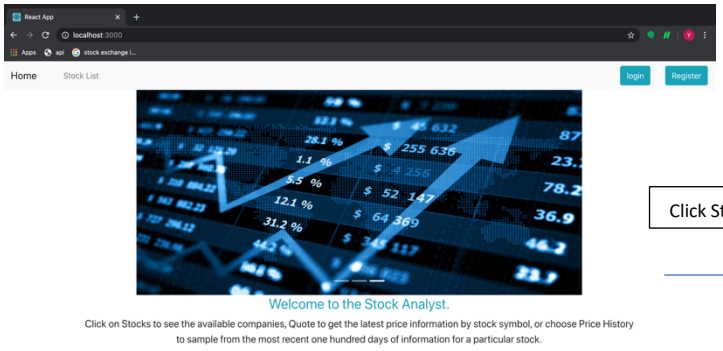
Click Login



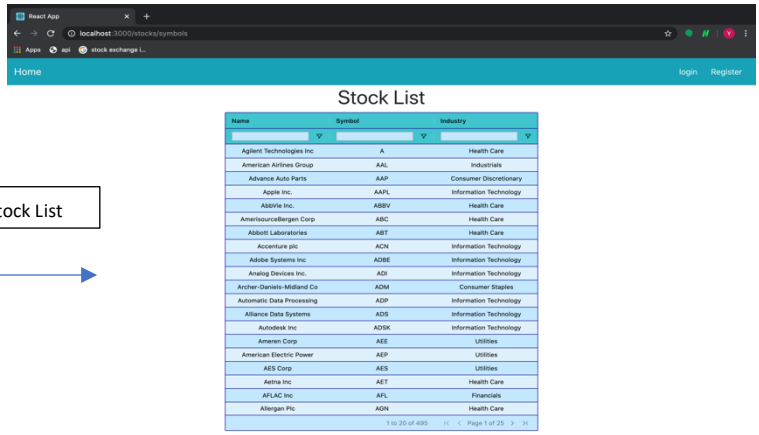


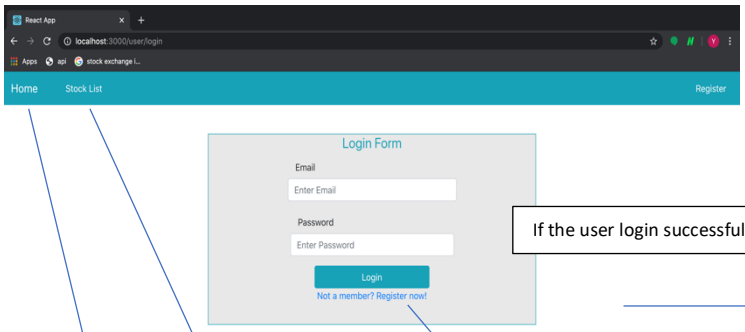
Click Register



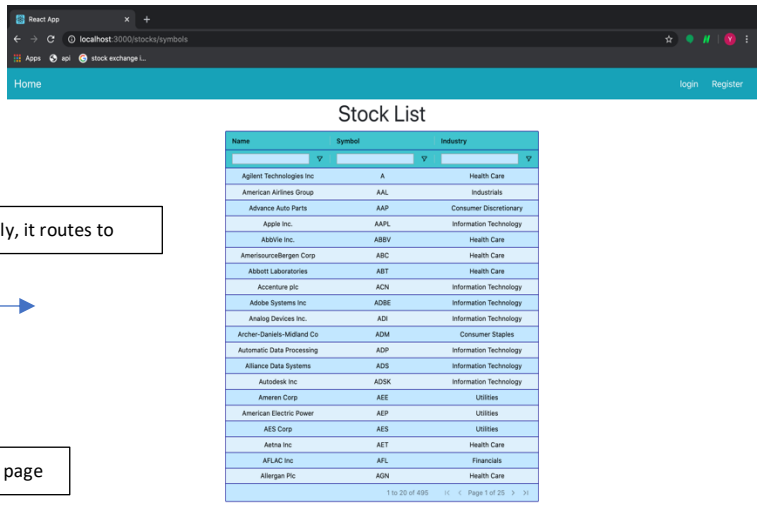


Click Stock List





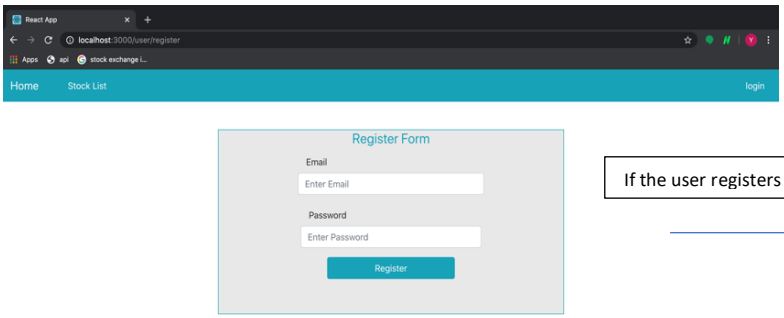
If the user login successfully, it routes to



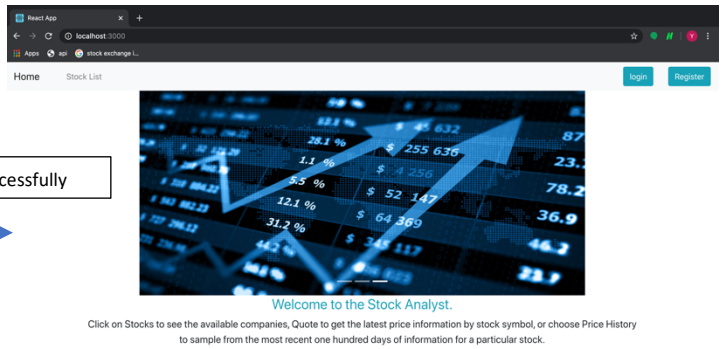
