

Assignment 1 cab230

REACT APP

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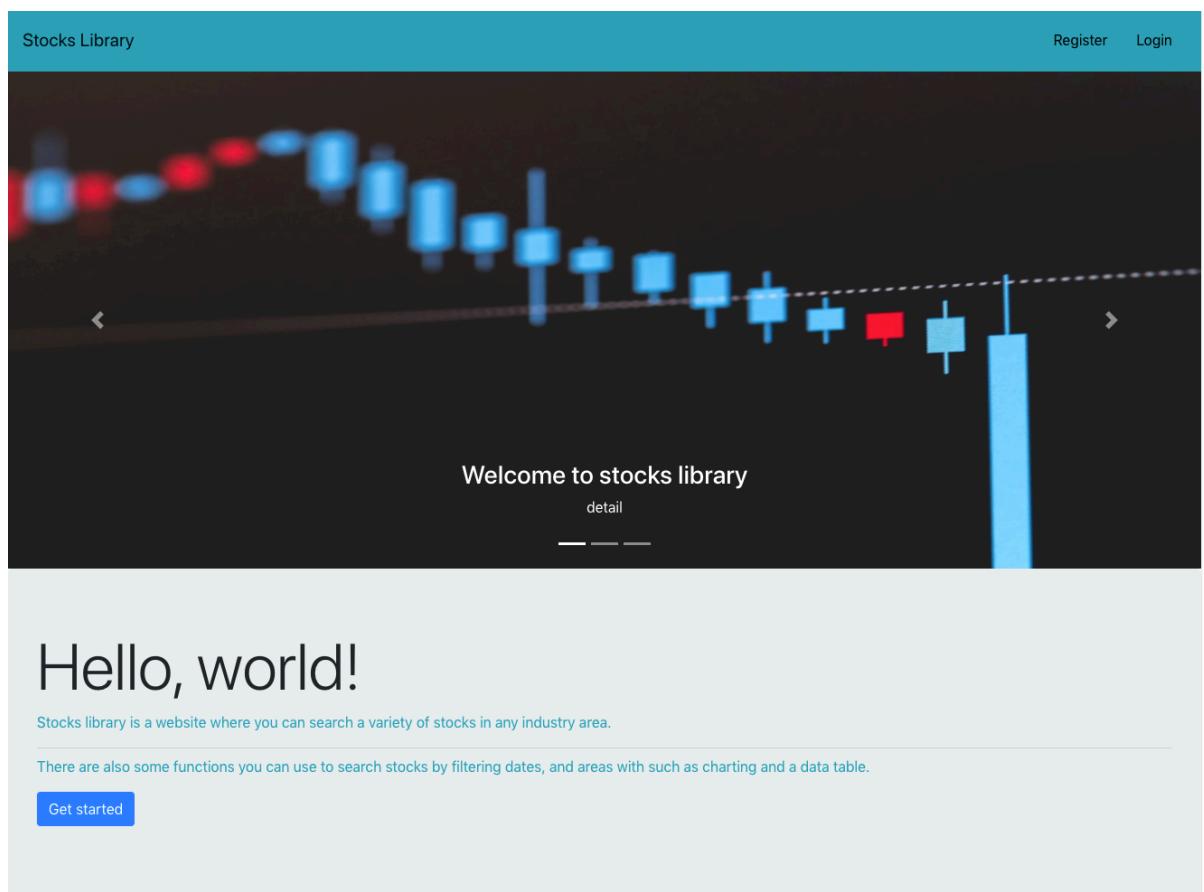
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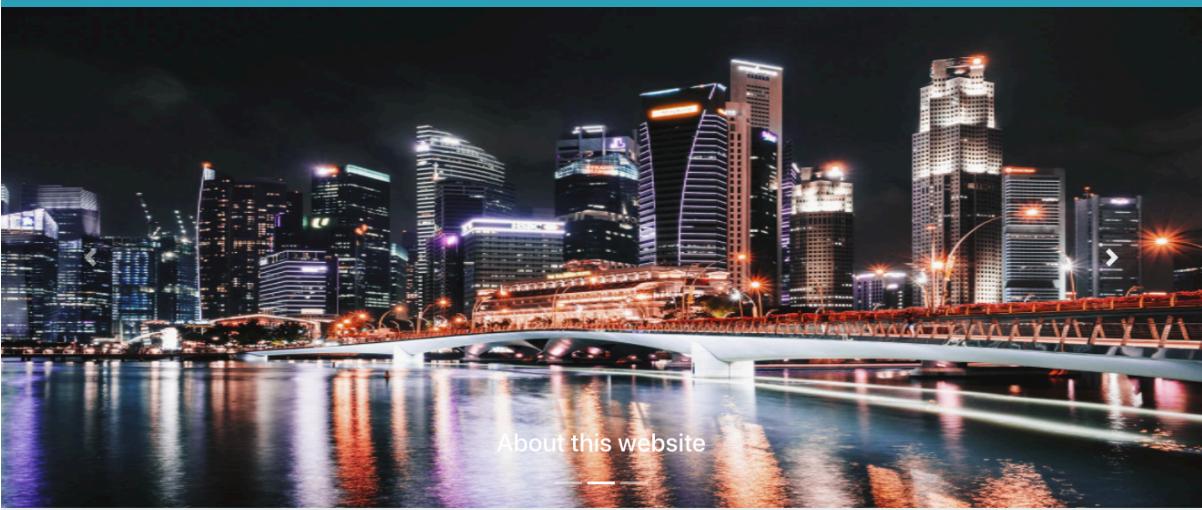
Introduction

Purpose & description

This web application is intended to be used to search and show all stocks available from stock market data drawn from an American exchange from November 2019 through to March 2020 with a simple looking table and a chart regarding selected data. The web application mainly consists of three parts, which are full lists of data, the latest data, and searching data by filtering data and symbol. In regards to those sections, users can show full lists of the data with searching functions using those companies name, symbol and industry area, and with a function that shows the latest available stock data.

