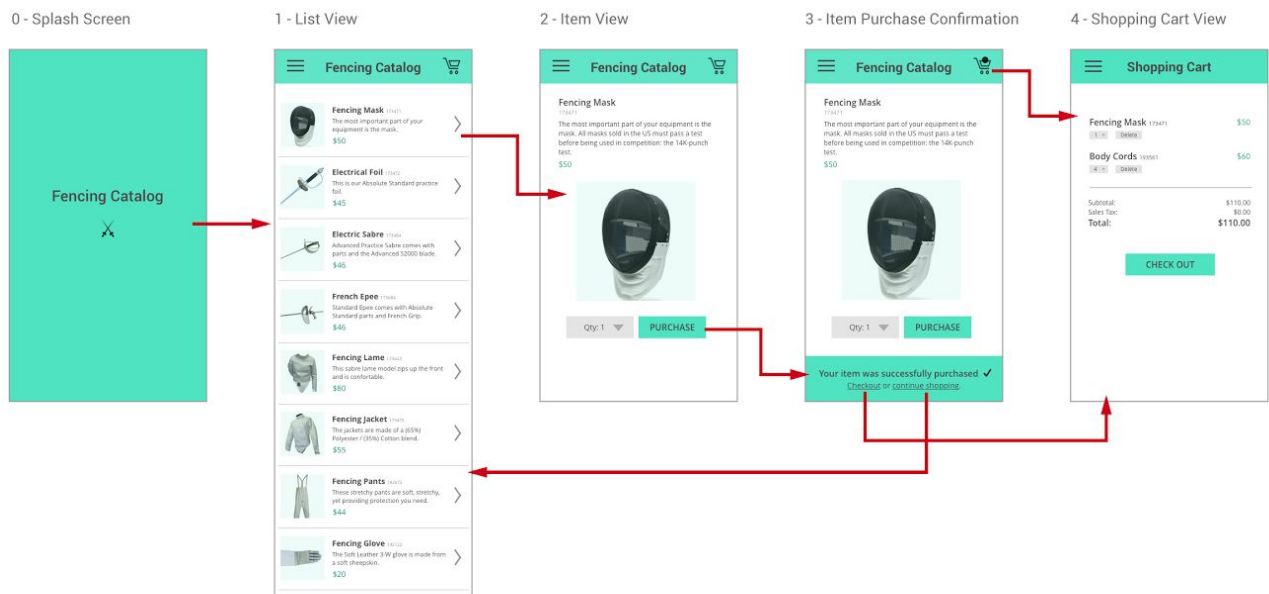# Project 2 Writeup

3. Estimate the time for each team member to complete (a) research, (b) design, (c) implementation, and (d) test of the project implementation.

Member	Research	Design	Implement	Test	Total
C. Paun	2 hrs	2 hrs	6 hrs	4 hrs	14 hrs
Y. Li	2 hrs	2 hr	6 hrs	4 hrs	14 hrs
Total	4 hrs	4 hrs	12 hrs	8 hrs	28 hrs

7. Have your peers review the user interface mockup or prototype

Peers suggested the following enhancements:
- Add a back button to navigate from the shopping cart back to the main shopping screen.
- Longer descriptions on each item would be nice.
- Another iteration of the app could include sizing charts, more photos, and maybe videos of each item.

The following summarizes the major comments:

- The app looks good and it seems intuitive and easy to use.
- The concept of having an app for selling only fencing equipment is really interesting.
- Knowing what I need to buy makes me more interested in trying out fencing.

For the first version of the app, there is a limited ability to examine each item, but sizing charts and videos of the each both sound like great ideas.

8. Focus Group

Summary:
We conducted a focus group to understand how users interact with the **Fencing Catalog** app. The users enjoyed the app and they were able to understand and use it successfully.

Question Asked:
- What is your first impression of the Fencing Catalog app?
- What works and what doesn't on each view?
- What did you like best about the app?
- What feature would you implement next?
- On a scale of 1 to 10, with 10 being the highest, how would you rate this app?

Catalog View Feedback:
- Like it. Both item images and prices are on display, which is great.
- The wave at the top and bottom is great, because it lets you know you did not scroll all the way down.
- It might be nice to implement "power user" functionality, where you can select multiple items at once on the catalog view. You might be a fencer or a fencing coach who already knows what everything is.

Item View Feedback:
- Everything looks great.