If the user clicks on the link, it routes to register page

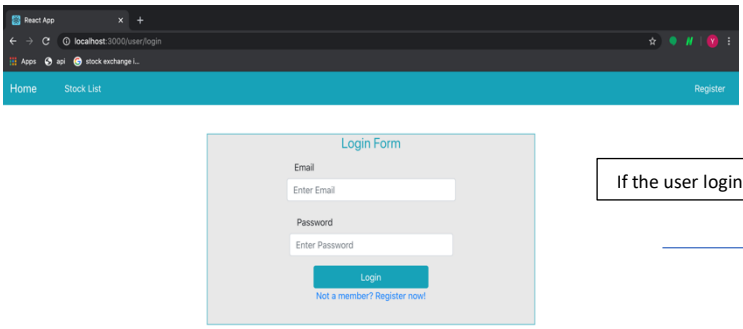
If you click on stock list, it navigates to stocks/symbols page

If you click on home, it navigates to home page

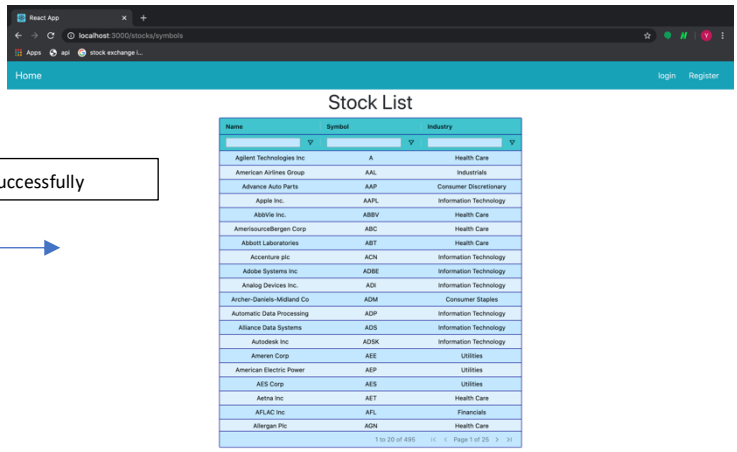


If the user registers successfully





If the user login successfully



You can filter and limit the results by name, symbol or industry.

