UNIT TESTING

Tested By:	Alekhya
Test Type	Unit Testing
Test Case Number	1.1
Test Case Name	Open Paper Account - Password Matching
Test Case Description	This test case checks the correctness of functionality to check the matching of input entered by the user in the fields "Password" and "Confirm Password" in the Registration Page.
Entry Condition	1. User is on Registration Page. 2. User has entered input in both "Password" and "Confirm Password" fields

Specifications		
Input	**Expected Output**	**Actual Output**
CASE 1 : Same Input in both fields	Function must return True i.e. both fields match	True
CASE 2 : Different Input in both fields	Function must return False i.e both fields don't match	False
CASE 3 : Input in "Password" and "Confirm Password" left empty	Function must return False i.e both fields don't match	False
CASE 4 : Input in "Confirm Password" and "Password" left empty	Function must return False i.e both fields don't match	False
Test Result	**PASS**	
Follow up action taken	N/A	

Tested By:	Alekhya
Test Type	Unit Testing
Test Case Number	1.2
Test Case Name	Open Paper Account - Empty Field
Test Case Description	Test the correctness of functionality that checks presence of empty fields in the Registration Page after user clicks on Submit button
Entry Condition	1. User is on Registration Page. 2. User clicked on Submit Button

Specifications		
Input	**Expected Output**	**Actual Output**
CASE 1 : Input entered in all the fields	Function must return True i.e No empty fields detected	True
CASE 2 : A few fields left empty	Function must return False i.e empty fields detected	False
Test Result	**PASS**	
Follow up action taken	N/A	

Tested By:	Alekhya
Test Type	Unit Testing
Test Case Number	1.3
Test Case Name	Open Paper Account - Correct Password Length
Test Case Description	This tests the correctness of functionality that checks if the length of password entered meets the requirements
Entry Condition	1. User is on Registration Page. 2. User entered input in the "Password" field

Specifications		
Input	**Expected Output**	**Actual Output**
CASE 1 : Password of length 8 characters entered	Function must return True i.e Sufficient length	True
CASE 2 : Password of length more than 8 characters entered	Function must return True i.e Sufficient length	True
CASE 3 : Password of length less than 8 characters entered	Function must return False i.e Insufficient length	False
Test Result	**PASS**	
Follow up action taken	N/A	

Tested By:	Alekhya
Test Type	Unit Testing
Test Case Number	2
Test Case Name	Login
Test Case Description	This tests that empty field error handling is working when one of the Username or Password field are empty on Sign In page and hence user cannot log on**.**
Entry Condition	1. User has signed up **2.** User is on Sign In Page**.**

Specifications		
Input	**Expected Output**	**Actual Output**
CASE 1 : Both Username and Password entered	Function must return True i.e. no empty fields	True
CASE 2 : Username entered and Password left empty	Function must return False i.e error handled - empty fields	False
CASE 3 : Username left empty and Password entered	Function must return False i.e error handled - empty fields	False
Test Result	**PASS**	
Follow up action taken	N/A	

Tested By:	Alekhya
Test Type	Unit Testing
Test Case Number	3
Test Case Name	Get Real Time Stock Quote
Test Case Description	This test case tests that the click on a company name returns correct stock value**.**
Entry Condition	1. User is on logged on. 2. User on browse tab.

Specifications		
Input	**Expected Output**	**Actual Output**
Clicks on any company	Stock Quote of that clicked company is returned	Stock Quote not returned
Test Result	**FAIL**	
Follow up action taken	1. Checked for the presence of that company in the third party API that provides stock data. **2.** Included only US based companies in the website	

Tested By:	Alekhya
Test Type	Unit Testing
Test Case Number	4.1
Test Case Name	Initiate Paper Trade - Share count validation
Test Case Description	This tests that the exception of entering "0" for number of shares to be purchased is handled correctly
Entry Condition	1. User is signed in 2. User is on Browse tab 3. User clicks on Buy shares 4. User inputs "Number of Shares" he wants to purchase

Specifications		
Input	**Expected Output**	**Actual Output**
CASE 1: Input entered is more than 0	Function must return value of Shares purchased	Value of Shares purchased
CASE 2: Input entered is 0	Function must return False	False
CASE 2: Input entered is less than 0	Function must return False	False

