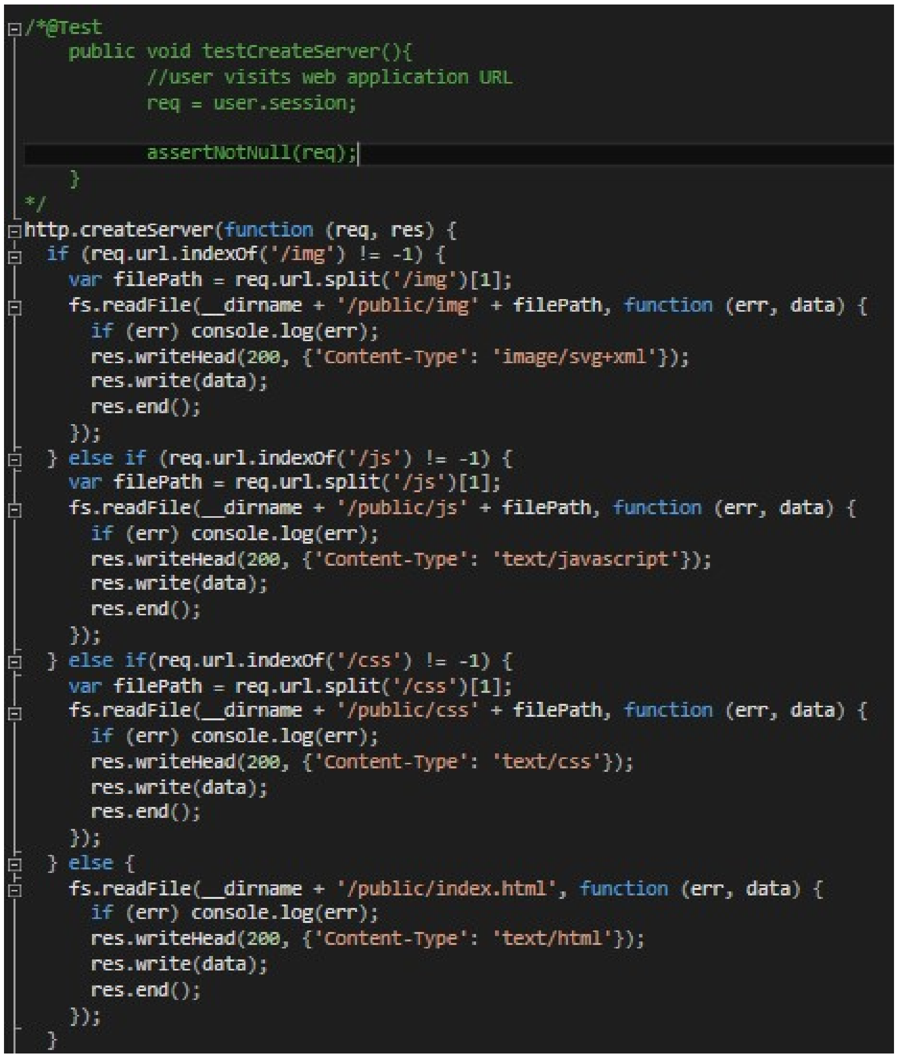
Test Plan Document

InvestiMapp

Contents

1. Unit Testing

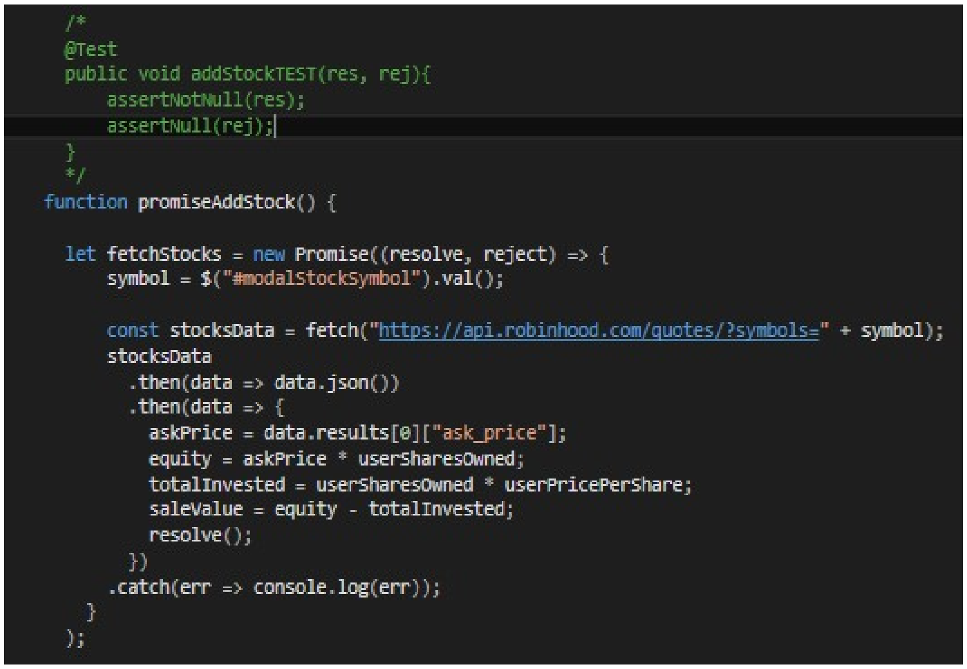
1.1 Test for requesting a new user session:



```
/*@Test
    public void testCreateServer(){
            //user visits web application URL
            req = user.session;

            assertNotNull(req);
    }
*/
http.createServer(function (req, res) {
  if (req.url.indexOf('/img') != -1) {
    var filePath = req.url.split('/img')[1];
    fs.readFile(__dirname + '/public/img' + filePath, function (err, data) {
      if (err) console.log(err);
      res.writeHead(200, {'Content-Type': 'image/svg+xml'});
      res.write(data);
      res.end();
    });
  } else if (req.url.indexOf('/js') != -1) {
    var filePath = req.url.split('/js')[1];
    fs.readFile(__dirname + '/public/js' + filePath, function (err, data) {
      if (err) console.log(err);
      res.writeHead(200, {'Content-Type': 'text/javascript'});
      res.write(data);
      res.end();
    });
  } else if(req.url.indexOf('/css') != -1) {
    var filePath = req.url.split('/css')[1];
    fs.readFile(__dirname + '/public/css' + filePath, function (err, data) {