In the process of developing web application, to make the web site more clear and easy to use, there are only three or four types of color are used in each page. They mainly used color is based on light blue using 'reactstrap' as a module for the web site design with slide pictures to attract visited users.



A wide-angle, nighttime photograph of the Singapore skyline. The city is densely packed with numerous skyscrapers of varying heights, all brightly lit with a variety of colors including blues, reds, and yellows. In the foreground, the calm water of the Marina Bay reflects the vibrant lights of the buildings. A prominent feature is the Marina Bay Bridge, which spans across the water and is also illuminated. The overall atmosphere is modern and bustling.

About this website

Hello, world!

Stocks library is a website where you can search a variety of stocks in any industry area.

There are also some functions you can use to search stocks by filtering dates, and areas with such as charting and a data table.

[Get started](#)

Completeness and Limitations

Overall, the web application satisfied all the requirements as discussed in the specification, all the function works very smoothly, and navigation is easily followed general web application styles, such as login system and register systems using 'react-router' as REST API. Users can easily find a login and register page at the top of the main section.

To check whether a visited user is logged in already, 'react-redux' and 'react-dom' are used to keep track of user authentication.

As for the table component, 'react-table-2' is used to show lists of data, and for users, date columns are sortable to change lists. A table is used in store button options at the top of the page. However, the user needs to log in first to access storage options.

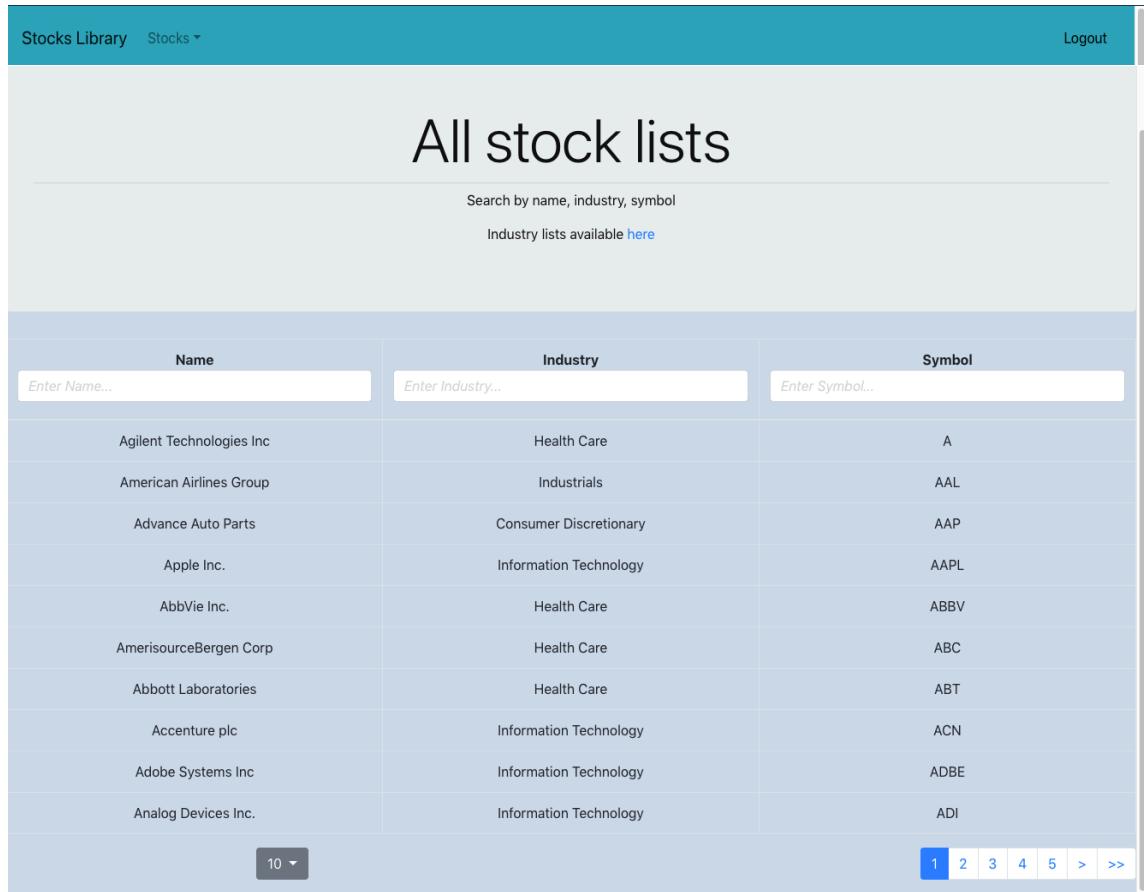
Besides, a chart is also placed into the stock top page, which is only accessible by the authenticated user. The chart shows data of close lists of each specified company by symbol and two dates(from and to).

With regarding error handling, in case of insufficient request, unauthenticated request or duplicated user or password, the error message will come up with appropriate messages to users. (Appendix 1)

Use of End Points

/stocks/symbols

----- The endpoint is used to show full lists of stock data into a table. The number of rows can be changed by the button option on the bottom.



