

A

## **Links**

[Game Planet](http://ec2-54-165-131-208.compute-1.amazonaws.com/index.php) (<http://ec2-54-165-131-208.compute-1.amazonaws.com/index.php>)

[GitHub Repository](https://github.com/kassiejgarcia/User-Interface-Project) (<https://github.com/kassiejgarcia/User-Interface-Project>)

## **Excel Results**

([https://utsacloud-my.sharepoint.com/:x:/g/personal/darean\\_wilde\\_my\\_utsa\\_edu/EakEZ\\_UMOSVDntqY7nTs9HEB0N0xXv4\\_d1HBuefFHJdtXg?e=AqaGxi](https://utsacloud-my.sharepoint.com/:x:/g/personal/darean_wilde_my_utsa_edu/EakEZ_UMOSVDntqY7nTs9HEB0N0xXv4_d1HBuefFHJdtXg?e=AqaGxi))

[Project Presentation Video](https://youtu.be/eKUZDV_s_wkA) ([https://youtu.be/eKUZDV\\_s\\_wkA](https://youtu.be/eKUZDV_s_wkA))

(we also uploaded the video on google drive:

[https://drive.google.com/file/d/1NXPCDDfW1T7wtm\\_Jjih\\_ijPV7xUzL5xy/view?usp=sharing](https://drive.google.com/file/d/1NXPCDDfW1T7wtm_Jjih_ijPV7xUzL5xy/view?usp=sharing))

### **1.1 Purpose Statement:**

All the developers for Game Planet expect to use this study design to improve the learnability and ease of use for the Game Planet Website. We want all our customers to shop on our website without confusion. In particular, we would like to study the efficiency of customers navigating the entire website for an item and then checking out. We expect that the results from the usability study will allow us to better understand the bugs and faults of our project, which we will then fix / update if time permits. The website design does allow for possible changes to be made, but we do not want to change our layout entirely. It should resemble our current interface well enough that long-time customers do not get confused. All the Game Planet Developers believe that this will be a helpful test to improve the usability of our website.

### **1.2 Concerns & Goals:**

#### 1.) Concerns:

- a.) Navigating the Website
- b.) Browsing game listings
- c.) Creating Account
- d.) Logging in
- e.) Viewing Wishlist
- f.) Placing items in cart
- g.) Updating items in cart
- h.) Purchase the item
- i.) Logging Out

#### 2.) Goals:

##### a.) Navigating the Website:

- i.) The user does not need to spend any more time than they want on the front page (3 seconds).
- ii.) Finds an item on the catalog page (15 seconds).
- iii.) Can navigate to the Sign-Up page (2 seconds).

b.) Purchasing

- i.) Can view their wishlist wherever (2 seconds).
- ii.) On a product screen, can place a object in their shopping cart (4 seconds)
- iii.) When in the shopping cart, can update the quantity of items (3 seconds).
- iv.) Purchases an item (2 seconds)

### **1.3 Tasks:**

- a. From any page, ask the participant to create an account or sign into theirs if they have one.
- b. From any page, ask the participant can view their wishlist of shopping cart.
- c. From the homepage, can navigate to the catalog.
- d. From the catalog, select a product.
- e. From the product, add to cart.
- f. From the product, add to wishlist.
- g. From the cart, purchase.
- h. From the purchase history, navigate to Wishlist.

### **1.4 Scenarios:**

Michael is a 21 year old college student. After his classes, he likes to unwind with gaming. Every few weeks, he looks for any new video games, and he buys any games that interest him. Sometimes he sees a game that he would want to buy, but he does not have the money to buy it immediately, so he saves it on his wishlist. Occasionally he hears his friends talk about a game, and he knows he wants to buy it also. Since he is taking classes while working at a gas station, he does not have time to travel to a physical game store, so he relies on online websites. Since he found Game Planet, this has been his go-to store.

You are looking for games across the internet and browsing prices. You have one trusty gaming console, the Wii, that's been with you since 2013. Lately you needed to buy a new console, the Switch. With your brand loyalty, you want to only browse Nintendo games. Once a price-comparison site indexed Game Planet as a competitive price, so you decided to check it out. Now, you found that Game Planet can filter games only to Nintendo, and with labeled sales, you now use Game Planet on a regular basis.

