**UI/UX Advanced Prototype Report**

-Cardbreaker: the impact-

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-494474-

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# **Section 1 – Design of the Prototype**

# Prototype’s Stylesheet

Graphical user interface, text

Description automatically generatedThis is the Stylesheet I originally created:

Graphical user interface, application

Description automatically generatedAfter asking for feedback, and some help this Stylesheet was created:

# Hi-Fi design

## User functionality

-Make a list with the 3 most important tasks the user can carry out in your prototype. -

* The user can open a card pack using a key from their inventory.
* The user can view all cards they own and inspect them.
* The user can set up a custom lobby and play a match.

## URL of the prototype

- Provide the shareable public URL to version A and B of your prototype. It is your responsibility to make sure it is accessible before submitting. -

**Version A:**

* <https://sad-ai.itch.io/uiuxa-version-a>

**Version B:**

* <https://sad-ai.itch.io/uiuxa-version-b>

# User journey of the prototype (Optional for Excellent)

-Fill in the template with the required information. -

|  |  |
| --- | --- |
| Persona | *Describe a fictional character part of your target group* |
| Scenario | *Describe the process the persona goes through* |
| Goals & Expectations | *Describe the users' goal & expectations* |

|  |  |  |  |
| --- | --- | --- | --- |
| Phase 1  *Describe the first step* | Phase 2  *Describe the next step* | Phase 3  *Describe the next step* | Phase 4  *Describe the last step* |
| User actions:  -  -  - | User actions:  -  -  - | User actions:  -  -  - | User actions:  -  -  - |
| User Thoughts:  -  -  - | User Thoughts:  -  -  - | User Thoughts:  -  -  - | User Thoughts:  -  -  - |
| Opportunities: *(potential improvements for the user)* | Opportunities: *(potential improvements for the user)* | Opportunities: *(potential improvements for the user)* | Opportunities: *(potential improvements for the user)* |

# Content that needs crediting

-List of free assets (code, icons, fonts, etc.) that were not made by you, and a link to the source of these assets. -

|  |  |  |
| --- | --- | --- |
| **Asset** | **Location** | **Source** |
| Proxon Font | Used for titles | <https://www.dafont.com/proxon.font> |
| Share Tech Mono | Used for texts | <https://www.dafont.com/share-techmono.font> |
| Search Icon | Used in library page for search bar | <https://www.flaticon.com/free-icon-font/search_3917061> |
| Checkmark Icon | Used mostly in library page | <https://www.flaticon.com/free-icon/check_1055183?term=checkmark&page=1&position=11&origin=search&related_id=1055183> |
| Arrow down Icon | Used in dropdown in library page | <https://www.flaticon.com/free-icon/arrow-down-sign-to-navigate_32195?term=arrow+down&page=1&position=2&origin=search&related_id=32195> |
| Key Icon | Used in open packs page | <https://www.flaticon.com/free-icon/door-key_63432?term=key&page=1&position=5&origin=search&related_id=63432> |
| Card / Pack art | The art on all cards and packs | <https://pixabay.com/> |

# Student-generated content (Optional for Excellent)

-List of assets (code, icons, fonts, etc.) that were made by you. -

|  |  |
| --- | --- |
| **Asset** | **Location** |
| All code (following are examples) | The entire project |
| Window Navigation Framework code | The entire project |
| Card Generators code | Library screen / Pack info popup |
| Pointer Reactions code | Buttons |
| UIPathFollower | Open pack screen |

# **Section 2 – Evaluation of the Prototype**

# Unmoderated A/B test protocol

## A/B conditions (Max. 2 sentences)

-Explain the difference between the two versions of your prototype. Make sure there is only one thing you are changing so your experimental results are valid. -

All differences take place on the ‘Open Cards’ page.  
In version A, the user selects a pack, then selects whether to see more info or purchase the pack.  
In version B, the user selects a pack by simple clicking on it. This will show a popup with both additional information and purchase information. To make space for the purchase information, the median results panel has been removed.