Stock List

Name	Symbol	Industry
		hea
Agilent Technologies Inc	A	Health Care
AbbVie Inc.	ABBV	Health Care
AmerisourceBergen Corp	ABC	Health Care
Abbott Laboratories	ABT	Health Care
Aetna Inc	AET	Health Care
Allergan Plc	AGN	Health Care
Align Technology	ALGN	Health Care
Alexion Pharmaceuticals	ALXN	Health Care
Amgen Inc	AMGN	Health Care
Anthem Inc.	ANTM	Health Care
Baxter International Inc.	BAX	Health Care
Becton Dickinson	BDX	Health Care
Biogen Inc.	BIIB	Health Care
Bristol-Myers Squibb	BMY	Health Care
Boston Scientific	BSX	Health Care
Cardinal Health Inc.	CAH	Health Care
Celgene Corp.	CELG	Health Care
Cerner	CERN	Health Care
CIGNA Corp.	CI	Health Care
Centene Corporation	CNC	Health Care

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Stock List

Name	Symbol	Industry
		health OR informa
Agilent Technologies Inc	A	
Apple Inc.	AAPL	Inf
AbbVie Inc.	ABBV	
AmerisourceBergen Corp	ABC	
Abbott Laboratories	ABT	
Accenture plc	ACN	Information Technology
Adobe Systems Inc	ADBE	Information Technology
Analog Devices Inc.	ADI	Information Technology
Automatic Data Processing	ADP	Information Technology
Alliance Data Systems	ADS	Information Technology
Autodesk Inc	ADSK	Information Technology
Aetna Inc	AET	Health Care
Allergan Plc	AGN	Health Care
Akamai Technologies Inc	AKAM	Information Technology
Align Technology	ALGN	Health Care
Alexion Pharmaceuticals	ALXN	Health Care
Applied Materials Inc	AMAT	Information Technology
Advanced Micro Devices Inc	AMD	Information Technology
Amgen Inc	AMGN	Health Care
ANSYS	ANSS	Information Technology

Contains: health
AND / OR
Contains: informa

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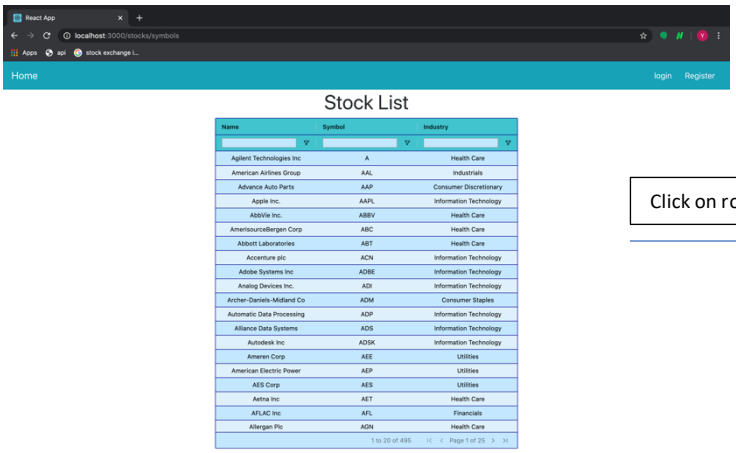
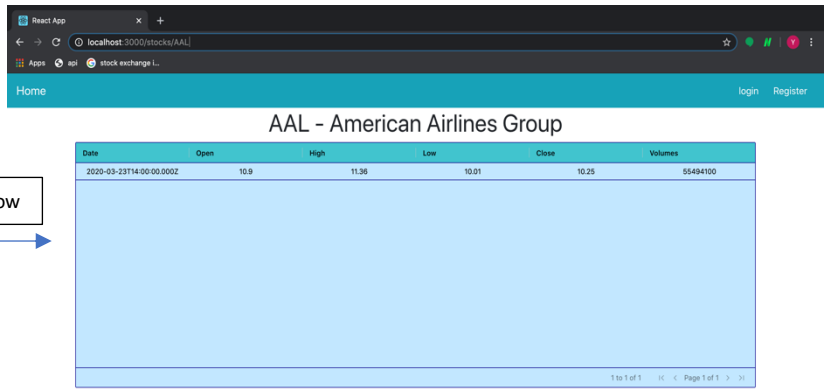