Test Result	**PASS**
Follow up action taken	N/A

Tested By:	Alekhya
Test Type	Unit Testing
Test Case Number	4.2
Test Case Name	Initiate Paper Trade - Check available balance
Test Case Description	This test case tests that the user is not allowed to buy shares when he has insufficient balance in his account
Entry Condition	1. User is Signed In 2. User is on Browse tab 3. User clicks on Buy shares 4. User enters valid input when prompted for "Number of Shares"

Specifications		
Input	**Expected Output**	**Actual Output**
CASE 1: Enter 100,000 in Number of shares *(since user can have maximum balance of only $1000, balance will definitely be insufficient for purchase)*	Exception must be handled and False returned	False
CASE 2: Enter valid input	Function must return True and updates the balance	True and balance is updated

Test Result	**PASS**
Follow up action taken	N/A

Tested By:	Alekhya
Test Type	Unit Testing
Test Case Number	5.1
Test Case Name	Sell-Update balance after Shares sold
Test Case Description	This tests that user's balance get updated after he sells the shares.
Entry Condition	1. User is on Sell tab 2. User clicks on Transaction Id to trigger sell shares 3. User enters input when prompted for "Number of Shares" to sell

Specifications		
Input	**Expected Output**	**Actual Output**
CASE 1: Enter value for number of shares to be sold greater than number of shares bought	Function must return False	False
CASE 2: Enter value for number of shares less than 0	Function must return False	False
CASE 3: Enter valid input	Function must return True and updates the balance	True and balance is updated
Test Result	**PASS**	
Follow up action taken	N/A	

Tested By:	Alekhya
Test Type	Unit Testing
Test Case Number	5.2
Test Case Name	Sell - Update number of shares after shares are sold
Test Case Description	This tests that user's share count gets updated after he sells the shares**.**
Entry Condition	1. User is on Sell tab 2. User clicks on Transaction Id to trigger sell shares **3.** User enters input when prompted for "Number of Shares" to sell

Specifications		
Input	**Expected Output**	**Actual Output**
CASE 1: Enter value for number of shares to be sold greater than number of shares bought	Function must return False	False
CASE 2: Enter value for number of shares less than 0	Function must return False	False
CASE 3: Enter valid input	Function must return True and reduces the number of shares in the user's account	True and number of shares in user's account is updated
Test Result	**PASS**	
Follow up action taken	N/A	

Tested By:	Alekhya
Test Type	Unit Testing
Test Case Number	6.1
Test Case Name	View Holdings - Fetch Transactions from Database
Test Case Description	This test case tests that user's share count and purchase date are fetched from DB and are accessible in the function that plots graph between Number of shares and Purchase Date
Entry Condition	1. User is on Transaction History tab 2. User has performed at least one transaction 3. User clicks on Graphical View

Specifications		
Input	**Expected Output**	**Actual Output**
Click on Graphical View	Function must return an array with number of shares and Purchase date belonging to the User	Empty array
Test Result	**FAIL**	
Follow up action taken	1. Corrected the code snippet that fetches the value into function used to plot the graph	

Tested By:	Alekhya
Test Type	Unit Testing
Test Case Number	6.2
Test Case Name	View Holdings - Plot Graph
Test Case Description	Tests the working of Graph function that plots graph between user's share count and purchase date
Entry Condition	1. User is on Transaction History tab 2. User clicks on Graphical View

Specifications		
Input	**Expected Output**	**Actual Output**
Click on Graphical View	Function plots graph for points (X,Y)	Graph between X and Y

Test Result	**PASS**
Follow up action taken	N/A

Tested By:	Alekhya
Test Type	Unit Testing
Test Case Number	7
Test Case Name	Email Notification
Test Case Description	This test case checks if the user is receiving the emails sent from the website after certain actions like – registration and password reset
Entry Condition	User has entered his email Id and it has been stored in the database

Specifications		
Input	**Expected Output**	**Actual Output**
Email Id	Email must be received by that user to the input email Id	Email received
Test Result	**PASS**	
Follow up action taken	N/A	

Tested By:	Alekhya
Test Type	Unit Testing
Test Case Number	8
Test Case Name	Add to Watchlist
Test Case Description	This test case checks whether the user is able to add his favorite companies to watchlist
Entry Condition	User has clicked the Add to watchlist button

Specifications		
Input	**Expected Output**	**Actual Output**
Email Id	Favorite companies must be added to watch list	Favorite companies have been added to watch list

Test Result	**PASS**
Follow up action taken	N/A

INTEGRATION TESTING:

