

Course Project Phase #1 - Front End Requirements

Name	Description	Input	File Output	Terminal Output
Login1	No operation may occur while the user is not logged in	- bid - login - admin - bid	- No output - No output - 10 admin AA 999999.99 (to userDailyUpdate file by front end) - No output until bid process is done	- Prompt "Must logged in to use functions" - Prompt "Enter Username.\nUsername: " - If login accepted, welcome message to admin/user and menu are displayed, create userDailyUpdate file. - Continue to bid completion.
Login2	If a login fails then another attempt may be made, will not crash if username is invalid (non-existent account)	- login - aNotExistUsr - login - admin	- No output - No output - No output - 10 admin AA 999999.99 (to userDailyUpdate file by front end)	- Prompt "Enter Username.\nUsername: " - If username is not registered, prompt message "Username not registered Enter username.\nUsername: " - Prompt "Enter Username.\nUsername: "" - If login accepted, welcome message to admin/user and menu are displayed, create userDailyUpdate file.
Login3	May not login while already logged in	- login - admin - login	- No output - 10 admin AA 999999.99 (to userDailyUpdate file by front end) - No output	- Prompt "Enter Username.\nUsername: " - If login accepted, welcome message to admin/user and menu are displayed, create userDailyUpdate file. - Prompt message "Already logged in!"
Logout1	Must be logged in	- login - admin	- No output - 10 admin AA 999999.99 (to userDailyUpdate file by front end)	- Prompt "Enter Username.\nUsername: " - If login accepted, welcome message to admin and menu are displayed, create userDailyUpdate file.

		- logout	- 00 admin AA 999999.99 (to userDailyUpdate file by front end)	- Prompt message “Okay, see you again. Good Bye!”, continue to completion of logout (push userDailyUpdate to globalDailyUpdate, then delete userDailyUpdate).
Advertise1	Account is only able to sell if they have permission	- login - admin - advertise ...	- No output - 10 admin AA 999999.99 (to userDailyUpdate file by front end) - No output until advertise process is done	- Prompt “Enter Username.\nUsername: ” - If login accepted, welcome message to admin/user and menu are displayed, create userDailyUpdate file. - If account is not “BS”, continue to completion of advertise, else, prompt message “Only Admin, Full-Standard or Sell-Standard support this option”. Redirect “BS” user to menu.
Advertise2	Name is valid (multiple cases)	- Macbook Pro - cancel ...	- No output until advertise process is done - No output until advertise process is done	- If item name 25 or under chars, continue to completion of advertise (input starting price next), else, prompt message “Item name too long, max 25 characters including spaces.\nItem Name: ” - If item name equal to option names (e.g. logout, bid, advertise, cancel), prompt message “Option/system names cannot be used as item name, re-input item name: ”. Typing cancel will cancel the transaction and redirect admin/user back to menu
Advertise3	Minimum bid is valid	- 15.99 (this is not negative)	- No output until advertise process is done	- If starting price inserted is between > 0 and <= 999.99 and valid (not string), continue to completion of advertise (input days next)

		- 1dolla ...	- No output until advertise process is done	- Prompt message "Re-input starting price.\nStarting price: "
Advertise4	Bidding day is valid	- 3 (this is not negative) - -10 (this is negative) ...	- No output until advertise process is done - No output until advertise process is done	- If bid days inserted is between 1 and 999 and valid (not string), continue to completion of advertise (record advertise next) - Prompt message "Re-input bidding days.\nBid Days: "
Advertise5	Properly adds to record	- logout	- 03 Macbook_Pro admin 003 015.99 (to userDailyUpdate file by front end) - 00 admin AA 999999.99 (to userDailyUpdate file by front end) - Macbook_Pro admin admin 003 200.00 (to itemList file by back end)	- Prompt message "Advertise successful". Redirect admin/user to menu - Prompt message "Okay, see you again. Good Bye!", continue to completion of logout (push userDailyUpdate to globalDailyUpdate, then delete userDailyUpdate).
Bid1	User must only be able to bid if they have permission to do so	- login - admin	- No output - 10 admin AA 999999.99 (to userDailyUpdate file by front end)	- Prompt "Enter Username.\nUsername: " - If login accepted, welcome message to admin/user and menu are displayed, create userDailyUpdate file.

