Software Engineering Project: Employee App Manual Testing

As we enter the third sprint, all major frameworks and implementations of the tasks have been complete. Therefore, with stabilised code, the need to test beyond the developer checking implementations becomes necessary. I will be performing this task in two waves. First, I will test and review the code by hand. This allows me to not only produce detailed feedback and detect further bugs, but I can then automate the process using Junit.

UPDATE: After multiple attempts and research, due to the heavy GUI elements of the employee application, I have decided to learn and use testfx instead, as it will help minimise the editing of the existing application and is specially designed for JavaFx gui testing.

Firstly, the employee web app was developed in the NetBeans IDE. This required some conversion and has the potential to lead to some errors. These will get figured out with communication with the person who is actively working with the code.

Login Page:

Test item	Test	Expected Results	Actual Results
Login text box	Correct	Upon entering a correct username and password the current tab should close and I should be granted access to the database.	When entering a combination that is present in the database, you are granted access to it. NOTES: There is a lack of feedback on this process, no indication of loading. More combinations need to be added to the database for testing.
	Incorrect	The "NOT LOGGED IN" text at the bottom left hand corner of the screen should change to "Invalid user name or Password"	Due to an oversight in the code, you will only get the incorrect response if the username is correct, but not the password. UPDATE: After passing these results on early, this test now results in an error pop-up stating the following: If username is wrong: *"The username does not exist!"* If the username is correct but the password isn't: *"Invalid Username or Password"*
	Abnormal	The same as the incorrect case.	Same as incorrect, there is no limit on special characters or number of characters.
Close tab	Correct	This button should highlight red and close the tab when pressed.	Worked as intended.
Maximise tab	Correct	This button should highlight grey and maximise the tab when pressed.	Worked as intended. Should be noted that there is no tab adjustment or centralisation when maximised.

Minimise tab	Correct	This button should highlight grey and minimise the tab when pressed.	Worked as intended.

Notes:

- The login page closes itself when you switch into the main application, this helps to minimise resource usage.
- There is no icon for the application, make it lose a bit of its professional look.

Customer Page:

Test item	Test	Expected Results	Actual Results
Search by name	Correct	Every letter I press should filter out entries until only one remains that is identical to the string I typed.	The search works on any part of the name, not just the beginning. This makes entering A to get all the users with names that start with A impossible.
	Incorrect	If I enter a string that isn't present in any name than the list should be completely filtered out and empty.	The table is blank with a message "No content in table" to inform the user that the query is null.
	Abnormal	Entering symbols that don't exist in names (!@#£, etc.) should null the results immediately.	On inputting the abnormal character, the "No content in table" message is shown.
Search by address	Correct	Every letter I press should filter out entries until only one remains that is identical to the string I typed.	Same results as the correct test for search by name.
	Incorrect	If I enter a string that isn't present in any address than the list should be completely filtered out and empty.	Same results as the incorrect test for search by name.
	Abnormal	Entering symbols that don't exist in address (!@#£ etc.) should null the results immediately.	Same results as the abnormal test for search by name.
Search by ID	Correct	Entering valid IDs should filter out other IDs.	Same results as the correct test for search by name.
	Incorrect	Entering IDs that don't exist should filter out all results.	Same results as the incorrect test for search by name.
	Abnormal	Entering anything that isn't a number should filter out every result.	Same results as the abnormal test for search by name.
Update Customer	Select name	Clicking on the row of the customer should highlight it and clicking it again should open a pop up.	Clicking on the row selects that row, shown by highlighting it. Double clicking that row opens a new, smaller tab letting you edit

	Correct	Changing the name and address of a customer should show on the database.	After editing the details and pressing confirm you get a pop-up stating: "Record Updated Successfully"

Notes:

- When updating a customer, there is no undo or cancel button in the tab, meaning that if you make a mistake, you either remember what state the customer was in before and type that out, or close the application.
- Due to a lack of thread pooling and proper client handling protocols, when testing I hit the limit of potential concurrent connects to the php server.