Tested By:	Sabarish	
Test Type	Integration Testing	
Test Case Number	1	
Test Case Name	Open Paper Account & Email Notification	
Modules Tested	Email Send/Receive, Registration	
Test Case Description	This test case tests the integration of the modules Open Paper Account, Email Notification.	
Entry Condition	User has been registered with the system	
Specifications		
Input	**Expected Output**	**Actual Output**
Username, Email id	User must receive the email notifying that he has registered with the system	User has received the mail notifying that he has registered with the system
Procedural Steps		
1	Username and Email Id are passed to the email module	
2	Email module sends the mail to the user.	
Test Result	**PASS**	
Follow up action taken	N/A	

Tested By:	Sabarish	
Test Type	Integration Testing	
Test Case Number	2	
Test Case Name	Open Paper Account & Login	
Modules Tested	Open Paper Account & Login	
Test Case Description	This test case tests the integration of the modules Open Paper account & Login	
Entry Condition	User has unique user name and the registered user name is stored into the DB	

Specifications		
Input	**Expected Output**	**Actual Output**
Username, Password	User must be allowed into the system if his login credentials are correct or blocked if his login credentials are incorrect	User has been allowed into the system if his login credentials are correct or blocked if his login credentials are incorrect

	Procedural Steps	
1	User enters his login credentials	
2	Login credentials are fetched for the username in the DB	
3	Login credentials are checked and the corresponding action is performed.	

Test Result	**PASS**	
Follow up action taken	N/A	

Tested By:	Sabarish	
Test Type	Integration Testing	
Test Case Number	3	
Test Case Name	Purchase Stocks	
Modules Tested	Get Real time Stock Quote, Initiate Paper trade	
Test Case Description	This test case tests the integration of the modules Get Stock Quote, Initiate Paper trade	
Entry Condition	User has clicked a Stock name	
Specifications		
Input	**Expected Output**	**Actual Output**
Username, Stock Symbol, Stock price, Number of Shares	User's balance, purchase history and transaction history must be updated after his purchase	User's balance, transaction history and purchase history has been updated after his purchase
Procedural Steps		
1	User clicks the Stock name	
2	User enters the share value	
3	Price for the total shares have been calculated.	
4	Purchase history, Transaction history and Balance have been updated	
Test Result	**PASS**	
Follow up action taken	N/A	

Tested By:	Sabarish	
Test Type	Integration Testing	
Test Case Number	4	
Test Case Name	Get Real time Stock Quote & Add to watchlist	
Modules Tested	Get Real time Stock Quote & Add to watchlist	
Test Case Description	This test case tests the integration of the modules Get Real time Stock Quote & Add to watchlist	
Entry Condition	User has clicked a Stock symbol from the table.	

Specifications		
Input	**Expected Output**	**Actual Output**
Username, Stock Symbol, Stock price, Number of Shares	User's selected symbol must be added to watchlist	User's selected symbol has been added to watchlist

Procedural Steps	
1	User clicks the Stock Symbol
2	User gets the real time stock quote
3	User selects the "Add to watchlist" button
4	The symbol has been added to wathclist

Test Result	**PASS**	
Follow up action taken	N/A	

Tested By:	Sabarish	
Test Type	Integration Testing	
Test Case Number	5	
Test Case Name	View Graph	
Modules Tested	Fetch Transaction history, Plot Graph	
Test Case Description	This test case tests the integration of the modules Fetch Transaction history, Plot Graph	
Entry Condition	User has made some transactions	

Specifications		
Input	**Expected Output**	**Actual Output**
Username, Stock Symbol, Stock price, Number of Shares, Transaction Date, Transaction Type	User's balance and purchase history must be updated after his purchase	User's balance and purchase history has been updated after his purchase

Procedural Steps	
1	User clicks the Stock Symbol
2	User enters the share value to be sold
3	Price for the total shares have been calculated.
4	Sell history, Transaction history and Balance have been updated

Test Result	PASS	
Follow up action taken	N/A	

SYSTEM TESTING

Tested By:	Sabarish	
Test Type	System Testing	
Test Case Number	1	
Test Case Name	Login, Browse Stocks, Get Realtime Stock Quote	
Test Case Description	This test case tests the system flow from logging into the account to browsing stocks	
Entry Condition	User has been registered with the system	
Specifications		
Input	**Expected Output**	**Actual Output**
Username, Email id	User must be able Login, browse stocks and get realtime stock quotes	User has been able to Login, browse stocks and get realtime stock quotes
Procedural Steps		
1	User logs in to the system	
2	User browses stocks	
3	User gets realtime stock quote	
Test Result	**PASS**	
Follow up action taken	N/A	