### **1.5 Measurements:**

The measurements for this study leans quantitative with analyzing time the user spent navigating to the next screen. After the user navigates to each of the pages we want them to visit or completes actions we want them to do, we collect this time. The longer a user takes to navigate to their next action, the more we want to optimize their travel path. After the study, we then ask the user what problems they found, what did they think of the website, and how we could improve.

- Quantitative:
  - Time in minutes:seconds a user took to navigate
- Qualitative:
  - User feedback on first impression
  - User feedback on problems they encountered.
  - User feedback on proposed solutions.

## **1.6 Test Methods:**

This test is to analyze the effectiveness of our website for people who use a screen reader, and compare their times with people who do not use a screen reader. This website is also being tested for bugs, and we ask the participant to write down any that they encounter. By analyzing time spent to complete a task, we can learn how long it would take a user to navigate this website.

Our target audience is college students who game as a hobby. This study is conducted with ten people, five of whom cannot see the screen at all.

As a group we recruited people to test our website. In one-on-one sessions, we told the user their tasks during briefing and again each individual step once they complete a task. We record their time to navigate to this task. We then have them load our website and record their first thought. Then we ask each participant to complete tasks one after another. Once the tasks are over, the participant will be asked what they thought of the website, any problems they encountered, and how to remedy them.

## **2 Study Script:**

\*Welcome to our User Interfaces usability study.

\*How are you doing?

\*This is \_\_\_\_\_ and he/she will be taking notes.

\*Thank you for participating. Our website is an online marketplace to rival Amazon and GameStop.

\*We are wanting to see how well our website performs for people who rely on or prefer using a screen reader.

\*You are the tester for our software, and our website is being tested.

\*We are recording this for analyzing the results only.

\*This test should take around 15 minutes.

\*Please let us know of any recommendations or critiques you have during any point of your shopping experience.

\*I would like for you to think out loud during your test. An example would be, “How would I purchase this?” “How would I get to this page?”

\*You can ask me questions on how to use this site, but I might answer them indirectly or help you think about it. We can discuss afterwards also.

\*How often did you use online shopping sites like GameStop or Amazon from the past year? Daily, weekly, monthly, yearly, or not at all?

\*When you look at the home page, what are your first impressions?

For your tasks, you are going to go to Game Planet,  
<http://ec2-54-165-131-208.compute-1.amazonaws.com/index.php>, and purchase a product.

Step one: Navigate to the Register screen.

Step two: Create an account with the website.

Step three: Navigate to the catalog.

Step four: Select a product.

Step five: Select a quantity.

Step six: Add item to cart.

Step seven: Add item to wishlist

Step eight: Navigate to cart

Step nine: Purchase.

Step ten: Navigate to Wishlist (My Account)

Step eleven: Return to purchase history.

Step twelve: Log out.

\*Are these directions clear?

\*Thank you very much for participating.

\*Do you have any questions?

\*Could you please explain how you felt using our website?

\*Please tell us how you feel this website could be improved.

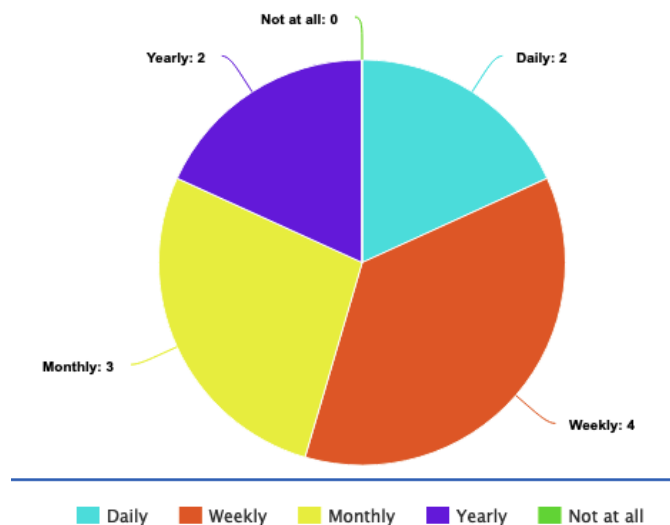
### 3 Results:

This is where our results are recorded. We inputted the data above into Google Forms and then exported this data to Excel. Using Excel we can make graphs and organize based on if they were blindfolded or if they were not. Finally, we can turn the results from minutes:seconds into pure seconds so we can calculate the average time it took for people to navigate their given tasks, and find the T-Test value.