Stocks Library Stocks ▾ Logout

All stock lists

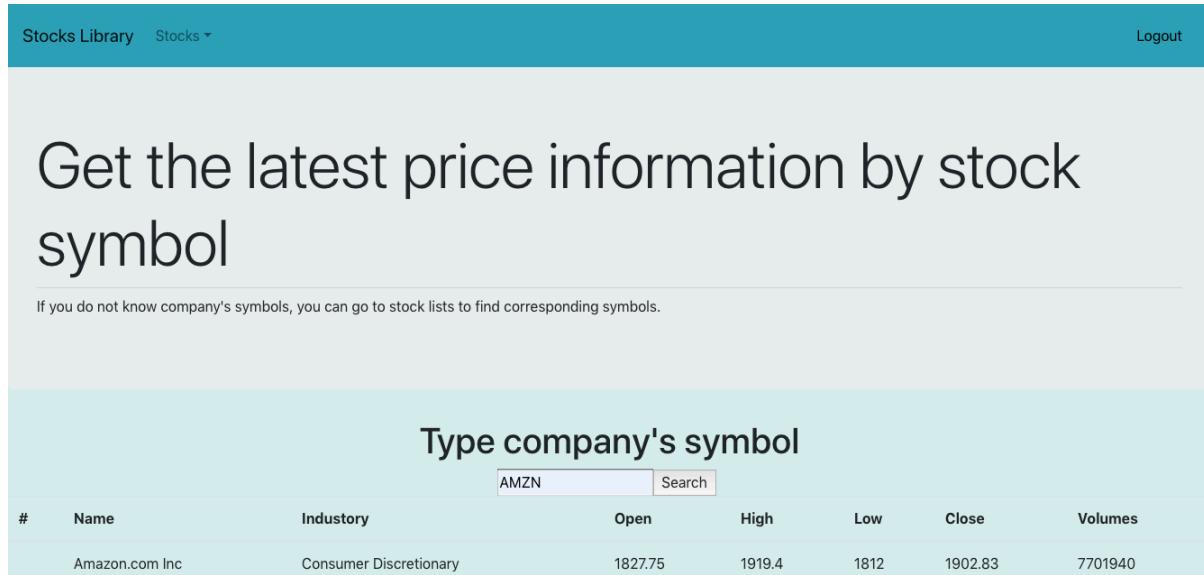
Search by name, industry, symbol
Industry lists available [here](#)

Name	Industry	Symbol
<input type="text" value="Enter Name..."/>	<input type="text" value="Enter Industry..."/>	<input type="text" value="Enter Symbol..."/>
Agilent Technologies Inc	Health Care	A
American Airlines Group	Industrials	AAL
Advance Auto Parts	Consumer Discretionary	AAP
Apple Inc.	Information Technology	AAPL
AbbVie Inc.	Health Care	ABBV
AmerisourceBergen Corp	Health Care	ABC
Abbott Laboratories	Health Care	ABT
Accenture plc	Information Technology	ACN
Adobe Systems Inc	Information Technology	ADBE
Analog Devices Inc.	Information Technology	ADI

10 ▾ 1 2 3 4 5 > >>

/stocks/{symbol}

----- The endpoint is used to show latest stock data lists of a company specified by a symbol.



Stocks Library Stocks ▾ Logout

Get the latest price information by stock symbol

If you do not know company's symbols, you can go to stock lists to find corresponding symbols.

Type company's symbol

#	Name	Industry	Open	High	Low	Close	Volumes
	Amazon.com Inc	Consumer Discretionary	1827.75	1919.4	1812	1902.83	7701940

/stocks/authed/{symbol}

----- The endpoint is used by users to send authenticated request to web server and request by filtering dates and a specific symbol.

Stocks Library Stocks ▾ Logout

Search stock lists by filtering date

You can search all stock lists from 6 November 2019 to 24 March 2020

Date columns can be sorted

Please put dates to filter

03/01/2020 to 03/05/2020

Please provide symbols

AMZN	Search						
Date	Name	Industry	Open	High	Low	Close	Volumes
04/03/2020	Amazon.com Inc	Consumer Discretionary	1946.57	1978	1922	1975.83	4772920
03/03/2020	Amazon.com Inc	Consumer Discretionary	1975.37	1996.33	1888.09	1908.99	7534490
02/03/2020	Amazon.com Inc	Consumer Discretionary	1906.49	1954.51	1870	1953.95	6761650
01/03/2020	Amazon.com Inc	Consumer Discretionary	1814.63	1889.76	1811.13	1883.75	9493800

10 1

data

1980
1970
1960
1950
1940
1930
1920
1910
1900
1890
1880

2020-03-04T14:00:00.000Z 2020-03-03T14:00:00.000Z 2020-03-02T14:00:00.000Z 2020-03-01T14:00:00.000Z

/user/register

----- The endpoint is used to register a new user to the server with a simple server.



Stocks Library Register Login

Register Form

Signup with setting your email and password!

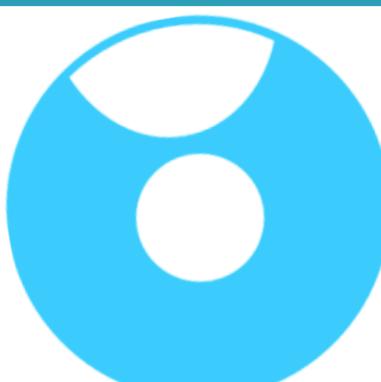
Email

Password

Register

/user/login

----- The endpoint is used to process login for a registered user with a simple form.



Stocks Library Register Login

Login Form

If you have already registered, please login with the registered email and password.

Email

Password

Login

Module used

- React-dom

This package serves as the entry point to the **DOM** and server renderers for **React**.

<https://www.npmjs.com/package/react-dom>

- React-router-dom

This package provide Routing function such as Link, Route, etc... by using react.