		<ul style="list-style-type: none"> - bid ... 	<ul style="list-style-type: none"> - No output until bid process is done 	<ul style="list-style-type: none"> - If account is not "SS", continue to completion of bidding, else, prompt message "Only Admin, Full-Standard or Buy-Standard support this option"
Bid2	Item name exists, valid (multiple cases)	<ul style="list-style-type: none"> - Gold Macbook Pro - Not exists Item - cancel ... 	<ul style="list-style-type: none"> - No output until bid process is done - No output until bid process is done - No output until bid process is done 	<ul style="list-style-type: none"> - If item name 25 or under chars, continue to completion of bidding (input bid next), else, prompt message "Item name max 25 chars, re-input item name, or type cancel to cancel" - if Item not exists, prompt message "Item not exists, re-input item name or type cancel to cancel" - Typing cancel will put user back to menu
Bid3	Bid may only be higher than previous by 5% if the user is not an admin (multiple cases)	<ul style="list-style-type: none"> - 200.30 - 1dolla - cancel 	<ul style="list-style-type: none"> - No output until bid process is done - No output until bid process is done - No output until bid process is done 	<ul style="list-style-type: none"> - If bid value inserted is at least 5%, unless they are "AA", continue to completion of bidding (record bid next) - If bid value is not valid, prompt "Bid value not valid, re - input bid value" - Typing cancel will put user back to menu
Bid4	User must have sufficient funds			<ul style="list-style-type: none"> - System checks if bidder has sufficient funds. If not, will prompt message to admin/user "Not enough balance to bid", redirect admin/user to menu. - If bidder has enough balance, continue to bid completion (record next)

Bid5	Properly adds to record	- logout	<ul style="list-style-type: none"> - 04 Gold_Macbook_Pro clyvewidjaya admin 200.30 (to userDailyUpdate file by front end) - 00 admin AA 999999.99 (to userDailyUpdate file by front end) 	<ul style="list-style-type: none"> - Prompt message "Good luck" - Prompt message "Okay, see you again. Good Bye!", continue to completion of logout (push userDailyUpdate to globalDailyUpdate, then delete userDailyUpdate).
AddCredit1	If the current user is an admin then a name must be provided	<ul style="list-style-type: none"> - login - admin - add - anotherUser - cancel ... 	<ul style="list-style-type: none"> - No output - 10 admin AA 999999.99 (to userDailyUpdate file by front end) - No output until add process is done - No output until add process is done - No output 	<ul style="list-style-type: none"> - Prompt "Enter Username.\nUsername: " - If login accepted, welcome message to admin/user and menu are displayed, create userDailyUpdate file. - If account is not "SS", continue to completion of add credit, else, prompt message "Only Admin, Full-Standard or Buy-Standard support this option" - If user exists, continue to completion of add credit, else prompt message "User not exists, re-input username.\nUsername: ". - Typing cancel will redirect admin/user to menu
AddCredit2	The given value must be non negative and equal to or less than 1000	<ul style="list-style-type: none"> - 500 ... 	<ul style="list-style-type: none"> - No output until add process is done 	<ul style="list-style-type: none"> - If value credit between > 0 and <= 1000, continue to add credit completion (properly record next). If not prompt message "Must be > \$0, max \$1000"
AddCredit3	The record is properly added	...	<ul style="list-style-type: none"> - 06 anotherUser FS 000999.00 	<ul style="list-style-type: none"> - If admin adds another user, when checking if user exists, it also grabs their current balance, then before adding the record, system counts the new total balance of the target balance.

