

Prototype Evaluations

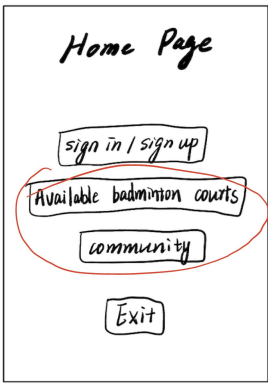
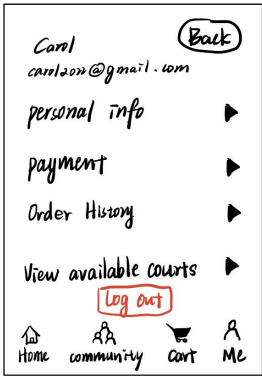

Group Member: WANG, Chen; TANG, Jiaguan; PENG, Yuanhan; ZHANG, Wenxin; WAN, Jiachen; WANG, Dongliang




Group Number: C12

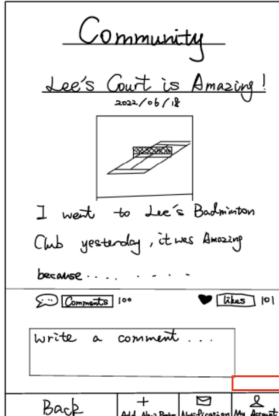
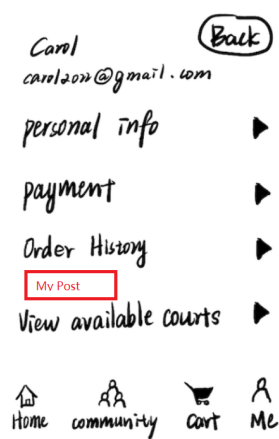
Group Name: Sports Lover

TA Name: Maryam Mokhberi



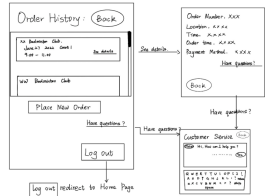

Section1. Cognitive Walkthrough Results


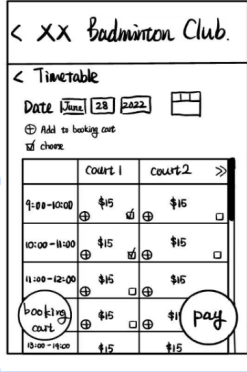
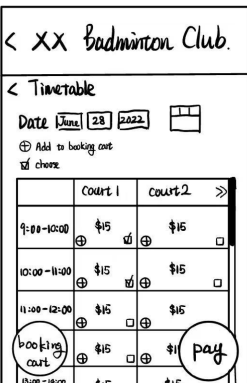
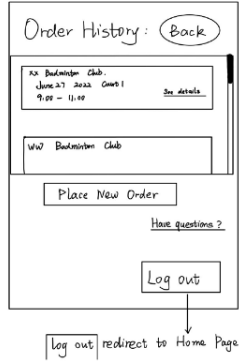
Issue	Cause	Severity	Remedy
	<p>It's designed so that users must log in before they start to use the app. So it's supposed that they should click on the "sign in/sign up" button first. However, users may click on "community" or "available badminton courts" in the beginning and it will break the logic behind.</p>	High	<p>We will delete the "available badminton courts" button and the "community" button and add another one "visit as a guest". So there will be only three buttons on the home page: "sign in/sign up", "visit as a guest", and "exit".</p>
	<p>Users may not find the "Logout" button to sign out of his/her account.</p>	Medium	<p>We add the "Logout" button to let users to log out conveniently.</p>
	<p>First time users may not know what this "home" button leads to.</p>	Low	<p>We will replace all the "home" buttons in the bottom navigation bar with a "search" button in order to better guide our users and avoid misunderstandings.</p>