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

- React-strap

This package serves fundamental design functions used in React environment.

<https://github.com/reactstrap/reactstrap>

- Axios

This module enable to send HTTP requests to a api, this times stocks api.

<https://www.npmjs.com/package/axios>

- React-bootstrap-table-next

This module provide basic table components with React.

<https://www.npmjs.com/package/react-bootstrap-table-next>

- React-bootstrap-table2-filter

This module is used with React-bootsrap-table-next to enable filtering.

<https://www.npmjs.com/package/react-bootstrap-table2-filter>

- React-bootstrap-table-paginator

This module is used with React-bootstrap-table to enable paginator.

<https://www.npmjs.com/package/react-bootstrap-table2-paginator>

- React-datepicker

This module provide simple datepicker in React.

<https://www.npmjs.com/package/react-datepicker>

- React-chartjs-2

This module provide simple charts.

<https://www.npmjs.com/package/react-chartjs>

- React-redux

This module enable us to control user state such as login, logout with some actions, and helper files.

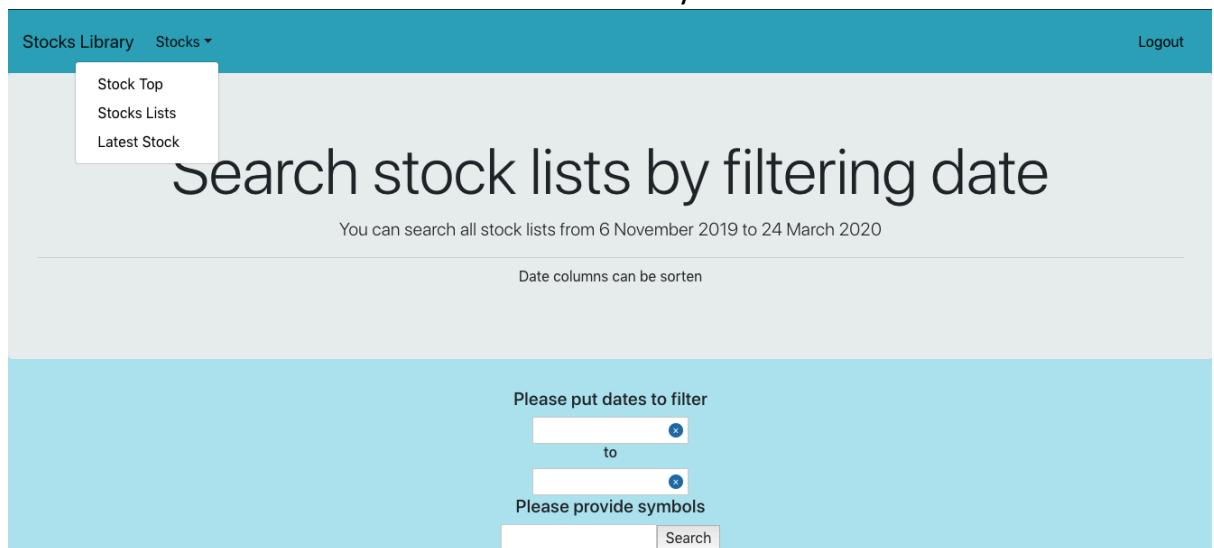
<https://www.npmjs.com/package/react-redux>

Application Design

Navigation and Layout

As for the main page, I mainly used a light blue color as a base color, and a carousel locates in the main page containing three pictures to attract more users. Once users click a get started button, the web site automatically leads users to the register page. I could have used react-bootstrap for designing pages, but I realized that react-strap is much easier to be used by users. Login and logout use simple reactstrap form.

As for navigation, the stocks option can only be used by authenticated users, with options button come up right next to the Stocks Library button once a user logged in and also the login button swap to logout. Users can choose three options, Stocks home, Stocks lists, and Latest stock, as you can see below. This is where users can choose what they want to find.

