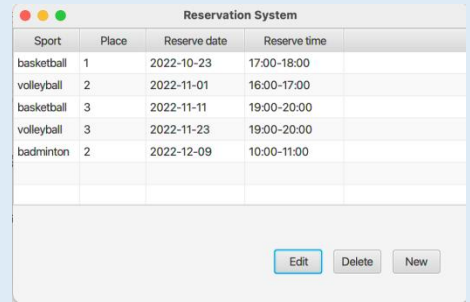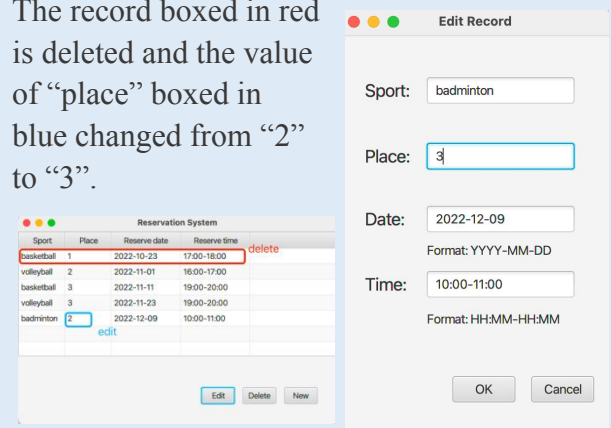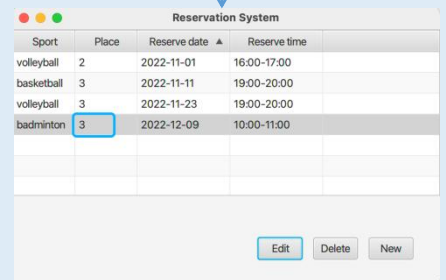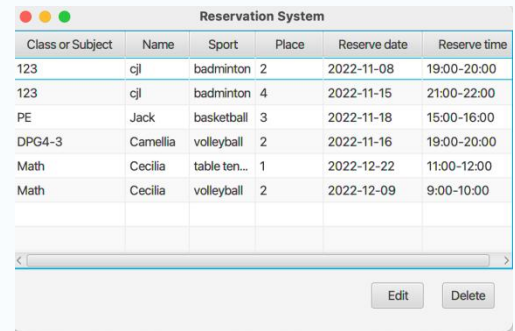# Evaluation

After finishing my product, I ran the tests according to the test plan that was created. Some of the tests were completed by myself, while many others were based on feedback from adviser Angel and users (students in school). The results are shown below.

Aspect	Test Type/Criteria of Success	Test Result	Evidence
Effectiveness	**For users:** 1. All reservations made previously can be checked by users.	1. Once logged in correctly, previous reservations can be viewed.	1. All previous reservation records can be viewed. Here is one test example:
	2. They can edit and delete reservations they made.	2. All records can be edited and deleted.	2. All records can be edited and deleted. Here is one test example: The record boxed in red is deleted and the value of "place" boxed in blue changed from "2" to "3".
	3. They can make reservations of a specific sport field for a specific time period.	3. All sport fields can be reserved for any available time period.	3. All the reservations shown above are made through the reservation system.