      if (err) console.log(err);
      res.writeHead(200, {'Content-Type': 'text/css'});
      res.write(data);
      res.end();
    });
  } else {
    fs.readFile(__dirname + '/public/index.html', function (err, data) {
      if (err) console.log(err);
      res.writeHead(200, {'Content-Type': 'text/html'});
      res.write(data);
      res.end();
    });
  }
```

1.2 Test for adding a new stock card:

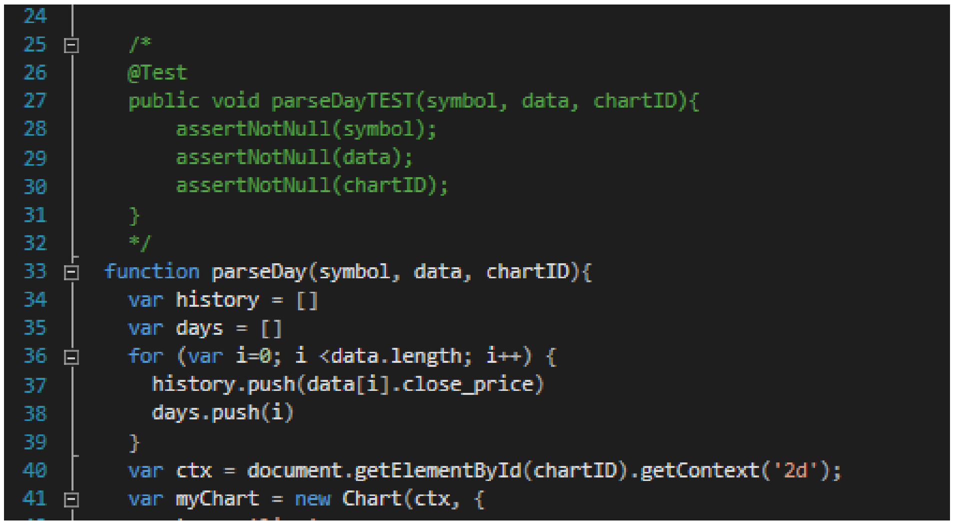


```
  /*
  @Test
  public void addStockTEST(res, rej){
      assertNotNull(res);
      assertNull(rej);
  }
  */
function promiseAddStock() {

  let fetchStocks = new Promise((resolve, reject) => {
      symbol = $("#modalStockSymbol").val();

      const stocksData = fetch("https://api.robinhood.com/quotes/?symbols=" + symbol);
      stocksData
        .then(data => data.json())
        .then(data => {
          askPrice = data.results[0]["ask_price"];
          equity = askPrice * userSharesOwned;
          totalInvested = userSharesOwned * userPricePerShare;
          saleValue = equity - totalInvested;
          resolve();
        })
      .catch(err => console.log(err));
    }
  );
```

