# The Stock App Testing

## Unit Testing

Each of the components were tested individually before they were integrated within the larger site. The chart in the middle was tested using set chart data to ensure its accuracy.

All API calls were verified and tested thoroughly before and during implementation in the frontend.

The ability to post was tested incrementally with the first thing that needed validation being the ability to tie a post to a certain account. Once that was verified then the posts were created in the command line with a basic object-oriented approach.

Testing cookies only involved the login and logout functions, and largely was a backend issue. Only the backend is able to create, view, and manage cookies. Various cookie problems plagued development and caused massive delays.

One of those delays was the integration of 401 handling, in which the app is able to take care of unauthorized or expired cookies. If this occurs, the app is set to automatically use the refresh token in order to obtain a renewed access token. This automatic functionality required tests all its own.

## Integration testing

Once all the components worked on their own, we combined them into the final product making sure that they still passed their original acceptance criteria after integration. The first things to get integrated was the account creation and the basic html for the webpage. After that we added the ability to write posts. Then after that we added the display for posts in the form of a feed.

## User Testing

User tests were first conducted internally by our team and then we opened the site up to a small group of friends to tell us their experience.

During the first stage of internal tests, we noticed that the account creation window wasn’t providing a confirmation that the account was successfully created. This was quickly addressed before sending the site off to other users. The other thing we realized is that the chart was not as intuitive as we first thought. So, we made a dialog box that would prompt users to zoom out by double clicking on the box.

Besides that, the site worked as expected so we passed it on to our other users. They reported that the site worked, and posting was easy. But upon reviewing their posts it became clear that it was not immediately apparent that they were supposed to navigate to a ticker to post about it. Many users just posted whatever they wanted on the Apple stock page because it was the default. We addressed this in our documentation but should make it more clear through our UI.