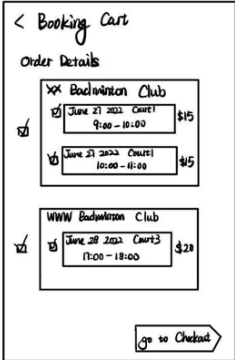
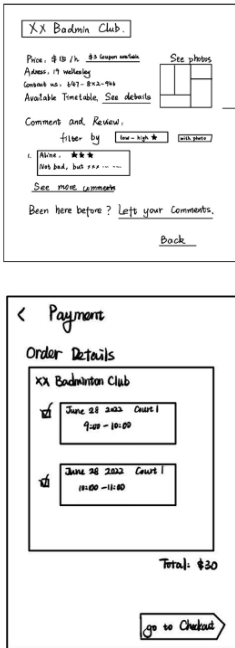
<div><div>Order History: Back</div><div><table><tr><td>order#</td><td>placed</td><td>court</td></tr><tr><td>1234</td><td>12-6-22</td><td>A</td></tr><tr><td>1244</td><td>15-6-22</td><td>B</td></tr><tr><td>1235</td><td>17-6-22</td><td>C</td></tr></table><div>place New Order</div><div><div>Home</div><div>community</div><div>cart</div><div>Me</div></div></div></div> <div><div>Users may not know where the button “place new order” switches to, after clicking it.</div><div>Low</div><div>We will delete the button “place new order” so that users just view the order history directly using this page.</div></div> <tr><td><div><div>Community</div><div>Lee's Court is Amazing! 2022/06/18</div><div></div><div>I went to Lee's Badminton Club yesterday, it was Amazing because.....</div><div><div>Comments 100</div><div>Likes 101</div></div><div>Write a comment...</div><div><div>Back</div><div>+</div><div>Add New Post</div><div>Notifications</div><div>My Account</div></div></div><div><div>Users are supposed to be able to view others' comments. However, we didn't show any posted comments here.</div><div>Medium</div><div>We will add some posted comments here to show that users can view others' comments.</div></div><tr><td><div><div>< XX Badminton Club.</div><div>< Timetable</div><div>Date June 28, 2022</div><div>+ Add to booking cart</div><div>choose</div><div><table><tr><td></td><td>Court 1</td><td>Court 2</td><td>>></td></tr><tr><td>9:00-10:00</td><td>\$15</td><td>\$15</td><td></td></tr><tr><td>10:00-11:00</td><td>\$15</td><td>\$15</td><td></td></tr><tr><td>11:00-12:00</td><td>\$15</td><td>\$15</td><td></td></tr><tr><td>12:00-13:00</td><td>\$15</td><td>\$15</td><td></td></tr><tr><td>13:00-14:00</td><td>\$15</td><td>\$15</td><td></td></tr></table><div>booking cart</div><div>pay</div></div></div><div><div>Users may not distinguish the difference between these two payment methods.</div><div>High</div><div>We will delete the “Pay” button so there will be only one method to pay the court fee.</div></div></td></tr></td></tr>	order#	placed	court	1234	12-6-22	A	1244	15-6-22	B	1235	17-6-22	C	<div><div>Community</div><div>Lee's Court is Amazing! 2022/06/18</div><div></div><div>I went to Lee's Badminton Club yesterday, it was Amazing because.....</div><div><div>Comments 100</div><div>Likes 101</div></div><div>Write a comment...</div><div><div>Back</div><div>+</div><div>Add New Post</div><div>Notifications</div><div>My Account</div></div></div> <div><div>Users are supposed to be able to view others' comments. However, we didn't show any posted comments here.</div><div>Medium</div><div>We will add some posted comments here to show that users can view others' comments.</div></div> <tr><td><div><div>< XX Badminton Club.</div><div>< Timetable</div><div>Date June 28, 2022</div><div>+ Add to booking cart</div><div>choose</div><div><table><tr><td></td><td>Court 1</td><td>Court 2</td><td>>></td></tr><tr><td>9:00-10:00</td><td>\$15</td><td>\$15</td><td></td></tr><tr><td>10:00-11:00</td><td>\$15</td><td>\$15</td><td></td></tr><tr><td>11:00-12:00</td><td>\$15</td><td>\$15</td><td></td></tr><tr><td>12:00-13:00</td><td>\$15</td><td>\$15</td><td></td></tr><tr><td>13:00-14:00</td><td>\$15</td><td>\$15</td><td></td></tr></table><div>booking cart</div><div>pay</div></div></div><div><div>Users may not distinguish the difference between these two payment methods.</div><div>High</div><div>We will delete the “Pay” button so there will be only one method to pay the court fee.</div></div></td></tr>	<div><div>< XX Badminton Club.</div><div>< Timetable</div><div>Date June 28, 2022</div><div>+ Add to booking cart</div><div>choose</div><div><table><tr><td></td><td>Court 1</td><td>Court 2</td><td>>></td></tr><tr><td>9:00-10:00</td><td>\$15</td><td>\$15</td><td></td></tr><tr><td>10:00-11:00</td><td>\$15</td><td>\$15</td><td></td></tr><tr><td>11:00-12:00</td><td>\$15</td><td>\$15</td><td></td></tr><tr><td>12:00-13:00</td><td>\$15</td><td>\$15</td><td></td></tr><tr><td>13:00-14:00</td><td>\$15</td><td>\$15</td><td></td></tr></table><div>booking cart</div><div>pay</div></div></div> <div><div>Users may not distinguish the difference between these two payment methods.</div><div>High</div><div>We will delete the “Pay” button so there will be only one method to pay the court fee.</div></div>		Court 1	Court 2	>>	9:00-10:00	\$15	\$15		10:00-11:00	\$15	\$15		11:00-12:00	\$15	\$15		12:00-13:00	\$15	\$15		13:00-14:00	\$15	\$15	
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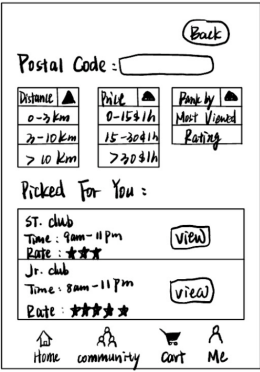
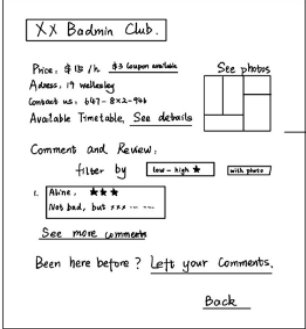
	<p>There is no submission instruction after the users write their comments, which would be confused for users because they don't know if they leave a comment successfully</p>	<p>High</p>	<p>We will add a "post" button at the bottom-right corner to allow users to post their comments.</p>
	<p>There is no button for users to check their own posts. It is difficult for users to find their posts and chat with other users.</p>	<p>Medium</p>	<p>We decided to add a 'My Post' button on the profile page.</p>