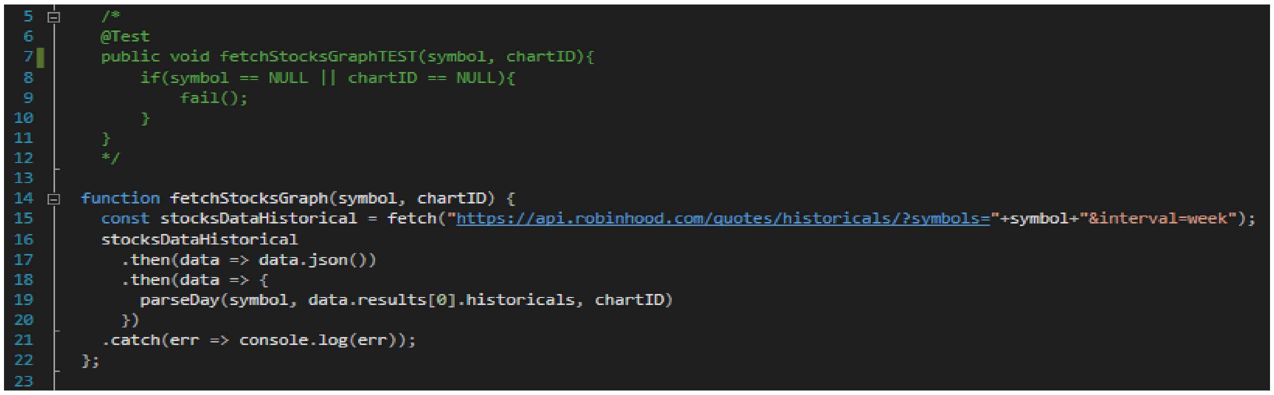
1.3 Test for parsing the information the customer has input:



```

  /*
  @Test
  public void parseDayTEST(symbol, data, chartID){
      assertNotNull(symbol);
      assertNotNull(data);
      assertNotNull(chartID);
  }
  */
function parseDay(symbol, data, chartID){
  var history = []
  var days = []
  for (var i=0; i <data.length; i++) {
    history.push(data[i].close_price)
    days.push(i)
  }
  var ctx = document.getElementById(chartID).getContext('2d');
  var myChart = new Chart(ctx, {
```

1.4 Test for fetching the Stock Graph:



```
  /*
  @Test
  public void fetchStocksGraphTEST(symbol, chartID){
      if(symbol == NULL || chartID == NULL){
          fail();
      }
  }
  */

function fetchStocksGraph(symbol, chartID) {
  const stocksDataHistorical = fetch("https://api.robinhood.com/quotes/historicals/?symbols="+symbol+"&interval=week");
  stocksDataHistorical
    .then(data => data.json())
    .then(data => {
      parseDay(symbol, data.results[0].historicals, chartID)
    })
  .catch(err => console.log(err));
};

```

2. Use Case Testing

2.1 Login Use Case

Actor: User Main
Scenario:
1) User clicks "Login"
2) User fills out form with credentials
3) User is signed into their account Alternatives:
   2a) User clicks "Login"
   2b) User fills out form with incorrect credentials
   2c) User is returned to form with a message stating they could not be signed in.
   3a) User clicks "Create Account'
   3b) User fills out form with information
   3c) User verifies an email sent to the address provided
   3d) User clicks "Login"

Test Situations:

1) User successfully signs in with their credentials
2) User fails sign-in with invalid credentials
3) User creates a new account

Test Coverage:

- Base: Number of main and alt scenarios = 3
- Test Situations cover all 3 cases
- 100% coverage of use case

Status: Not implemented (no screenshot)

2.2 Stock Manipulation Use Case

Actor: User
Main Scenario:

1) User clicks "Add/Remove Stock"
2) User fills out a form and clicks "Submit"
3) The page will redirect to their dashboard with their updated stock ownership.