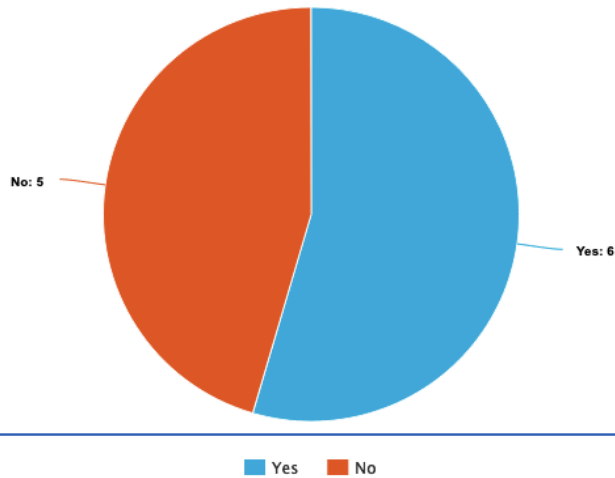
#### 3.1 Graphs:

Survey Questions:

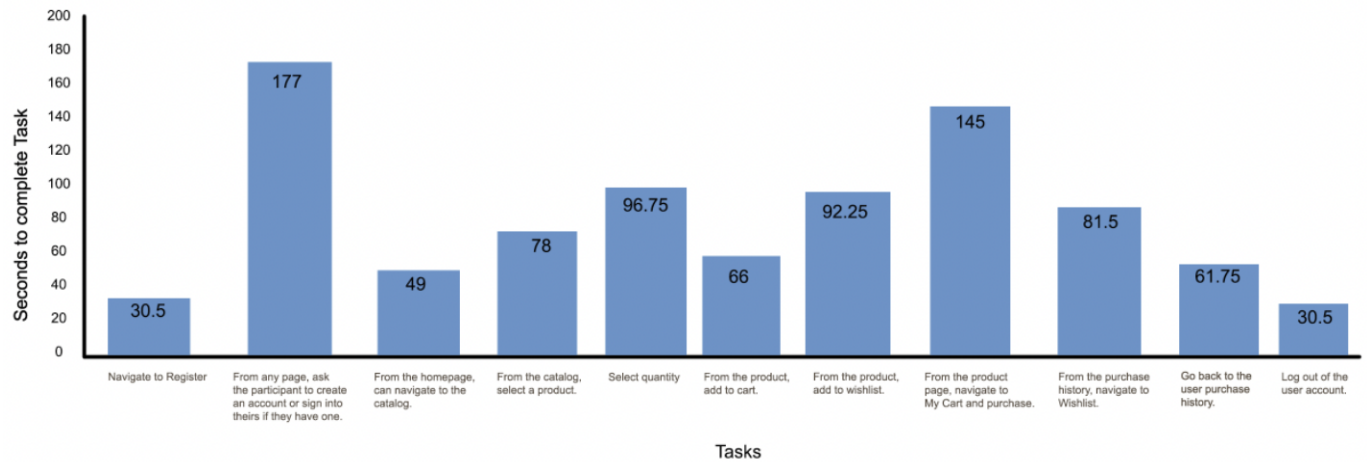
- How often did you use online shopping sites like GameStop or Amazon from the past year?