Tested By:	Sabarish	
Test Type	System Testing	
Test Case Number	2	
Test Case Name	Login, Browse Stocks, Purchase ,Sell	
Test Case Description	This test case tests the system flow from logging into the account to selling stocks	
Entry Condition	User has been registered with the system	

Specifications		
Input	**Expected Output**	**Actual Output**
Username, Email id	User must be able Login, browse stocks and get realtime stock quotes	User has been able to Login, browse stocks, purchase and sell

	Procedural Steps	
1	User logs in to the system	
2	User browses stocks	
3	User purchases the selected stock	
4	User clicks the purchased stock to sell	
5	The stock is sold for the current price	

Test Result	**PASS**	
Follow up action taken	N/A	

Tested By:	Sabarish	
Test Type	System Testing	
Test Case Number	3	
Test Case Name	Login, Browse Stocks, Add to Watchlist	
Test Case Description	This test case tests the system flow from logging into the account to adding stocks to watchlist	
Entry Condition	User has been registered with the system	

Specifications		
Input	Expected Output	Actual Output
Username, Email id	User must be able Login, browse stocks and add stocks to watchlist	User has been able to Login, browse stocks and add to watchlist

Procedural Steps		
1	User logs in to the system	
2	User browses stocks	
3	User adds the stocks to watchlist	

Test Result	PASS	
Follow up action taken	N/A	

USER ACCEPTANCE TESTING

Tested By:	Alekhya
Test Type	User Acceptance
Test Case Number	1.1
Test Case Name	Open Paper Account - Password Matching Message Display
Test Case Description	This test case checks if the Password Match/Mismatch message is displayed when user enters input in "Password" and "Confirm Password" on the Registration Page.
Entry Condition	3. User is on Registration Page. 4. User has entered input in both "Password" and "Confirm Password" fields

Specifications		
Input	**Expected Output**	**Actual Output**
CASE 1 : Same Input in both fields	Display – "Passwords Match"	"Passwords Match" message displayed
CASE 2 : Different Input in both fields	Display- "Passwords Don't Match"	"Passwords Don't Match" message displayed
CASE 3 : Input in "Password" and "Confirm Password" left empty	Display – "Passwords Don't Match"	"Passwords Don't Match" message displayed
CASE 4 : Input in "Confirm Password" and "Password" left empty	Display – "Passwords Don't Match"	"Passwords Don't Match" message displayed
Test Result	**PASS**	
Follow up action taken	N/A	

Tested By:	Alekhya
Test Type	User Acceptance
Test Case Number	1.2
Test Case Name	Open Paper Account - Empty Field Message Display
Test Case Description	Tests that presence of empty fields in the Registration Page triggers display of appropriate message. (Empty fields. Enter data in all fields)
Entry Condition	3. User is on Registration Page. 4. User clicked on Submit Button

Specifications		
Input	**Expected Output**	**Actual Output**
CASE 1 : Input entered in all the fields	Display - "Registration successful"	"Registration successful" – Message displayed
CASE 2 : A few fields left empty	Display - "Empty fields. Enter data in all fields"	"Empty fields. Enter data in all fields" – Message displayed
Test Result	**PASS**	
Follow up action taken	N/A	

Tested By:	Alekhya
Test Type	User Acceptance
Test Case Number	1.3
Test Case Name	Open Paper Account - Correct Password Length Message Display
Test Case Description	Tests the display of message "Insufficient Password Length" when the length of password entered doesn't meet the requirements
Entry Condition	3. User is on Registration Page. 4. User entered input in the "Password" field

Specifications		
Input	Expected Output	Actual Output
CASE 1 : Password of length 8 characters entered	No message displayed	No message displayed
CASE 2 : Password of length more than 8 characters entered	No message displayed	No message displayed
CASE 3 : Password of length less than 8 characters entered	Display - "Insufficient Password Length	"Insufficient Password Length" – Message Displayed
Test Result	PASS	
Follow up action taken	N/A	

Tested By:	Alekhya
Test Type	User Acceptance
Test Case Number	2.1
Test Case Name	Login - Empty fields on Sign In page message display
Test Case Description	Tests that appropriate message is displayed when one of the Username or Password field are empty on Sign In page.
Entry Condition	3. User has signed up 4. User is on Sign In Page.