Alternatives:
   2a) User clicks "Cancel" or closes out the form window
   2b) User is brought back to their dashboard, with no changes to stock ownership
   3a) User had entered an invalid stock symbol and/or quantity
   3b) User is brought back to their dashboard, with not change to stock ownership Test
Situations:

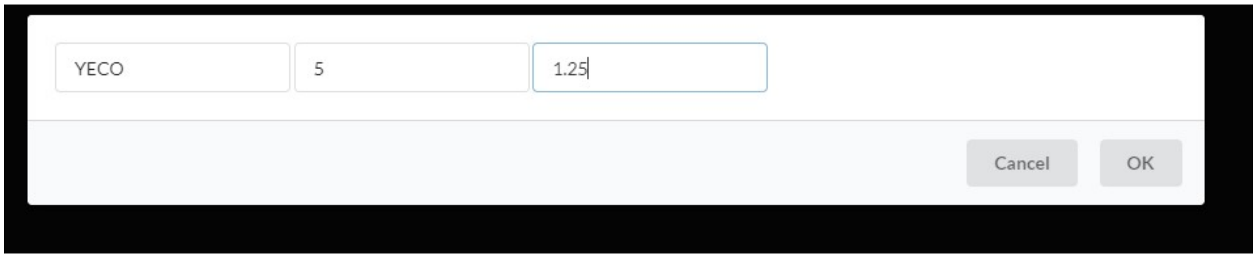
1) User successfully adds a stock
2) User successfully removes a stock
3) User begins the add/remove process, but terminates it before completion 4) User attempts to add an invalid stock
5) User attempts to remove a stock they don't have
6) User attempts to add/remove an invalid number of stock (i.e., -1)

Test Coverage:

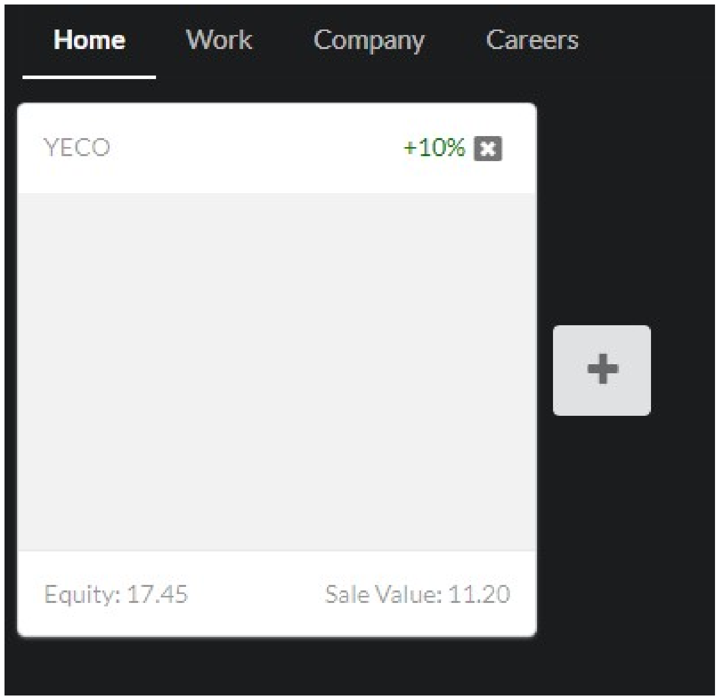
- Base: Number of main and alt scenarios = 3
- Test Situations cover all 3 cases
- 100% coverage of use case

Status: Implemented (screenshots below)

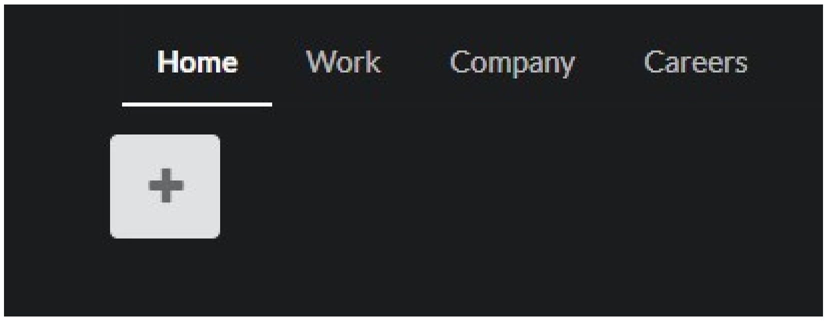
1) Adding a Stock



2) Stock has been added



3) Stock was removed



2.3 Dashboard Updates Use Case

Actor: User
Main Scenario:

1) User signs into, or is redirected to their homepage.
2) User views the most recent information on stock prices, and how they compare to price of purchase Alternatives:

2a) User has poor/no internet connection, and the most recent prices could not be fetched Test Situations:

1) User successfully views dashboard
2) User unsuccessfully views dashboard

Test Coverage:

- Base: Number of main and alt scenarios = 2
- Test Situations cover all 2 cases
- 100% coverage of use case

Status: Not yet implemented (no screenshots)

2.4 Notifications Use Case

Actor: System Main
Scenario:

1) Stock Market data is updated and loaded in the system
2) System sends notification based on user preferences Alternatives:
2a) User has notifications turned off
3a) User has invalid contact methods in the system Test

Situations:

1) User with valid contact methods in system, and notifications turned on
2) User with invalid contact methods in system, and notifications turned off 3) User with notifications turned off

Test Coverage:

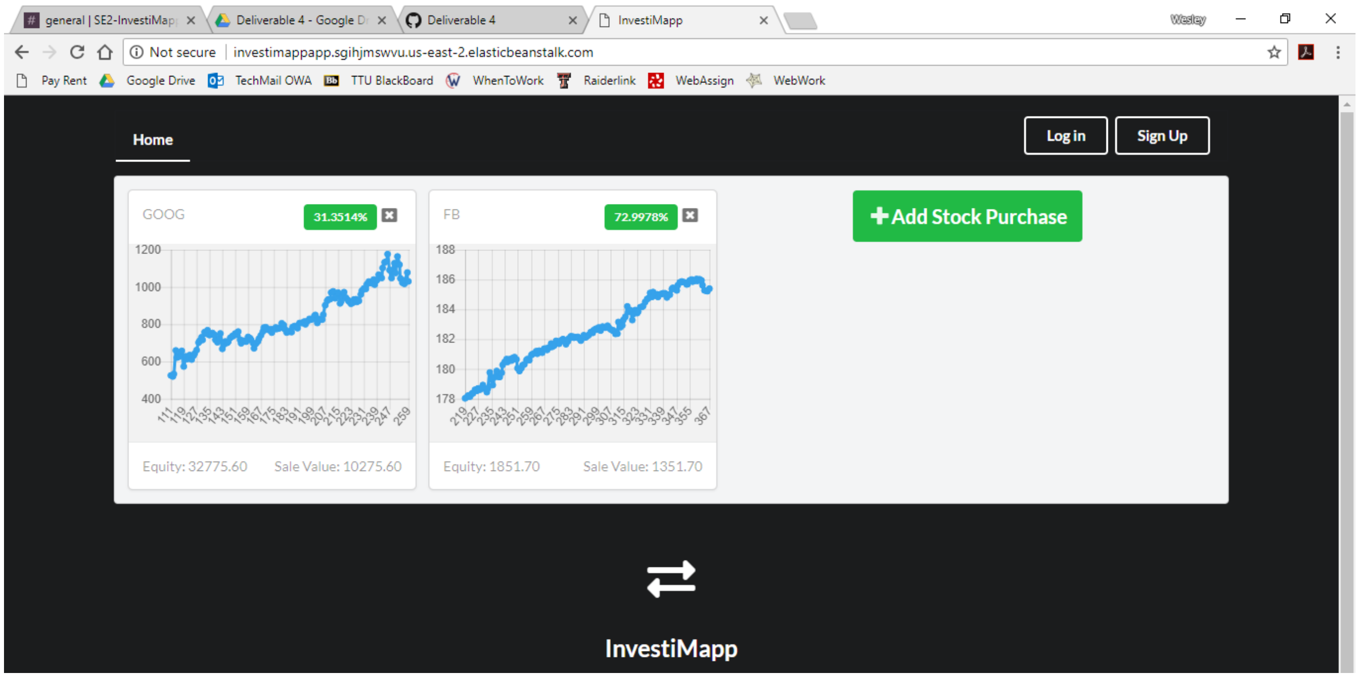
- Base: Number of main and alt scenarios = 3
- Test Situations cover all 3 cases
- 100% coverage of use case

Status: Not yet implemented (no screenshots)

3. Acceptance Testing

Current Status: Complete

We have completed our black box testing by running through our full suite of use cases on our live application. Using multiple browsers (IE, Chrome, Firefox, and Safari) on multiple platforms (Windows 10, Windows 7, MacOS X, iOS 11, Android 7, and Android 8), we successfully accessed our application. After doing so, we were successfully able to add stock cards of multiple different companies, view and manipulate the view of the data, as well as remove them.



Equity: 32775.60 Sale Value: 10275.60

Equity: 1851.70 Sale Value: 1351.70