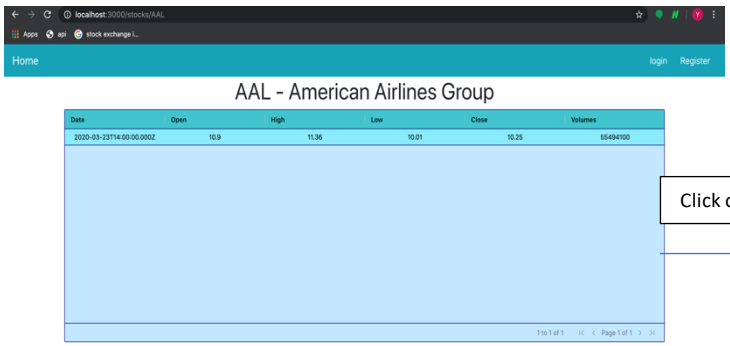
Click on row



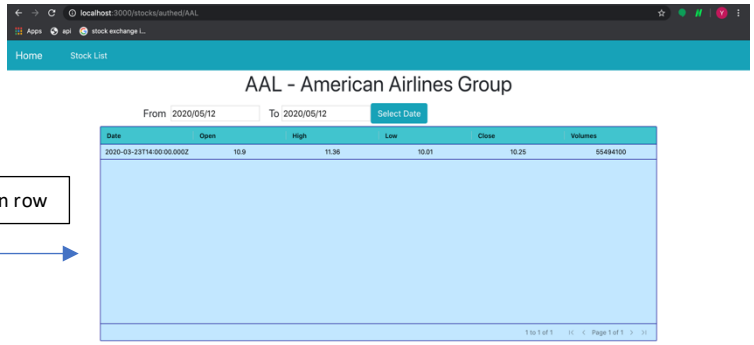
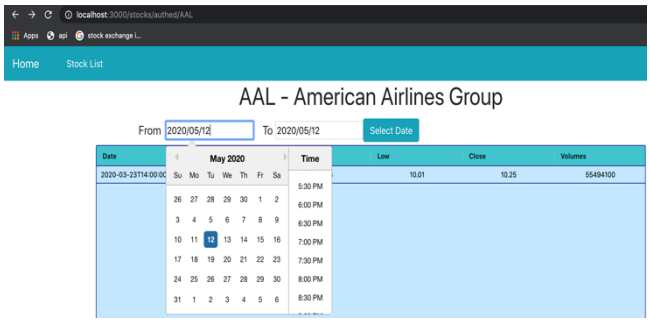
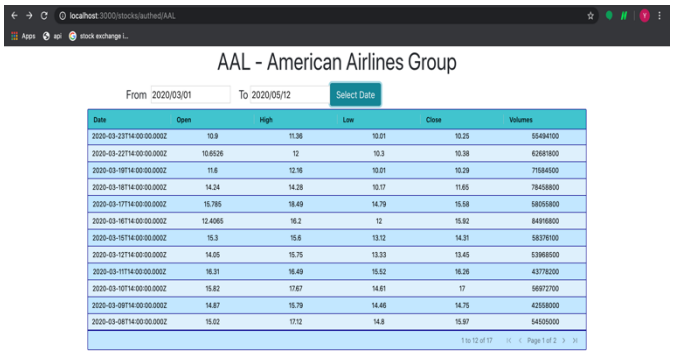
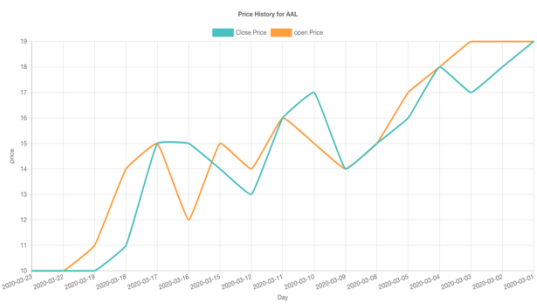
Click on row, it will show details for that particular item that you clicked.

Non-authenticated route for single symbol page

Authenticated route for single symbol page



Click on row



After user login you can select date and if there is data available between those dates the table will update and line chart will display. Line chart will show opening and closing price.