AddCredit4	The total value added must not exceed 1000 a day	<ul style="list-style-type: none"> - add - anotherUser - 600 - logout 	<ul style="list-style-type: none"> - No output until add process is done - No output until add process is done - 06 anotherUser FS 000999.00 - 00 admin AA 999999.99 (to userDailyUpdate file by front end) 	<ul style="list-style-type: none"> - If account is not "SS", continue to completion of add credit, else, prompt message "Only Admin, Full-Standard or Buy-Standard support this option" - If user exists, continue to completion of add credit, else prompt message "User not exists, re-input username.\nUsername: " - Prompt message "Okay, see you again. Good Bye!", continue to completion of logout (push userDailyUpdate to globalDailyUpdate, then delete userDailyUpdate).
Create1	User must be admin	<ul style="list-style-type: none"> - login - admin - create 	<ul style="list-style-type: none"> - No output - 10 admin AA 999999.99 (to userDailyUpdate file by front end) - No output until create process is done 	<ul style="list-style-type: none"> - Prompt "Enter Username.\nUsername: " - If login accepted, welcome message to admin and menu are displayed, create userDailyUpdate file. - If account is "AA", continue to completion of create (input new username next), prompt message "Input new username.\nUsername: ", else, prompt message "Only Admin support this option", redirect user to menu
Create2	Name must not already exist, must not contain underscores	<ul style="list-style-type: none"> - admin - clyve_w 	<ul style="list-style-type: none"> - No output until create process is done - No output until create process is done 	<ul style="list-style-type: none"> - Prompt message "User exists, re-input new username.\nUsername: " - Prompt message "Username cannot contain underscore, re-input new username.\nUsername: "
Create3	Number of characters must be between 1 and 15 inclusively	<ul style="list-style-type: none"> - newUser123 - thisIsALongUsernameMoreThan25Chars 	<ul style="list-style-type: none"> - No output until create process is done - No output until create process is done 	<ul style="list-style-type: none"> - If username 15 or under chars and valid, continue to completion of create (input account type), prompt message "User type: " - Prompt message "Username too long (max 25 characters), re-input new username.\nUsername: "

Create4	Permissions are correctly assigned	<ul style="list-style-type: none"> - FS - SF 	<ul style="list-style-type: none"> - No output until create process is done - No output until create process is done 	<ul style="list-style-type: none"> - If account type valid, ("SS", "FS", "BS", "AA"), continue to completion of create (input balance) - Prompt message "Account type invalid, re-input type!\nAccount type: "
Create5	Range of credit when creating a new user is between 1 cent to 999,999 inclusively (multiple cases)	<ul style="list-style-type: none"> - 0 - 1000000 - 9053.17 	<ul style="list-style-type: none"> - No output until create process is done - No output until create process is done - No output until create process is done 	<ul style="list-style-type: none"> - Prompt message "Minimum 1 cent for starting credit" - Prompt message "Maximum 999999 for starting credit" - If starting credit between 1 cent to 999,999, continue to completion of create (record create next)
Create6	Properly adds to record		<ul style="list-style-type: none"> - 01 newUser123 FS 009053.17 (to userDailyUpdate file by front end) - newUser123 FS 009053.17 (to userList file by back end) 	<ul style="list-style-type: none"> - Prompt message "Create successful"
Delete1	User must be admin	<ul style="list-style-type: none"> - login - admin - delete ... 	<ul style="list-style-type: none"> - No output - 10 admin AA 999999.99 (to userDailyUpdate file by front end) - No output until delete process is done 	<ul style="list-style-type: none"> - Prompt "Enter Username.\nUsername: " - If login accepted, welcome message to admin and menu are displayed, create userDailyUpdate file. - If account is "AA", continue to completion of delete (input username next), else, prompt message "Only Admin support this option"
Delete2	Admin cannot delete admin and cannot delete self	<ul style="list-style-type: none"> - admin2 - admin 	<ul style="list-style-type: none"> - No output until delete process is done - No output until delete process is done 	<ul style="list-style-type: none"> - Prompt message "Cannot delete another admin" - Prompt message "Cannot delete yourself"

