SigFig Coding Challenge

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**Question 1**

1) For this function I only used 3 companies (google, yahoo, and kmart) and chose to do last week (4/10/2016 – 4/16/2016). I also decided to create the getFriendsListForUser and getTradeTransactionsForUser functions as well as create objects for each user. The function first goes through each of the user’s friend’s transactions and filters by year, month, and day removing the transactions that did not occur last week. Then the transactions are filtered by company and pushed to arrays depending on the company. Next, for each company transaction array, the net value is returned along with a corresponding BUY, SELL, or neutral string. A transaction string output is made for each company and the string, pushed to a final array, and if the string contains neutral (net value of 0) it is removed. Finally, the final array is sorted and then reversed to order each net transaction from highest to lowest. I have a lot of comments in my code so you can check those out of you want to follow along better.

2) To be honest I don’t really have any experience with unit tests but I tried some out using QUnit (not sure if it’s the best test framework to use but figured I would try). To test it out I first used it to see if the function alertUser and display were in the file. Next I used it for something more practical and tested to see if the alertUser function returned an array for each name in the ID array. Lastly, I checked to see if the checkFriends function existed and the getTradeTransactionsForUser function returned an array.

3) Some other practical unit tests that could be performed include an asynchronous test where if you were getting data from an API (ex. different Stock companies) you could check to see if the API data loaded first before your personal functions were performed. You could also test to check if a function you made doesn’t run when it’s not supposed to using notOk().

4) This question took me a little longer since I decided to make the getTrade and checkFriends functions myself, used DOM manipulation, and an object creator function with actual ID values. The overall function that I was asked to create (alertUser() ) probably took me around two hours to figure out and a little extra time to make sure everything was running alright. If we were to expand on this, I could use the date function to determine the actual “last week” as well as create a function filtering through multiple companies besides just three.

**Question 2:**

In a prior project I did I had created a blackjack game. You can find the code for this application at <https://github.com/billfranz00/blackJack>. Some methods used in this include dealing the cards and the dealers turn. When dealing the cards the cards have to be drawn out at random. I did this by having an object with all 52 cards and extracting a random car from the deck using Math.floor(Math.random…). To deal 1 card to the player then 1 card to the dealer, an if statement was used by determining if the remainder of the amount of cards used was equal to 0. For the dealers turn after the player stays, the function had to keep running until the dealers total was over 17 or the dealer busted. This was made using a while loop and drawing random cards out of the object using the Math.floor(Math.random…) method. The dealers total had to be stored in a variable and was checked after every card drawn.