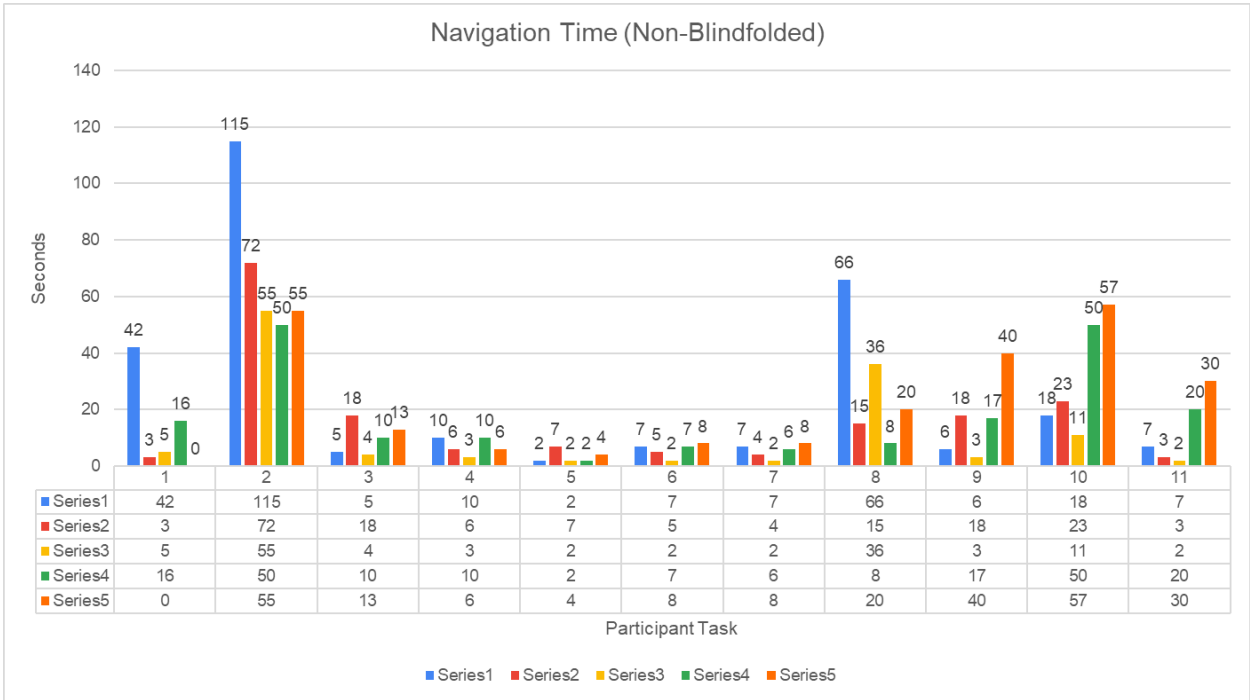
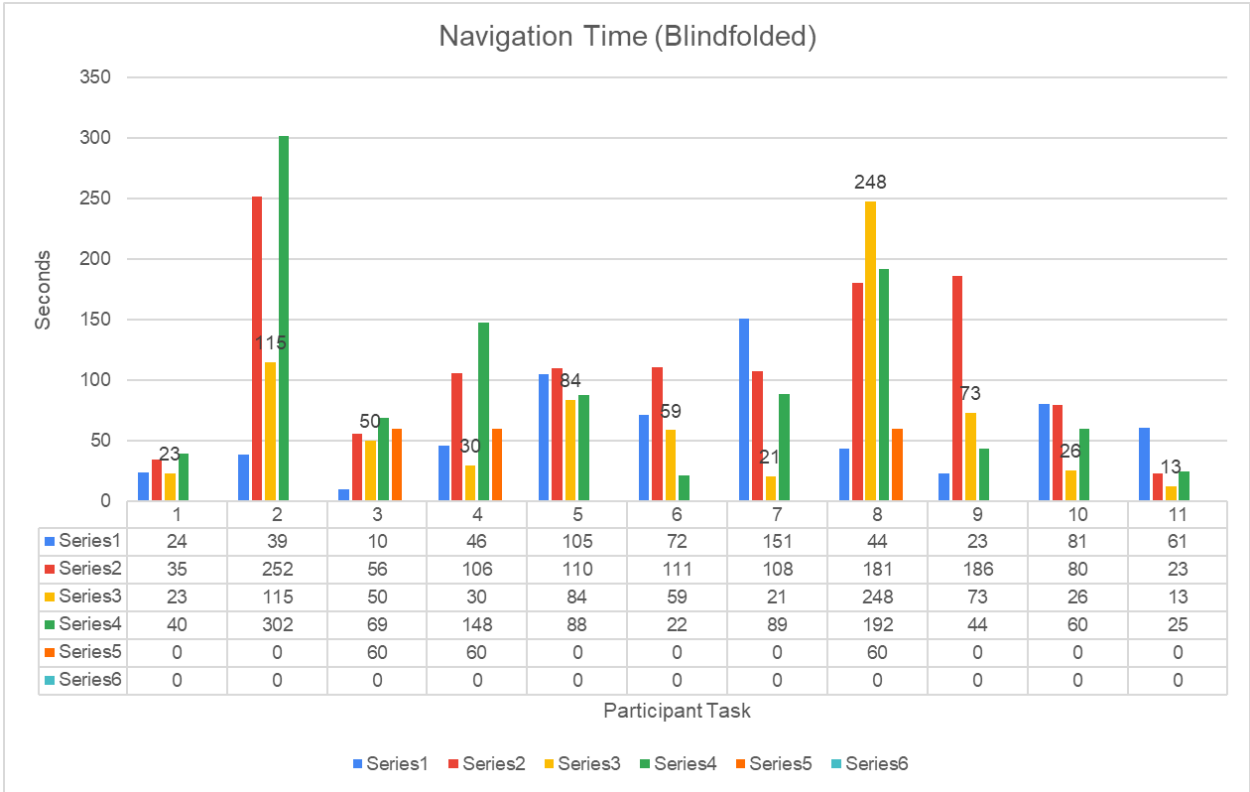
- Blindfolded w/ Screenreader?