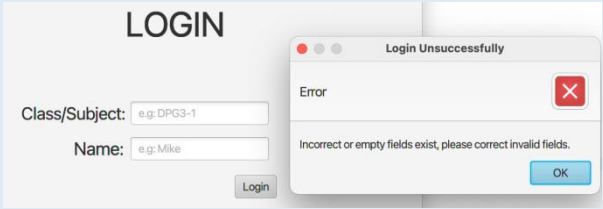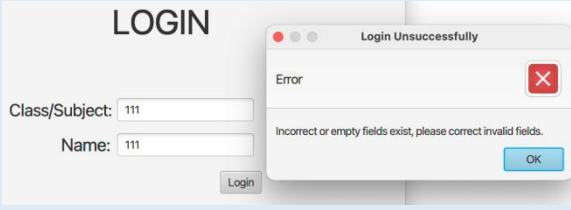|			
	For administrator: 1. Administrator can check for all reservation information, including class/subject, name, time and sports field. 2. Administrator can edit and cancel any reservation.	By testing, the functions of looking through all, edit them and delete them all perform as expected.	1. All previous reservation records can be viewed. Here is the test result: 2. All records can be edited and deleted. Here is one test example: The record boxed in red is deleted and the value of reserved date and time boxed in blue changed from "2022-11-18 15:00-16:00" to "2022-11-23 16:00-17:00".
	For all: 1. All the information can be automatically updated. 2. All the data can be showed successfully.	The pages automatically change on both users' page and administrator's page after editing some reservations.	Through out the test, the database changes timely if there is any change. Here is a test example, it is the result after the actions mentioned in the test for administrator:
Efficiency	All functions can be achieved using few steps and costing less time.	No unnecessary steps exist.	According to the feedback from adviser and clients, all the testers agreed that the system design was easy and straightforward to use.
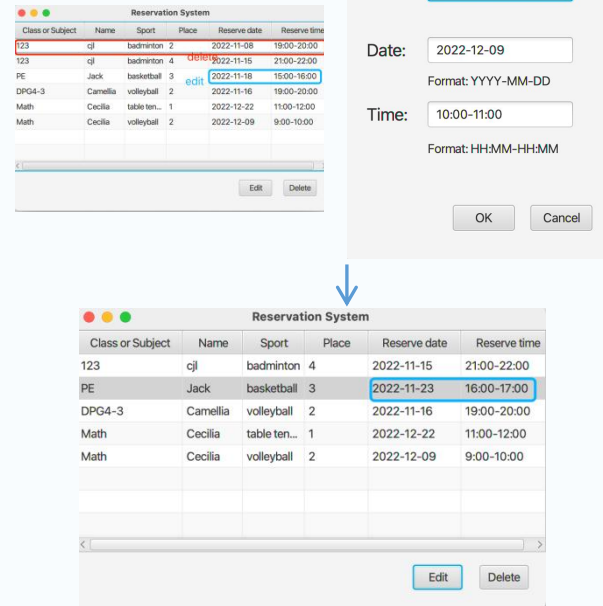
Security	1. Class or subject and name are needed for a user to login.	1. User has to fill the class/subject and name before login. And warning dialog pops out if nothing is entered.	1.
	2. Users can not view or modify any reservations made by others.	2. Only reservations made by the logged user can be viewed.	2. The test example above for the user has shown this.
	3. Name and password are verified when logging in as administrator.	3. Only correct username with correct password can login successfully.	3.
Learnability	1. The design of system is easy to understand and use. 2. There are necessary reminders on the interface.	Easy to understand and use with the help of useful reminders.	According to the feedback from the adviser and clients, they all agreed that the system is easy to learn how to use with useful labels.
Memorability	All pages are clear and logic, making it not complicated.	There is no ambiguous part in the system.	According to the feedback from the adviser and clients, they all agreed that the system is clear to use and still easy to use next time, despite some details can be improved .
Readability/Comprehensibility	The size, color and location of components are proper. The font of words is easy to recognize.	Good readability and comprehensibility.	All feedback from the testers on the appearance of the system has shown this, although there is advice about improvement to make it looks better.
Satisfaction	The users and administrator are satisfied with the functions provided.	Good satisfaction.	According to the feedback from the adviser and clients, all functions provided are useful and no other necessary functions are ignored.

In conclusion, after multiple tests, my program has been shown to achieved my criteria and goals successfully. For effectiveness, all the functions required about the system perform as expected. For efficiency, every function was achieved by simply few steps and there is no break down or long time waiting. For security, the data of users' information and the reservations are protected. For learnability and memorability, the system was appraised as easy and clear to use. For readability and comprehensibility, the feedback showed that the system has performed well but could be better with more decorations. While it performed well in terms of satisfaction, more decorations could be added to improve the system's aesthetics. Overall, the system has successfully met the success criteria.

Recommendations for Future Development

GUI

1. The design of the whole project can be more aesthetically pleasing with some decorations to fulfill the visual comfort of users. For example, the interfaces can add some icons beside the title or button which can increase the usability of the program as well.

2. For some interfaces, for example, the user main interface for the display of reservations' data, can be more diversiform instead of a simple table only.

3. The system can be more colorful but not white and black only. For example, include background color or highlighted text.

Function

1. The security probably can be enhanced by using some encryption algorithm on users' information, or even combination of the algorithms to make it harder to read. For example, the use of MD5 Hash Function.

2. There may add one more function of contacting technology help to prevent some technical accidents. For example, providing my email below the main page is feasible.

3. A function for moving back may be added as well, because some users may choose "Administrator" in the start interface by accident.

4. The function could be more diversified that allow the rent for sports equipment and gym reservation etc, to meet the potential needs users may want.

5. Some statistical features about the data can be added. For example, a feature of generating personal report for users can help them to conclude the working out time and do the next-stage planning better.