Section2. Heuristic Evaluations

prototype page reference	Issues	Heuristic(s) violated	severity ratings	number of evaluators
All screens	The back button design is inconsistent.	4. Consistency & standards	2	2
	Users are supposed to sign in/sign up before they click on the other two buttons. But there is no instruction or limitation here.	1. visibility of system status 3. User control and. Freedom 5. Error prevention	4	4
	No “Log Out” on the screen. The user cannot log out his/her personal account.	2. Match between system and the real world 3. User control and. freedom	3	2
	Users can not cancel their order efficiently, so a cancel button is needed.	2. Match between system and real world 3. User control & freedom	2	1
	Users should be able to post their comments but there is no submit button.	1. Visibility of system status 4. Consistency & standards	4	4

	<p>Users should be able to submit a post without adding an image. But there's no option for users to create a post without pictures here.</p>	<p>3. User control & freedom</p>	<p>4</p>	<p>1</p>
	<p>Users do not know whether the courts are full or not. This may cause a conflict error.</p>	<p>3. Error prevention</p>	<p>3</p>	<p>1</p>
	<p>The booking cart and payment functions are supposed to be separate. But the design is not clear and the instructions are not obvious.</p>	<p>2. Match between system and the real world 4. Consistency & standards 8. Aesthetic and minimalist design</p>	<p>3</p>	<p>3</p>
	<p>Normally, “log out” indicates that the user wants to exit his account on a computer system or an application. However, this button means differently, which redirects users back to the home page. It's confusing for users if their accounts remain</p>	<p>1. Visibility of system status 2. Match between system & real world 4. Consistency & standards</p>	<p>4</p>	<p>1</p>

	logged in status or they should sign in again.			
	<p>Since there are no warnings, there are possibilities that the user accidentally selects wrong time slots and books two different badminton clubs, but with the same time slots.</p> <p>However, there is no doubt that the user could not go to both clubs to play badminton at the same time.</p>	<p>2. Match between system & real world</p> <p>3. User control & freedom</p> <p>5. Error prevention</p> <p>9. Help users recognize, diagnose, & recover from errors</p>	3	1
	<p>In the detail page of a badminton club, there is information about price and related coupons. However, in the payment system page, when the system confirms the order details, there are no details about the amount details and coupon apply entrances.</p>	<p>1. Visibility of system status</p> <p>4. Consistency & standards</p>	3	1