Bike Page:

Test item	Test	Expected Results	Actual Results
Selecting bikes	Normal	Clicking on a row will highlight it.	A single click (either left or right) on the row will highlight it, once selected, there is on way to unselect a row (you can however select another)
Searching for bikes	Search by ID	Bikes should get filtered out if they do not contain the numbers entered.	Search preforms like it has in other tests, meaning that entering "1" will not only show every ID starting with 1, but any ID that contains that number.
	Search by location	Bikes should get filtered out if they are not assigned to the address entered.	Performs much like the other search tests. Notes: • Not case sensitive • Entering some single letters would not filter out the table, will look for a cause.
	Search by price	Bikes should be filtered out according to the filtered price.	This function doesn't work at all and performs as an ID search. UPDATE: Implemented this functionality.
	Search by date	Should filter out all the bikes that are not free in that timeframe.	Bike not available in the timeframe are filtered out. Note: • There is no automated system for setting bikes to free after the time is up (what is understandable as in would have to be checked off when returned and late returns are a thing)

			• For the sake of testing, we need to edit the database for more current dates with booked bikes.
	Filter by status	Should filter out all hired or free bikes based on the settings.	Works as intended.
Booking bikes	Existing customer	I should be able to book a free bike (as the button doesn't show if the bike isn't free) and book it for a day, from here I will check the database hosting site to see if the transaction has been saved.	Checking the database, it was saved, should be noted that the transaction only accepts full pounds and gives the change to 1 dp. Note: • You can only enter numbers into the cash option.
	New customer	Add a new customer when booking a bike, then check the customer page to see if they're there.	The transaction was noted, and a new customer is now part of the database.
	Abnormal duration	Attempt to set the end date before the start date.	You get a pop-up: "You cannot set a date in the past!", ignoring this pop-up then trying to enter the change will make the pop-up appear again.
	Abnormal payment	Try to pay less than the required amount.	You get a pop-up: "You need to add more money to proceed!", ignoring this pop-up then trying to enter the change will make the pop-up appear again.
Managing bikes	Set to free	Bike's status should be changed to free.	Bike's status was changed from hired to free, you get a pop up saying, "Database Updated!" should be noted that you must close the tab to see this update.
	Set to hired	Bike's status should be changed to hired.	Same as set to free.
	Set to Damaged	Bike's status should be changed to damaged.	Same as set to free. Note: The database doesn't differentiate between hired and damaged, as it's based on a binary model of available to hire and unavailable to hire.

Notes:

- Need to fix/implement the by price search.
- When changing the status of bikes, in some situations I would have two tabs open.
- There is no formatting on entering the address.
- After the first time managing bikes, the first page doesn't close, leading to another ta

Ticket Page:

Test item	Test	Expected Results	Actual Results
Selecting tickets	Normal	I should click on the row and it should be highlighted.	A single click (either left or right) on the row will highlight it, once selected, there is on way to unselect a row (you can however select another)
Searching for tickets	Search by ID	Tickets should get filtered out if they do not contain the numbers entered.	Search preforms like it has in other tests, meaning that entering "1" will not only show every ID starting with 1, but any ID that contains that number.
	Search by customer name	Every letter I press should filter out entries until only one remains that is identical to the string I typed.	Once again sometimes entering a single letter doesn't filter the table.
	Search by bike ID	Tickets should get filtered out if they do not contain the numbers entered.	Search preforms like it has in other tests, meaning that entering "1" will not only show every ID starting with 1, but any ID that contains that number.
	Search by customer ID	Tickets should get filtered out if they do not contain the numbers entered.	Search preforms like it has in other tests, meaning that entering "1" will not only show every ID starting with 1, but any ID that contains that number.
Print ticket	Normal	Pressing the button should print a ticket (this process will likely be different due to the lack of a centralised location and therefore lack of a consistent printer set-up)	Pressing the button opens an external window giving a preview of the ticket and the ability to then save or print said ticket.
Create Transaction	Normal	Create a new transaction by booking a bike on the bike paid and then checking if a ticket has	Created a transaction for the new member "Adachi Cho" and opened the ticket. Note:

		been generated for that transaction.	• For the sake of competition, I will have to print out one of these tickets at a later date.

UPDATE: After working with Zahoor the current fixes have been implemented after this document was made:

- **Added the ability to edit customer details.**
- **The damaged status has been added to the table, so it is now displayed.**
- **Bike management now involves damaged.**