Shopping Cart:
- The manual editing of the item quantity is great.
- The splitting of the price into two labels with dollars and cents is great.
- I like that you can still see the individual price of each item.
- The "empty cart" button is nice.

- It's awesome that everything is confirmed, especially when you are deleting from your shopping cart.
- It crashes when you add 9,000,000 of one item. Also, the labels eventually get cuts off when too many items are ordered. Maybe set an upper limit.

General Feedback:
- It's simple, elegant, and clean.
- This app could use more functionality, but so far, it is a great start.
- It would be nice to build a more visually-pleasing iteration next time.
- Have a name and logo for the app and make sure it's on every page.

9. Usability test script

a.   Thank you for agreeing to perform this usability test. Note that we are testing how easy it is to use the **Fencing Catalog** Android app. This application allows you to purchase all your fencing equipment needs in one easy location. During this usability test, we are not testing you. We are interested in discovering what problems you encounter while using this app. Don't worry about making mistakes. They will help us improve our mobile application.

b.   Process for loading the app:
- The .apk file of the app is located here: https://cs-560.github.io/project2.html
- You can use an Android mobile emulator to test it out. We have provided ARC Welder, a Chrome plugin, to easily load and run .apk files.
- We have also provided an InVision prototype of this app through the InVision site.

c.   Perform each of the following "performance" tasks:
- Scroll through the catalog of fencing equipment items and add one item to your shopping cart.
- Add one foil mask to your shopping cart.
- Add three body cords (two-prong) to your shopping cart.
- Delete one foil mask from your shopping cart.
- Delete one body cord (two-prong) from your shopping cart.

d.   Answer the following "preference" questions:
- On a scale from 1 to 5, how easy was it to perform the tasks?
- On a scale from 1 to 5, how did you like the look and feel of the app?
- What did you like best about the app?

- What feature(s) would you like to see implemented next?

e. Thank you for providing your time and insight to help us improve this application.

10. Results of the usability test

Performance Results:

Task	Subject 1	Subject 2	Subject 3
Scroll through the catalog of fencing equipment items and add one item to your shopping cart.	15 sec.	20 sec.	15 sec.
Add one foil mask to your shopping cart.	10 sec.	10 sec.	10 sec.
Add three body cords (two-prong) to your shopping cart.	10 sec.	10 sec.	15 sec.
Delete one foil mask from your shopping cart.	5 sec.	5 sec.	5 sec.
Delete one body cord (two-prong) from your shopping cart.	2 sec.	1 sec.	1 sec.

Preference Results:

Question	Subject 1	Subject 2	Subject 3
On a scale from 1 to 5, how easy was it to perform the tasks?	5	5	4
On a scale from 1 to 5, how did you like the look and feel of the app?	4	4	4
What did you like best about the app?	The ability to change	The list of items with pictures,	The confirmation before

	the quantity in the cart.	because I am not a native English speaker.	putting an item in your cart.
What feature(s) would you like to see implemented next?	Add suggested items. As a novice, I don't know if a jacket requires body cords. What needs to be purchased together?	Login page with username and password. Help menu if you get stuck.	A scroll bar to change the quantity of each item in the shopping cart.

11. Actual time spent by each team member.

Member	Research	Design	Implement	Test	Total
C. Paun	5 hrs	4 hrs	5 hrs	4 hrs	18 hrs
Y. Li	2 hrs	2 hr	14 hrs	4 hrs	22 hrs
Total	7 hrs	6 hrs	19 hrs	8 hrs	40 hrs

12. Summary of what each team member learned by doing the lab project

The project was significantly more difficult than it looked at first. We had to figure out Android Studio and Android Emulator for the user testing. At first, this seemed like a simple shopping cart application, but there is so much functionality required at each step. There are also a lot of small details that take the application from usable to a great user experience.

13. Explain how to access your application or website by either

- Go to this page: https://cs-560.github.io/project2.html
- Click on the "Download Project .apk" button and download the file.
- Use an Android Emulator with settings for "mobile" and "portrait" view.
- -OR- download the ARC Welder Chrome extension from here: https://developer.chrome.com/apps/getstarted_arc. Once downloaded, set the settings to "mobile" and "portrait" view.

14. Final Thoughts

It was hard to create an experience, learn a new implementation platform (Android), build the app, and test the app. This project was a great learning experience. However, there were significant limitations, because neither one of us was very familiar with Android.