Specifications		
Input	**Expected Output**	**Actual Output**
CASE 1 : Both Username and Password entered	User logs into the website	User logs into the website
CASE 2 : Username entered and Password left empty	Display - "Enter Password to login"	"Enter Password" – Message displayed
CASE 3 : Username left empty and Password entered	Display - "Enter Username"	"Enter Username" – Message displayed

Test Result	**PASS**
Follow up action taken	N/A

Tested By:	Alekhya
Test Type	User Acceptance
Test Case Number	3
Test Case Name	Stock Quote Display
Test Case Description	Tests that the click on a company name displays correct stock value.
Entry Condition	3. User is on logged on. 4. User on browse tab.

Specifications		
Input	**Expected Output**	**Actual Output**
Clicks on any company	Display Stock Quote of that clicked company	Stock Quote not displayed
Test Result	**FAIL**	
Follow up action taken	3. Checked for the presence of that company in the third party API that provides stock data. 4. Included only US based companies in the website	

Tested By:	Alekhya
Test Type	User Acceptance
Test Case Number	4.1
Test Case Name	Initiate Paper Trade - Share count validation message display
Test Case Description	Tests that appropriate message is displayed after user enters the number of shares he wants to purchase.
Entry Condition	5. User is signed in 6. User is on Browse tab 7. User clicks on Buy shares 8. User inputs "Number of Shares" he wants to purchase

Specifications		
Input	**Expected Output**	**Actual Output**
CASE 1: Input entered is more than 0	Display - "Transaction Successful"	"Transaction Successful" – Message Displayed
CASE 2: Input entered is 0	Display - "Enter value more than 0"	"Enter value more than 0" – Message Displayed
CASE 2: Input entered is less than 0	Display - "Enter value more than 0"	"Enter value more than 0" – Message Displayed

Test Result	PASS
Follow up action taken	N/A

Tested By:	Alekhya
Test Type	User Acceptance
Test Case Number	4.2
Test Case Name	Initiate Paper Trade - Check available balance message
Test Case Description	Tests that the user is not allowed to buy shares when he has insufficient balance in his account
Entry Condition	5. User is signed in 6. User is on Browse tab 7. User clicks on Buy shares 8. User enters valid input when prompted for "Number of Shares"

Specifications		
Input	**Expected Output**	**Actual Output**
CASE 1: Enter 100,000 in Number of shares *(since user can have maximum balance of only $1000, balance will definitely be insufficient for purchase)*	Display – "Insufficient balance"	"Insufficient balance" message displayed
CASE 2: Enter valid input	Display – "Transaction successful"	"Transaction successful" message displayed
Test Result	**PASS**	
Follow up action taken	N/A	

Tested By:	Alekhya
Test Type	User Acceptance
Test Case Number	5
Test Case Name	View Holdings – Table View
Test Case Description	Tests that the user can view his transactions in Table format
Entry Condition	1. User is on Transaction History tab 2. User has at least one transaction

Specifications		
Input	Expected Output	Actual Output
Click on Transaction History Tab	A table with Transaction ID, Company Name, Number of Stocks purchased and Purchase Date must be displayed	Table with Transaction ID, Company Name, Number of Stocks purchased and Purchase Date
Test Result	PASS	
Follow up action taken	N/A	

Tested By:	Alekhya
Test Type	User Acceptance
Test Case Number	6
Test Case Name	Add to Watchlist
Test Case Description	Tests that the user can add companies to his watchlist
Entry Condition	1. User is on signed in 2. User is on Browse tab

Specifications		
Input	**Expected Output**	**Actual Output**
Click on "+" indicating request to add the corresponding company to watchlist	Display Message – "Added successfully to favorites"	"Added successfully to favorites" message displayed

Test Result	**PASS**
Follow up action taken	N/A

Tested By:	Alekhya
Test Type	User Acceptance
Test Case Number	7
Test Case Name	Get Watchlist
Test Case Description	Tests that the user can view companies in his watchlist
Entry Condition	1. User is on signed in 2. User is on watchlist tab

Specifications		
Input	**Expected Output**	**Actual Output**
Click on Watchlist Tab	Must show a list of companies the user added to his favorites	List of companies added to the watchlist are displayed

Test Result	**PASS**
Follow up action taken	N/A