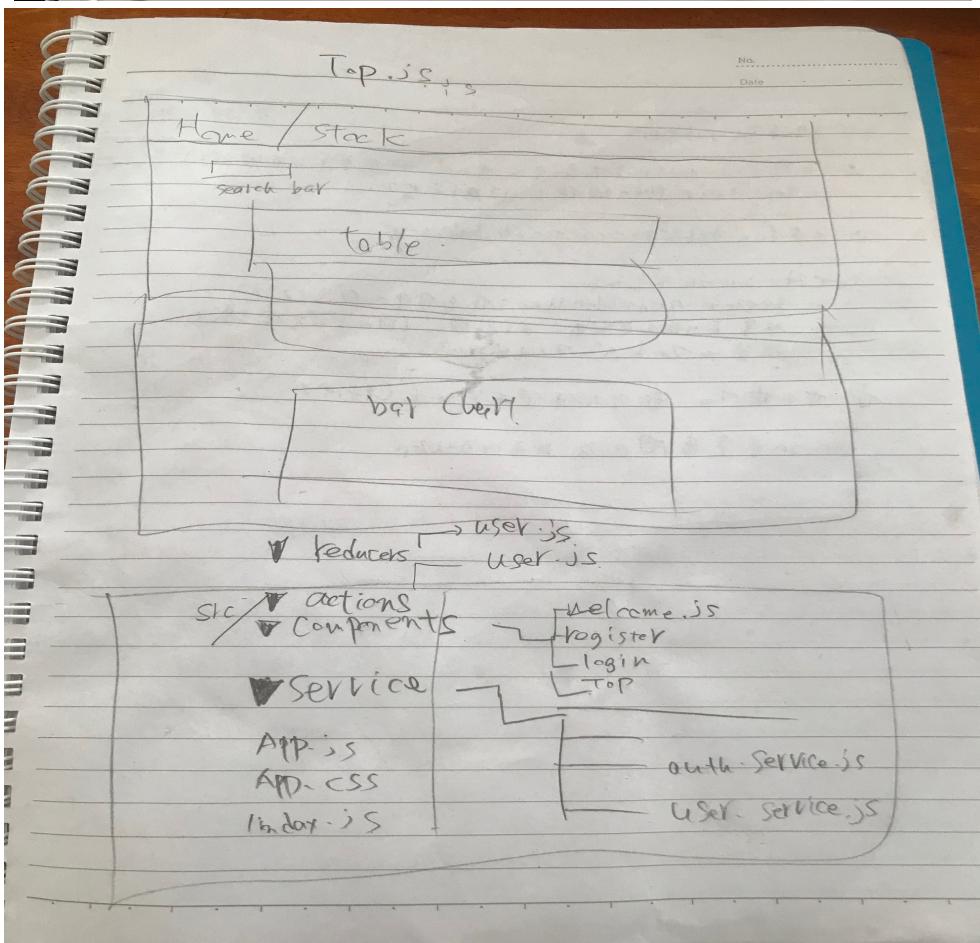
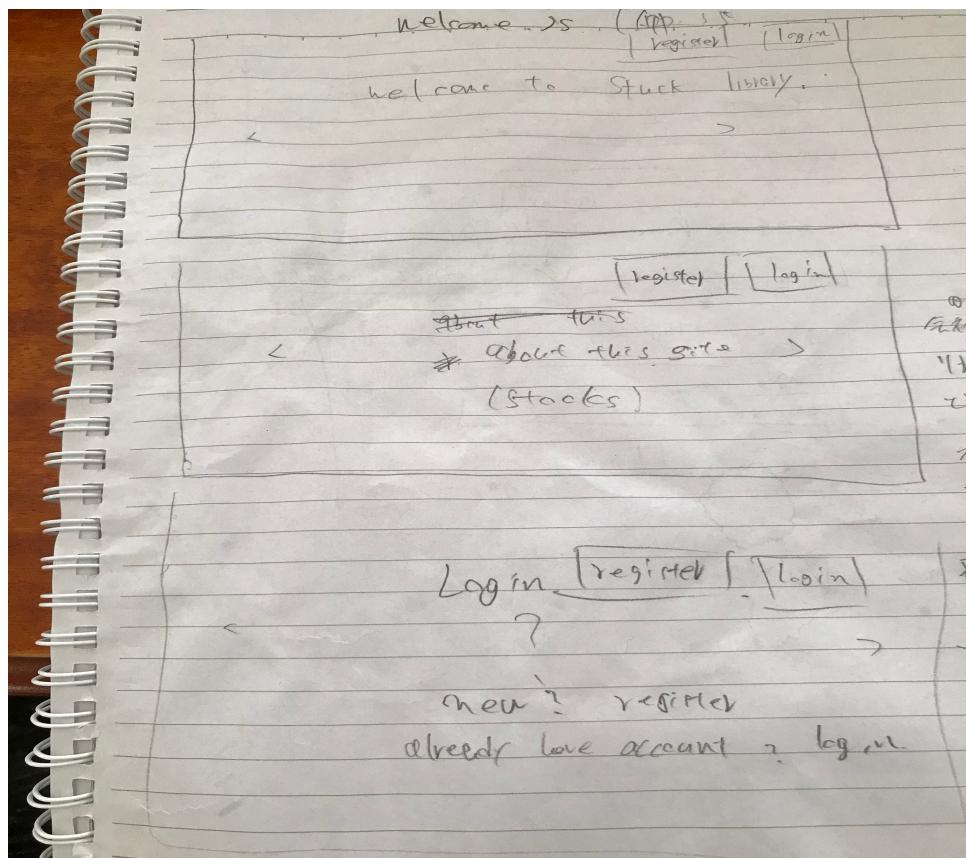


In the early process of developing the web site, I made a simple mockup design and architecture of all folders as you can see below.

The web sites basically satisfied all requirements, whereas, some designing could have been better considering there are still some white blank areas left especially in the login and logout pages.

I could add more functions in those blank areas in the future assignment.