	<p>In the filter table, the user does not know how to check all results without a scroll bar.</p>	<p>2. Match between system and real world 3. User control & freedom</p>	<p>2</p>	<p>1</p>
	<p>In the detail page of a badminton club, there is information about price. However, in reality, the price may be charged differently based on time period and vacation. It may be confusing for users if they see the price listed in the introduction page of a badminton club is different from that of the timetable page.</p>	<p>4. Consistency & standards</p>	<p>2</p>	<p>1</p>

Section3. Internal Evaluation Results & Design Update

First significant page:

- Important and complex page # 1 - Timetable Page

The prototype shows a page titled "XX Badminton Club." with a "Timetable" section. It includes a date selector (June 28, 2022) and a table with two columns: "Court 1" and "Court 2". The table lists time slots from 9:00-10:00 to 13:00-14:00. Prices are listed for each slot, mostly \$15, with a \$1 price for the 12:00-13:00 slot in Court 2. There are two back buttons at the top left. A "booking cart" button and a "pay" button are at the bottom. Annotations highlight issues: "Users don't know the difference and the function of these two back buttons", "Users don't know how to define an unavailable time slot", "Users may not understand why there are showing so many of the same price.", and "Users may not distinguish the difference between the pay button and the booking cart button".

Annotations:

- Users don't know the difference and the function of these two back buttons
- Users don't know how to define an unavailable time slot
- Users may not understand why there are showing so many of the same price.
- Users may not distinguish the difference between the pay button and the booking cart button

- Updated design of page # 1 - Timetable Page

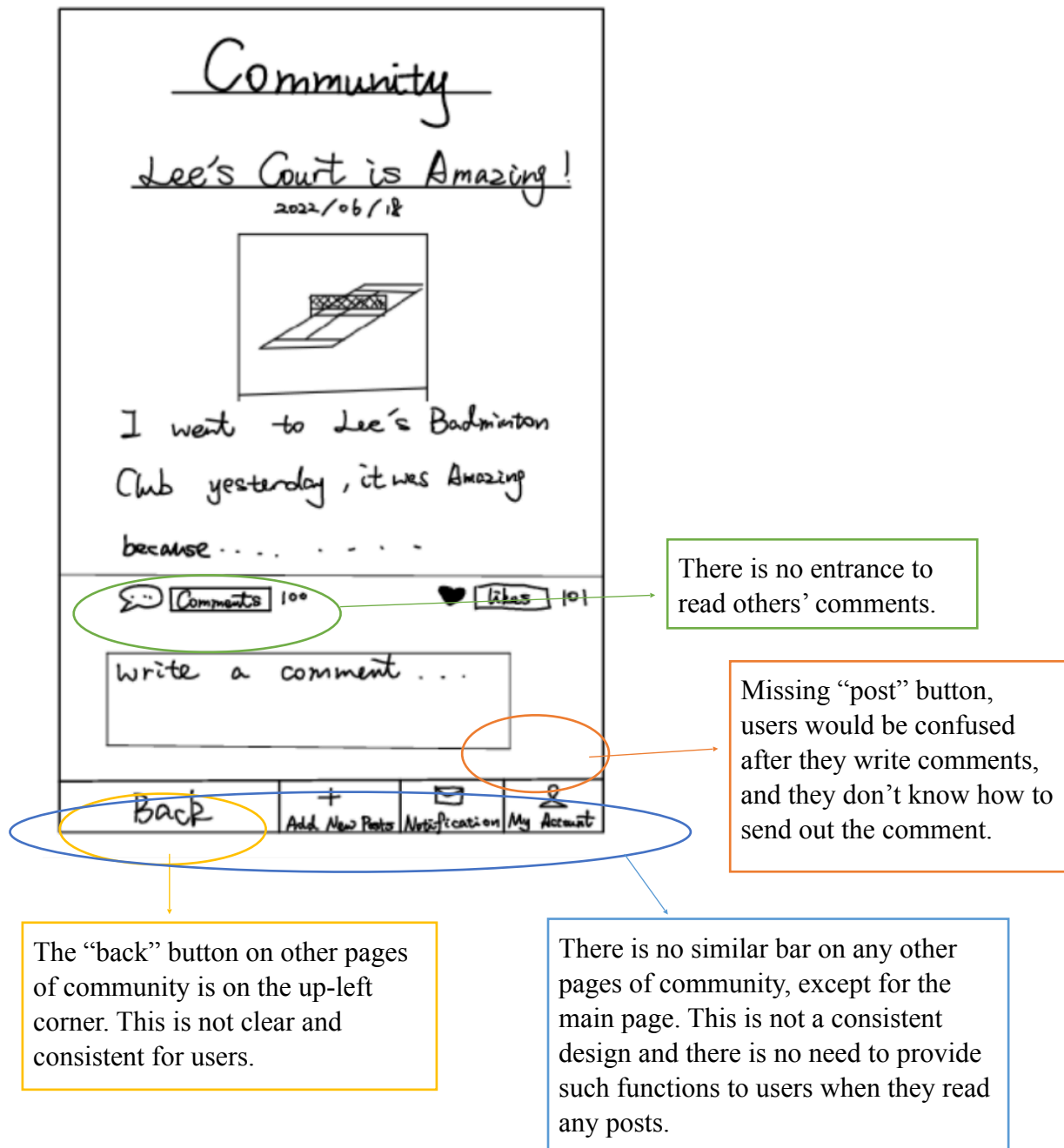
The updated prototype shows a page titled "XX Badminton Club." with a "Timetable" section. It includes a date selector (June 28, 2022) and a table with two columns: "Court 1" and "Court 2". The table lists time slots from 9:00-10:00 to 13:00-14:00. Prices are listed for each slot: \$10 for 9:00-10:00, \$12 for 10:00-11:00, and \$15 for 11:00-12:00 and 13:00-14:00. The 12:00-13:00 slot in Court 1 is marked as "unavailable" with diagonal lines. There is a single "Back" button at the top right. A "Booking Cart" button with a shopping cart icon is at the bottom. Annotations highlight updates: "Change two back buttons to one back button. Back to the comment and review page", "Unavailable time slots are clearly displayed", "Show the difference in price", and "Combine the pay button and the booking cart button into the cart button since the functions of these two buttons are duplicated. We also change the way of adding to cart."