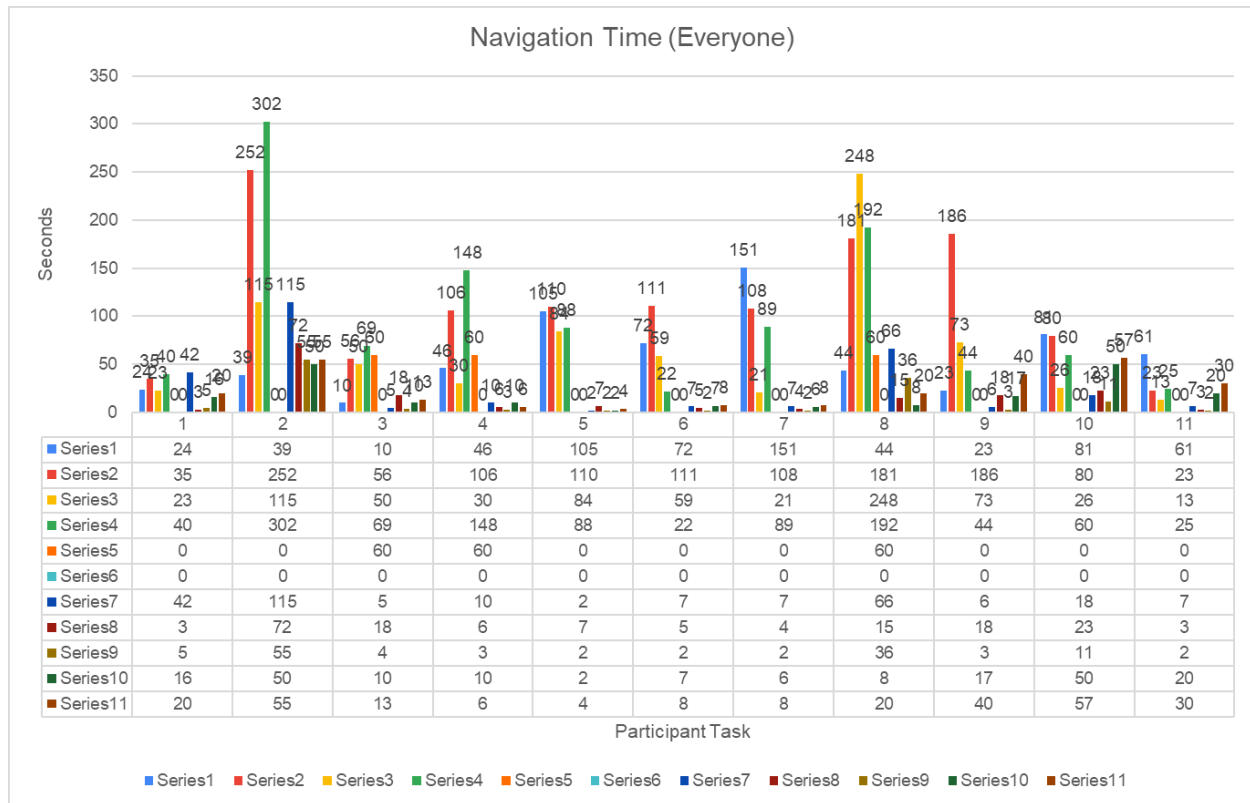


- Average time (measured in seconds) it took to complete tasks while Blindfolded



- Average time (measured in seconds) it took to complete tasks





### 3.2 Identify Problems:

- The user got a 404 error when clicking on “My Account”
- User prompted to sign-in in cart page but moved to home page.
- Wording of the study was confusing
- Things look like buttons but cannot be clicked
- User did not know to log in again after registering

### 3.3 Prioritize Problems:

- 1: 404 error
- 2: Log in after registering
- 3: Sign-in in cart
- 4: Fix study wording
- 5: Change unclickable buttons.