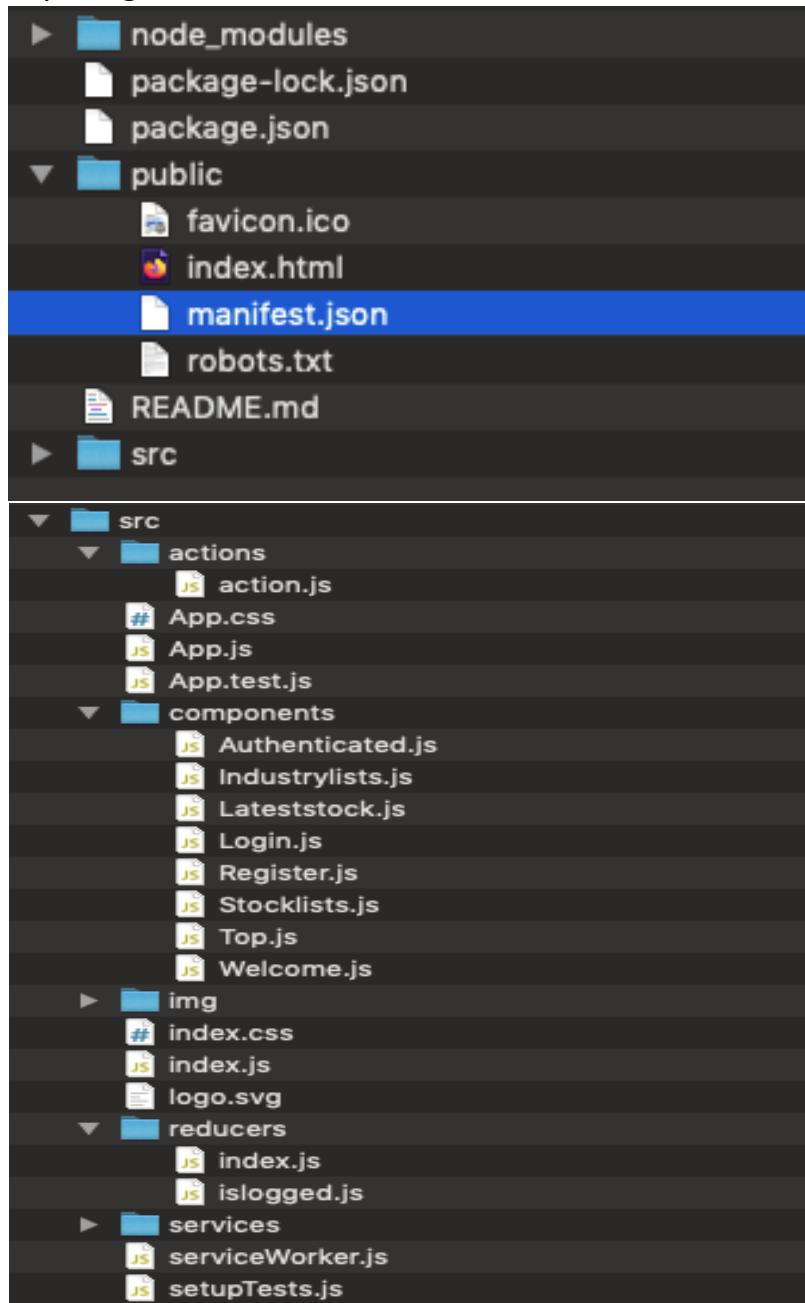
However, the way I designed in all pages is really functional looking and easy to navigate users. I added limitations in date picker since the stock API timestamp is limited, and for preventing code from breaking..



Technical Description

Architecture

My assignments folder consists of these files and folders.



My src folder is mainly composed of actions, components, img, reducers, and services folders. The actions and reducers folders contain code for react-redux to control user state, and the component's class contains each class with renders and the Authenticated file manages user authentication. Since I decided to use react-redux, actions and reducers fodders were added.

To manage user authentication, in app.js, I wrap all authenticated files with Auth components imported from Authenticated.js. This will allow users to log

in and logout with proper authentication.

```
<Switch>
  <Route exact path = '/' component={Welcome} />
  <Route path = '/login' component={Login} />
  <Route path = '/register' component={Register} />

  <Auth >
    <Route path = '/stocklists' component={Stocklists}/>
    <Route path = '/lateststock' component={Lateststock} />
    <Route path = '/top' component={Top} />
    <Route path = '/industrylists' component={Industrylists}/>
  </Auth>
</Switch>

</Router>
```

In addition, for managing user state using react-redux, first I only could find the way used as react hooks, it took a while to figure out how to use in class component, then finally figured out in login.js like,

```
const mapDispatchToProps = (dispatch) => {
  return {
    signIn: () => dispatch(setLoginTrue())
  }
};

export default connect(null, mapDispatchToProps)(Login);
```

Test Plan

1	TASK	POSITIVE OUTCOME CASES	NEGATIVE OUTCOME CASES	EDGE CASE	RESULT	APPNEDIX
2	Access to localhost/	show localhost/	Network error 400, 404, 403	Null	Pass	1
3	Try to register	Success	Network error 400	Register without any input	Pass	2
4	Try to login	Success, push to Auth top page	Network error 401	Register without any input	Pass	3
5	Try to logout	Push to home page with initial set up	Redirect to home, but state is not chaged	Null	Pass	4
6	Go to stock lists from option	Go to a proper page , Show all stock lists	Network connection error	Null	Pass	5
7	filter lists by symbol,	Filter and show specified lists	Network connection error	Put unexisted symbol	Pass	6
8	filter lists by Industry,	Filter and show specified lists	Network connection error	Put unexisted Industry	Pass	7
9	filter lists by name,	Filter and show specified lists	Network connection error	Put unexisted name	Pass	8
10	Go to latest stock lists	Go to a proper page , Show latest stock lists	Network connection error	Null	Pass	9
11	Search by symbol	Filter and show specified lists	Network connection error	Put unexisted symbol	Pass	10
12	Go to Stock top page	Go to a proper page	Network connection error	Null	Pass	11
13	Filter lists by date and symbol	Show table and chart with results	Show incorrect format error	Search without any value	Pass	12
14	Show industry area	Go to a proper page	Network connection error	Null	Pass	13

Difficulties/Exclusion/unresolved & persistent errors/

- My current web sites do not contain any bug or error, whereas, I could not change the format of timestamp(date) inside the chart. I could change dates format in the table, but in the chart, it still shows exactly timestamp I get from API.

Extensions

- Potentially, as more data need to handle in this web site in the future, Loading pages or functions should be added since users cannot know what is happening during loading.

User guide

1. Users are able to register by clicking the register button on the right top of the bar.
2. If users already had an account, then move to the login page.
3. Provide email and password.
4. In the main stock page, users can jump to three pages, all stock lists, latest stock, and stock top.
5. If users want to see the latest stock data by symbol, the user can put any valid symbols in the input field and search.
6. If users want to find all stocks lists, go to the stock lists page, and simply filter by name, industry, and symbol.