Annotations:

- Change two back buttons to one back button. Back to the comment and review page
- Unavailable time slots are clearly displayed
- Show the difference in price
- Combine the pay button and the booking cart button into the cart button since the functions of these two buttons are duplicated. We also change the way of adding to cart.

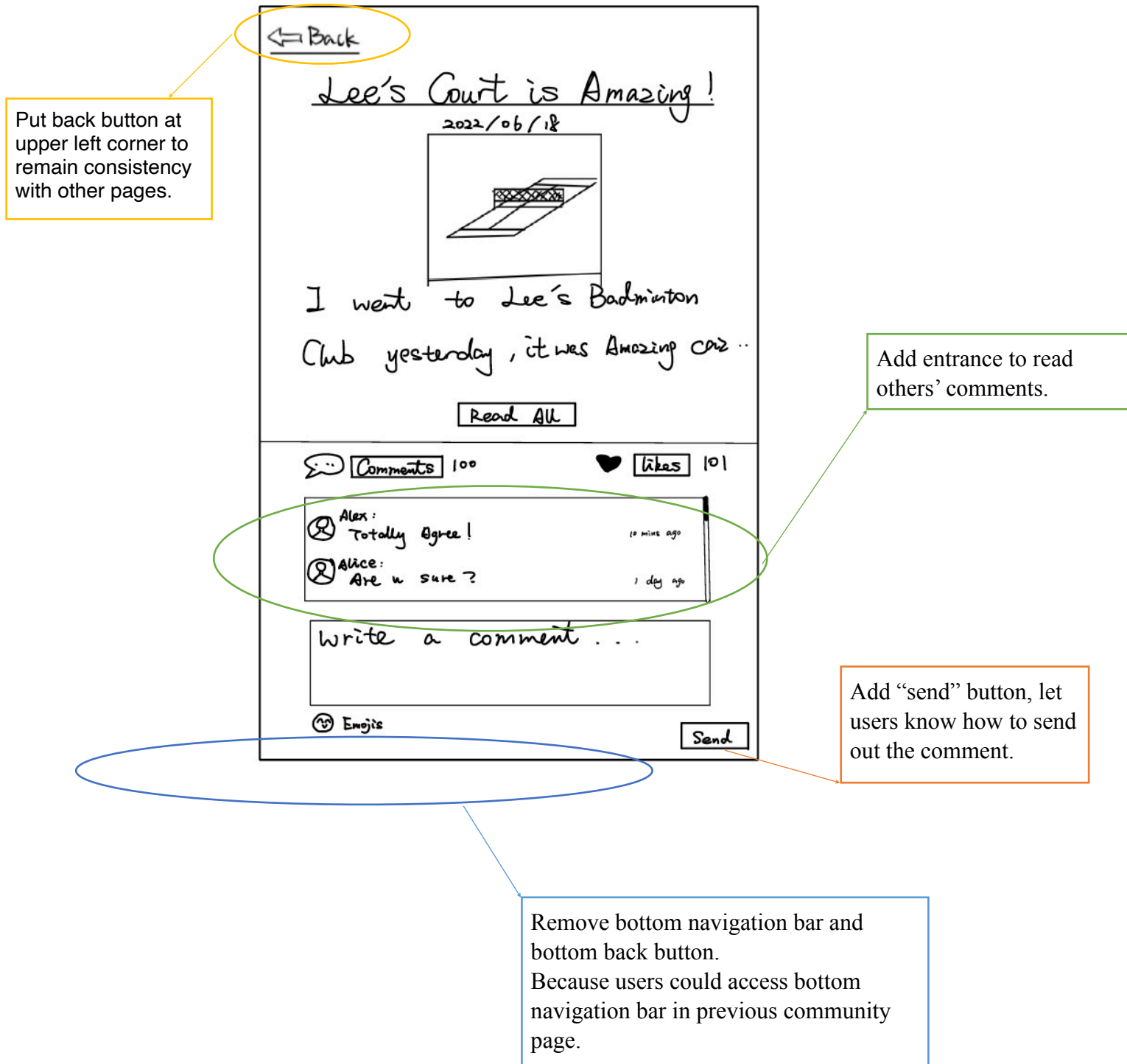
Second significant page:

- Original design of page # 2 — Community Page



Second significant page:


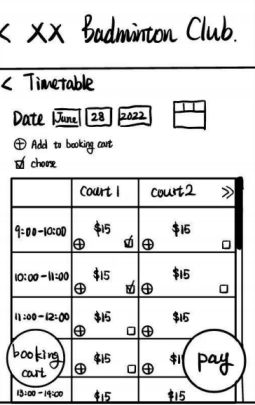
- Updated design of page # 2 — Community Page:

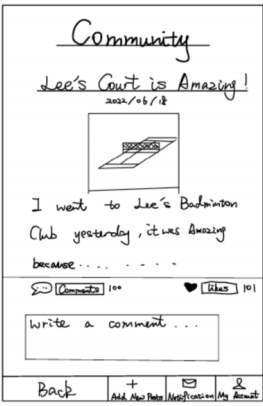






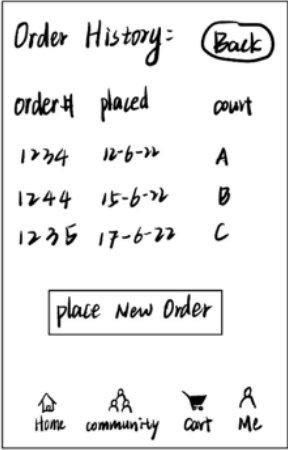
Appendix 1

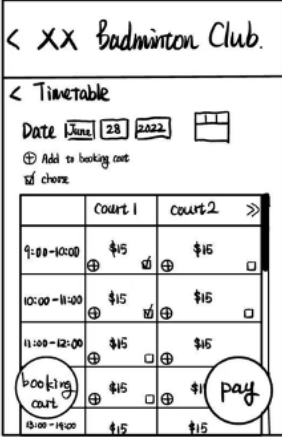
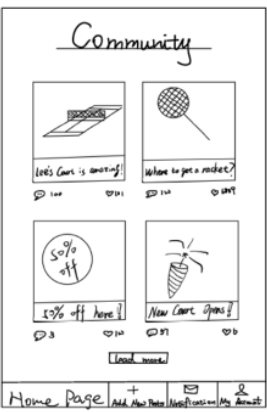
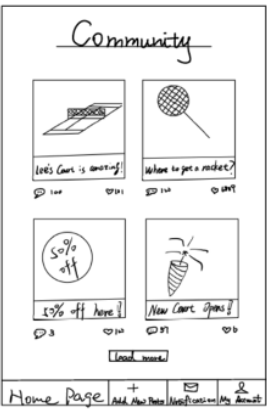
Individual Heuristic Evaluations