Delete3	Target user must exist	- newUser123	- No output until delete process is done	- If username exists and valid, continue to completion of delete (delete advertised items in market, and users info), else, prompt message "Username not exists, re-input username!"
Delete4	For sale items are properly removed		- No output until delete process is done	- After all user info and item in itemlist are deleted, continue to completion of delete (record delete properly)
Delete5	Properly adds to record, properly delete user from user list and items sold by deleted user (delete effective immediately)	- logout	- 02 newUser123 FS 009053.17 (to userDailyUpdate file by front end) - 00 admin AA 999999.99 (to userDailyUpdate file by front end)	- Prompt message "Delete successful" - Prompt message "Okay, see you again. Good Bye!", continue to completion of logout (push userDailyUpdate to globalDailyUpdate, then delete userDailyUpdate).
Refund 1	User must be admin	- login - admin - refund	- No output - 10 admin AA 999999.99 (to userDailyUpdate file by front end) - No output until refund process is done	- Prompt "Enter Username.\nUsername: " - If login accepted, welcome message to admin and menu are displayed, create userDailyUpdate file. - If account is "AA", continue to completion of refund (input buyer username next), else, prompt message "Only Admin support this option"
Refund 2	Both targets must exist (multiple cases)	- byrUsername - slrUsername	- No output until refund process is done - No output until refund process is done	- If buyer username exists and valid, continue to completion of refund (input seller username next), else, prompt message "Buyer username not exists, re-input buyer username.\nBuyer username: " - If seller username exists and valid, continue to completion of refund (input refund value next), else,

		- cancel	- No output until refund process is done	prompt message "Seller username not exists, re - input seller username.\nSeller username: " - Typing cancel will put user back to menu
Refund 3	Must be valid number(>0 and not string) (multiple cases)	- 12.53 - 2cents	- No output until refund process is done - No output until refund process is done	- If value > 0 and valid, continue to completion of refund (checking seller's balance next). - Prompt message "Value invalid, re-input refund value.\nValue: "
Refund 4	Properly adds to record	-logout	- 05 byrUsername slrUsername 000012.53 (to userDailyUpdate file by front end) - 00 admin AA 999999.99 (to userDailyUpdate file by front end)	- Prompt message "Refund successful" - Prompt message "Okay, see you again. Good Bye!", continue to completion of logout (push userDailyUpdate to globalDailyUpdate, then delete userDailyUpdate).

Assumptions/requirement problems:

- When someone is deleted their account is unusable immediately. Item list advertised by deleted user will be deleted by front end
- When someone's account balance is push above or below account limits the program will force their balance back into valid amounts
 - Sell refunded and account drops below zero, for example
- When an item is added, if it is a duplicate then it will be rejected during the update in the back-end
- When performing a refund then admin will enter the correct information
- If user or admin add credit more than 1000 per session, only 1000 will be processed
- If a user advertise an item, and if that item is sold and exceeds max balance, it will then be set to the max balance.

Test plan:

Test inputs are going to be per directory. Functions like, e.g. advertise, bid, and so on, will be in separate files and folders e.g. advertise.cpp will be in Advertise folder which is located inside Functions folder (see diagram below). Inside the functions folder, there will be a folder called Test which contains Inputs and Outputs folder. After running all tests for each functions, each tests that will have an output, will write their output on output.txt in their working directory. We will also create expectedOutput.txt per function for our expected output. Input files will have .sh file format and output and expected output will have .txt file format

Project -> main.cpp

-> dailyUpdate.txt

-> itemList.txt

-> userList.txt

-> userDailyUpdate.txt (will be created after logged in, and deleted text insides are pushed to dailyUpdate.txt after logged out)

-> Functions -> Advertise -> advertise.cpp

-> Tests -> Inputs -> advertise1.sh

-> advertise2.sh

-> advertise3.sh

-> advertise4.sh

-> advertise5.sh

-> Outputs -> output.txt

-> expectedOutput.txt

-> Bid -> bid.cpp

-> Tests -> Inputs -> bid1.sh

-> bid2.sh

-> bid3.sh

-> bid4.sh

-> bid5.sh

-> Outputs -> output.txt

-> expectedOutput.txt

-> ...

The tests will be run through shell scripts that run the front end for the set inputs. The order will be as the order that they are listed: login,logout,non privileged operations, privileged operations, and the output will be checked against the predetermined values to see if the resulting files and user prompts are as expected.