7. If users want to find lists of stocks within specified dates, users can use the provided date pickers to select from dates and to dates, then they can search specified value.
8. Users can simply log out by clicking the button right top of the bar.
9. Users can access to industry areas from stock lists page clicking “here”.

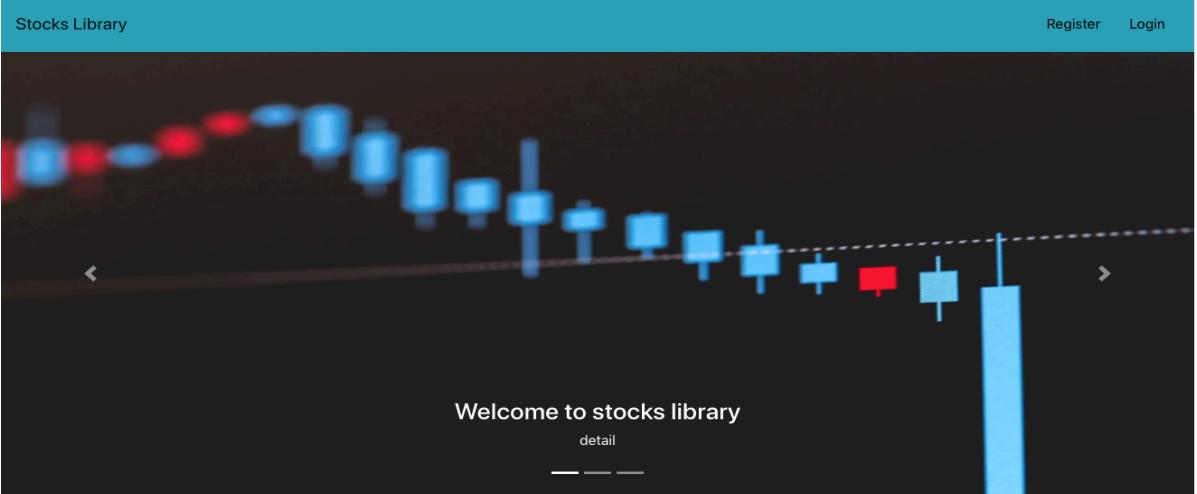
References

React Docs(n.d.). React DOM.

Retrieved from <https://reactjs.org/docs/react-dom.html>

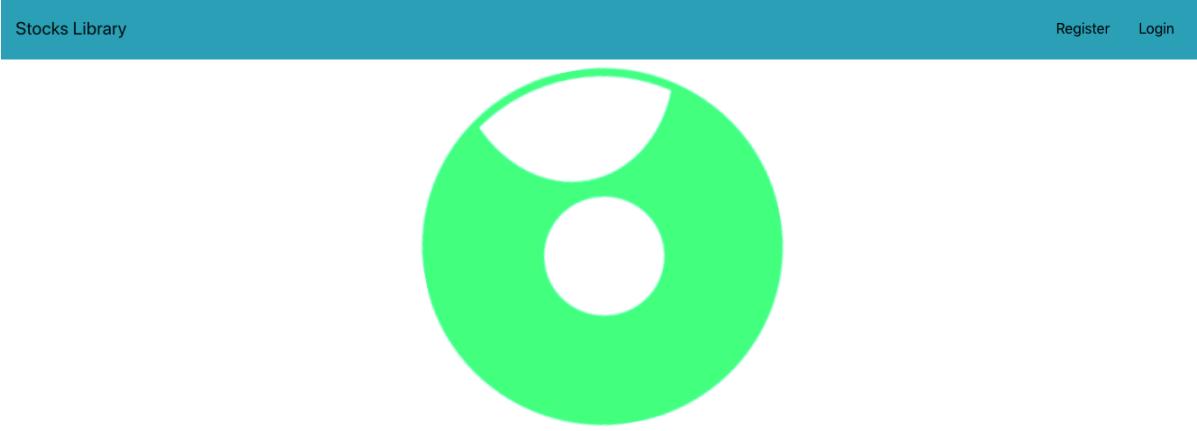
Appendices

Test 1:



The screenshot shows the homepage of a stocks library website. The top navigation bar is teal with the text "Stocks Library" on the left and "Register" and "Login" on the right. Below the navigation is a large, dark background image of a candlestick chart with blue and red bars. In the center of the chart, the text "Welcome to stocks library" is displayed in white, with a smaller "detail" link underneath. At the bottom of the page, the text "Hello, world!" is prominently displayed in large, white, sans-serif font. Below this, a smaller text block reads: "Stocks library is a website where you can search a variety of stocks in any industry area. There are also some functions you can use to search stocks by filtering dates, and areas with such as charting and a data table." A blue "Get started" button is located on the left side of this text block.

Test 2:

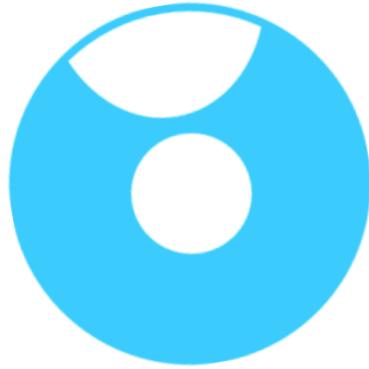


The screenshot shows a registration form page. The top navigation bar is teal with the text "Stocks Library" on the left and "Register" and "Login" on the right. The main content area features a large, bright green circular logo in the center. Below the logo, the text "Register Form" is displayed in a bold, black, sans-serif font. Underneath this, a sub-instruction "Signup with setting your email and password!" is shown in a smaller, regular black font. The form itself consists of two input fields: "Email" and "Password". The "Email" field contains the placeholder text "with a placeholder". The "Password" field contains the placeholder text "password placeholder". At the bottom of the form is a large, solid green button with the text "Register" in white.