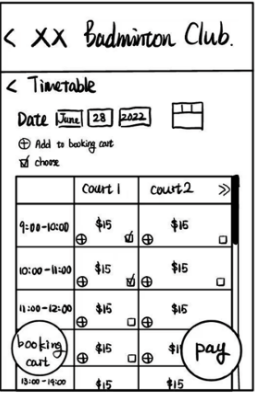
Dongliang Wang

Page Reference	Design Issues	Nielsen violated Heuristic #	Severity Ratings
All screens	The back button design is inconsistent.	4. Consistency & standards	2
	The cart button and booking cart button have different names but have the same function	4. Consistency & standards	2
	No log out button	3. User control & freedom	3



	<p>Loss post button on the comment</p>	<p>3. User control & freedom</p>	<p>4</p>
	<p>User needs to remember what the home button leads to</p>	<p>6. Recognition rather than recall</p>	<p>3</p>
	<p>Lost my post button. Users cannot check their own posts.</p>	<p>3. User control & freedom</p>	<p>4</p>


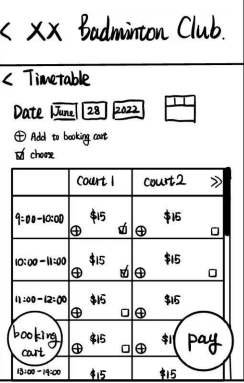
Screen	Problem Details	Severity	Heuristic Violation
	No “View as a guest button” on the screen. Users can not choose to view the available badminton courts as a guest.	2	3. User control and. Freedom 1. visibility
	No “Log Out” on the screen. User cannot log out of his/her personal account.	5	2. Match between system and the real world 3. User control and. freedom
	Users may not know where the “place new order” button links to.	1	3. User control and. freedom

	<p>Same “back” buttons have the same meaning. Users are confused about which “back” button is which.</p>	<p>5</p>	<p>4. consistency and standards</p>
	<p>Inconsistencies between menus and buttons. Lack of bottom search bar.</p>	<p>3</p>	<p>4. consistency and standards</p>
	<p>No “Help” button on the screen. Users can not view the help documents when he/she knows what next step to take.</p>	<p>2</p>	<p>10. Help and documentation</p>


	<p>Functions of the “pay” button and the “booking cart” button are not clear.</p>	<p>3</p>	<p>2. Match between system and the real world 3. User control and freedom</p>
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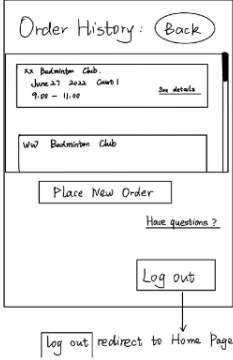
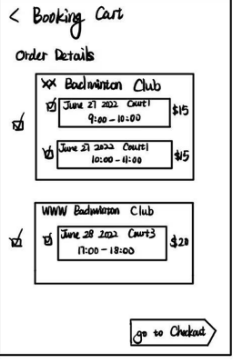

WANG, Chen

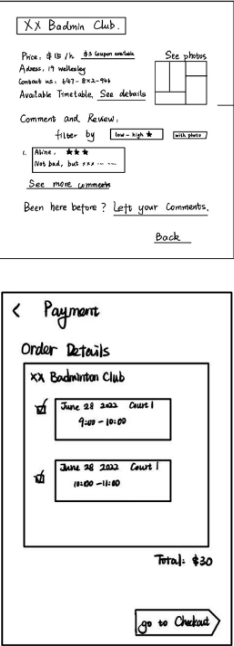
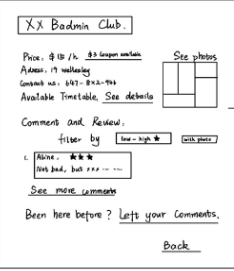
Page #	Design issues	Nielsen violated Heuristic #	Severity rating
All pages	The navigation bar at the bottom of the screen is not uniform	4. Consistency & standards 1. Visibility of system status	3
	Users are supposed to sign in/sign up before they click on the other two buttons. But there is no instruction or limitation here.	2. Match between system and real world 5. Error prevention	4
	Users should be able to post their comments but there is no submit button.	2. Match between system and real world 4. Consistency & standards	4

	<p>Users should be able to submit a post without adding an image. But there's no option for users to create a post without pictures here.</p>	<p>3. User control & freedom</p>	<p>4</p>
	<p>The booking cart and payment functions are supposed to be separate. But the design is not clear and the instructions are not obvious.</p>	<p>8. Aesthetic and minimalist design</p>	<p>3</p>