### 3.4 Theorize Reasons:

- 404 error
  - We believe this was occurring because when a user was directed to do tasks relating to their “my account” settings, they would click on the “my account” link in the website’s header, which would then lead them to this 404 error.
- Login after registering
  - We believe this happened because when a user successfully registered, they would be notified that it was successful, however, there was no indication that the next step was to log in.
- Sign-in in Cart



- We believe this issue was occurring because in order to place an order, it must be placed with an associated account. So, if the user failed to sign in before checking out, they would be forced to sign in and had to leave the cart.php page.
- Fix study wording
  - We believe this issue occurred because the wording used to describe our tasks / features in our study was not consistent with the website. For example, we used the word “catalog” to describe the shop all page, and the word “purchase history” to describe the “orders” page of the account settings. This left some users confused as to what exactly they were meant to do.
- Unclickable buttons
  - We believe this was happening because we used bootstrap buttons to showcase certain things. For example, we used a button to label the games by their manufacturers (Nintendo Switch, PS4, PS5, Xbox one, etc.). So when a user hovers over these “labels”, it seems like it can be clicked on. But it does not have a clickable action.

### 3.5 Theorize Solutions:

- 404 error
  - To solve this, we could fix the “my account” link to link to the main my account->my orders page once clicked on.
- Login after registering
  - To solve this, we could redirect the user to the login page right after they successfully registered an account. We could also add a message, such as “Sign into your new account here” at the top of the sign in page so the user can know their next step.
- Sign-in in Cart
  - To solve this, we could add functionality which allows for guest checkouts, which can be placed as long as the user’s address, email, and contact info are provided.
- Fix study wording
  - To solve this, we could change the wording of the study tasks to match that of the website. Or, we could opt to change the wording of the website itself. We could even host another study which tests what kind of wording is the most intuitive to our customers (for example- is “my orders” a more intuitive label, or is “my purchase history” more intuitive?)
- Unclickable buttons
  - To solve this issue, we can change the classes of our labels (i.e., the manufacturer label) to look more like a typical label which does not seem to have a clickable action. We can also make it less of a button shape.

### 3.6 Identify Successes:

- All of us at Game Planet feel we have successfully learned about many of the challenging and confusing elements of our website which lessen the website’s usability. We are grateful and excited that our website only had errors which can be easily fixed, and that no one had any major issues with the website as a whole. We worked very hard to design a website that a customer can trust and would enjoy to shop on. Although we did not get to implement all the features we had initially discussed (i.e., we didn’t implement ratings or reviews), we are still very proud of our website, and we are glad everything with the study went smoothly.

### **3.7 Identify Areas of Uncertainty:**

- Some of us were shocked by our study results. And I believe a user even mentioned that the website was too simple and didn't make efficient use of the page space. This is definitely an area of uncertainty, as to us, the simplicity of our website is what makes it desirable to use. Initially, we thought other websites (Gamestop, Amazon) have too many features which don't contribute to the simplicity of buying games. So it was strange to receive feedback that someone preferred the opposite. But it did make us think we could benefit from some more features. And as we reflected on the project, we agree that the websites' real estate could've been used more effectively.

## Report

### Finding and recommendations Five Positive findings:

1. Register feature. All our participants successfully were able to register and create an account in our website.
2. Navigation In all cases, we observed that participants could find related links and easily navigate to certain product page.
3. Overall clear products and features. Our participants were easily able to select the products they desire and select the quantity they wanted and add it to cart.
4. Wishlist feature. Participants were easily able to add products to their wishlist and view them back later.
5. Easily could purchase product. Our users found it very easy and straight forward to purchase a product.

### Difficulties encountered:

1. Based on our results one of our participants who did the blind test was not able to navigate our website successfully and couldnt find most of our features which was frustrating for them.
2. We believe that some of our test subjects were too generous with their critique of our website on the questionnaire because we do know some of them personally. Future testing should be performed with strangers whenever possible and the person giving the test should emphasize that we want participants to be critical.

### Recommendations and future work:

We discovered some issues while conducting our tests these include:

1. One of our users facing a 404 error when clicking on a product.
2. Log in after registering was kind of tedious to one our users.
3. Signing in after you want to add to cart gave one of our users trouble.
4. Our script study wording was suggested to be improved by one of our users.
5. One our our users didn't like that when designing our product we made a design choice to use a button to distinguish a ninetedo game from a ps4 game. They found that to be a little confusing.