Test 3:

Stocks Library

Register Login



Login Form

If you have already registered, please login with the registered email and password.

Email with a placeholder

Password password placeholder

Login

Test 4,5:

All stock lists

Search by name, industry, symbol

Industry lists available [here](#)

Name	Industry	Symbol
<input type="text" value="Enter Name..."/>	<input type="text" value="Enter Industry..."/>	<input type="text" value="Enter Symbol..."/>
Agilent Technologies Inc	Health Care	A
American Airlines Group	Industrials	AAL
Advance Auto Parts	Consumer Discretionary	AAP
Apple Inc.	Information Technology	AAPL
AbbVie Inc.	Health Care	ABBV
AmerisourceBergen Corp	Health Care	ABC
Abbott Laboratories	Health Care	ABT
Accenture plc	Information Technology	ACN
Adobe Systems Inc	Information Technology	ADBE
Analog Devices Inc.	Information Technology	ADI

10 ▾

1 2 3 4 5 > >>

Test 6:

All stock lists

Search by name, industry, symbol
Industry lists available [here](#)

Name	Industry	Symbol
<input type="text" value="Enter Name..."/>	<input type="text" value="Information Te"/>	<input type="text" value="Enter Symbol..."/>
Apple Inc.	Information Technology	AAPL
Accenture plc	Information Technology	ACN
Adobe Systems Inc	Information Technology	ADBE
Analog Devices Inc.	Information Technology	ADI
Automatic Data Processing	Information Technology	ADP
Alliance Data Systems	Information Technology	ADS
Autodesk Inc	Information Technology	ADSK
Akamai Technologies Inc	Information Technology	AKAM
Applied Materials Inc	Information Technology	AMAT
Advanced Micro Devices Inc	Information Technology	AMD

10 ▾ 1 2 3 4 5 > >>

Test 7, 8:

Stocks Library Stocks ▾ Logout

All stock lists

Search by name, industry, symbol
Industry lists available [here](#)

Name	Industry	Symbol
<input type="text" value="Enter Name..."/>	<input type="text" value="Enter Industry..."/>	<input type="text" value="AAL"/>
American Airlines Group	Industrials	AAL

10 ▾ 1

Test 9,10:

Stocks Library Stocks ▾ Logout

Get the latest price information by stock symbol

If you do not know company's symbols, you can go to stock lists to find corresponding symbols.

Type company's symbol

AMZN	Search						
#	Name	Industry	Open	High	Low	Close	Volumes
	Amazon.com Inc	Consumer Discretionary	1827.75	1919.4	1812	1902.83	7701940

Test 11,12:

Stocks Library Stocks ▾ Logout

Search stock lists by filtering date

You can search all stock lists from 6 November 2019 to 24 March 2020

Date columns can be sorted

Please put dates to filter

03/01/2020 to 03/05/2020

Please provide symbols

AMZN	Search						
Date	Name	Industry	Open	High	Low	Close	Volumes
04/03/2020	Amazon.com Inc	Consumer Discretionary	1946.57	1978	1922	1975.83	4772920
03/03/2020	Amazon.com Inc	Consumer Discretionary	1975.37	1996.33	1888.09	1908.99	7534490
02/03/2020	Amazon.com Inc	Consumer Discretionary	1906.49	1954.51	1870	1953.95	6761650
01/03/2020	Amazon.com Inc	Consumer Discretionary	1814.63	1889.76	1811.13	1883.75	9493800

10 ▾ 1

Test 13:

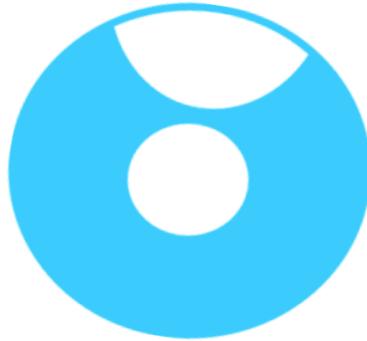
The image shows a mobile application interface with a teal header bar. The header contains the text "Stocks Library" and "Stocks ▾". Below the header, the main content area has a light teal background. At the top of this area, the text "Industrials Lists" is displayed in a large, serif font. Below this, a numbered list of ten sectors is shown, each preceded by a small black number and a vertical line:

1. *Health Care*
2. *Industrials*
3. *Consumer Discretionary*
4. *Information Technology*
5. *Consumer Staples*
6. *Utilities*
7. *Real Estate*
8. *Materials*
9. *Energy*
10. *Telecommunication Services*

Error handlings:

Stocks Library

Register Login



Login Form

If you have already registered, please login with the registered email and password.

Email

with a placeholder

Password

password placeholder

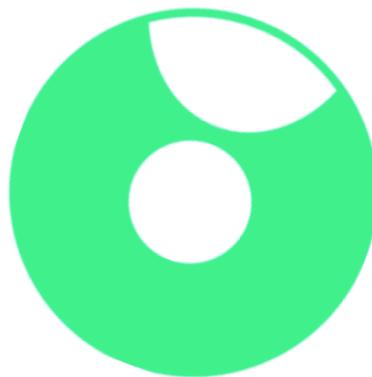
Login

Log in failed

Login info is not correct

Stocks Library

Register Login



Register Form

Signup with setting your email and password!

Email

test@1

Password

*

Register

Registration failed

User already exists

Stock symbol incorrect format - must be 1-5 capital letters

x

Search stock lists by filtering date

You can search all stock lists from 6 November 2019 to 24 March 2020

Date columns can be sorted

Please put dates to filter

 x

to

 x

Please provide symbols