Yuanhan peng




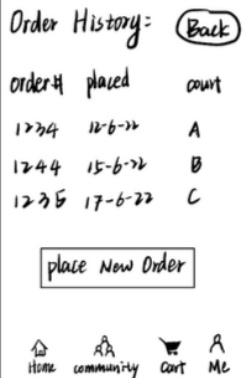
Screen	Problem details	Severity	Heuristic violation
	<p>It's not clear that if the user must log in or sign up first so that they can use other functions on the application.</p>	<p>4</p>	<p>1</p>




	<p>Normally, “log out” indicates that the user wants to exit his account on a computer system or an application. However, this button means differently, which redirects users back to the home page. It’s confusing for users if their accounts remain logged in status or they should sign in again.</p>	4	1, 2, 4
	<p>Since there are no warnings, there are possibilities that the user accidentally selects wrong time slots and books two different badminton clubs, but with the same time slots. However, there is no doubt that the user could not go to both clubs to play badminton at the same time.</p>	3	2, 3, 5, 9
	<p>There is no submission button. After the user finishes his comments, he may be confused about how to confirm that he posts his comment successfully.</p>	4	1

	<p>In the detail page of a badminton club, there is information about price and related coupons. However, in the payment system page, when the system confirms the order details, there are no details about the amount details and coupon apply entrances.</p>	<p>3</p>	<p>1, 4</p>
	<p>In the detail page of a badminton club, there is information about price. However, in reality, the price may be charged differently based on time period and vacation. It may be confusing for users if they see the price listed in the introduction page of a badminton club is different from that of the timetable page.</p>	<p>2</p>	<p>4</p>

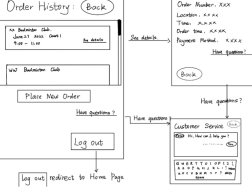
Wenxin Zhang

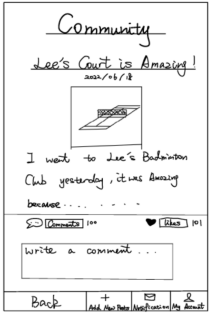
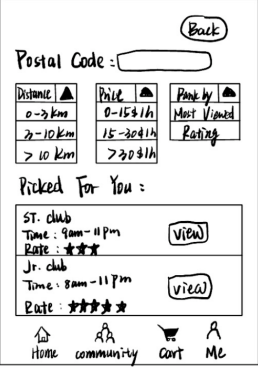
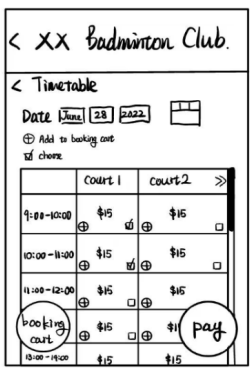
prototype page reference	Issues	Heuristic(s) violated	severity ratings
All pages	Buttom nevigation bar not consistent.	4. Consistency & Standards	3

	<p>Users should first sign in before seeing available badminton courts.</p>	<p>5. Error prevention</p>	<p>4</p>
	<p>Because the navigation bar “Home” has been modified to “Search”, the “view available courts” should be deleted.</p>	<p>8. Aesthetic and minimalist design</p>	<p>3</p>
	<p>Missing logout button</p>	<p>3. User control & freedom</p>	<p>3</p>
	<p>Missing scrolling bar for order history</p>	<p>3. User control & freedom</p>	<p>2</p>

	Missing scrolling bar for review viewing	3. User control & freedom	2
	Missing back button	3. User control & freedom	3
	Misleading back button, not consistency bottom navigation bar	4. Consistency & Standards	3

Tang, Jiaguan

Page #	Design issues	Nielsen violated Heuristic #	Severity rating
	Users can not cancel their order efficiently, so a cancel button is needed.	User control & freedom	2

	<p>Users can not submit their comments on a post.</p>	<p>Consistency & standards</p>	<p>4</p>
	<p>In the filter table, the user does not know how to check all results without a scroll bar.</p>	<p>Flexibility and efficiency of use</p>	<p>2</p>
	<p>Users do not know whether the courts are full or not. This may cause a conflict error.</p>	<p>Error prevention</p>	<p>3</p>

Appendix 2: Assignment attribution

Cognitive Walkthrough	All group members
Heuristic Evaluations	All group members
Combination of section 2	WANG, Chen; TANG, Jiaguan
Interval evaluation	WANG, Dongliang; PENG, Yuanhan; WAN, Jiachen; ZHANG, Wenxin