## Hypothesis (Max. 1 sentence)

-State what you believe will change, in terms of user behavior, between conditions A and B. -

I believe that in version B, users will have an easier time selecting their desired pack. I also believe that the ‘Median Results’ panel from version A may have been somewhat deterring.  
In version B, the window no longer shows which key is used for each pack which may be frustrating.

## Variables

-List the aspect of the experiment that you are controlling and changing (independent variable – there should only be one), what is affected by that change (dependent variables), and what aspects you have no control over but could affect the results (confounding variables). -

|  |  |
| --- | --- |
| **Independent variable** | Layout of the “Open Pack” page (and also the pack info popup screen) |
| **Dependent variable(s)** | * Ease of selecting desired pack * Search time of finding information * User purchase behaviour |
| **Confounding variable(s)** | * User purchase habits * Screen resolution/size * Technical issues |

## User tasks

-State the actions you will ask the user to perform with your prototype. Copy-paste the table as necessary. -

|  |  |
| --- | --- |
| **Task 1** | Set up a custom match and start a match. |
| **Success criteria** | User has navigated to the ‘Create Match’ page and started a match. |

|  |  |
| --- | --- |
| **Task 2** | Purchase a pack of cards after reviewing the pack details. |
| **Success criteria** | User has completed the following steps:   1. The user navigated to the ‘Open Packs’ page. 2. The user read the pack information. 3. The user attempted to purchase a pack of cards. |

|  |  |
| --- | --- |
| **Task 3** | View all cards and inspect a card. |
| **Success criteria** | User has navigated to the ‘Library’ page and clicked on a card to inspect it. |

## Survey

-Fill in the URL of your survey. **Remember you need at least 4 questions, and they should be relevant to your test (should allow you to validate your hypothesis)**. -

I’m sure you may be wondering why there are 2 links. Let me explain: I used google forms, and I wanted an easy way to see how people with version A answered vs. people with version B. While Google forms does allow you to see individual responses, it does not allow for filtering based on a question, so I decided to give up and make two forms.

(Both versions are identical)

Version A: <https://forms.gle/ZgPAehzKRodWFkLD9>   
Version B: <https://forms.gle/oV9jNZeLmHtCCAEd9>

# Unmoderated A/B test results

## Survey results data

-Copy-paste the results of your survey. These are usually obtained as tables/graphs. Demographic information does not need to be reported here or in the following sections. -

**Condition A**Chart

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

Chart, bar chart

Description automatically generated

Graphical user interface, text, application

Description automatically generated

Graphical user interface, text, application

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

A picture containing chart

Description automatically generated

Graphical user interface, text, application, Teams

Description automatically generated

Chart

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

**Condition B**

Chart

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

Chart, bar chart

Description automatically generated

Graphical user interface, text, application, letter, email

Description automatically generated

Graphical user interface, text, application, email

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Graphical user interface, text, application, email

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

Chart

Description automatically generated

Graphical user interface, text, application, email, Teams

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Chart

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Graphical user interface, text, application, email

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

## Statistical processing of the results

-Fill in the table with the results of your descriptive statistical analysis of the raw data from your survey. You can choose a different way of presenting your data if the table does not provide a good structure but make sure you show, per question and per condition, the required information. -

|  |  |  |  |
| --- | --- | --- | --- |
| **Question 1 –** On a scale of 1 - 5, how easy was it to find the custom match page? | | | |
| **Question Type – Linear Scale** | | | |
| **Condition A** | | **Condition B** | |
| **Number of testers** | 6 | **Number of testers** | 6 |
| **Mean** | 4.83333 | **Mean** | 4.83333 |
| **Median** | 5 | **Median** | 5 |
| **Standard deviation** | 0.4082483 | **Standard deviation** | 0.4082483 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Question 2 –** Can you elaborate on why you felt this way? | | | |
| **Question Type – Open** | | | |
| **Condition A** | | **Condition B** | |
| **Number of testers** | 6 | **Number of testers** | 6 |
| **Consensus** | It was easy to find and in an intuitive position | **Consensus** | It was easy to find and in an intuitive position, but the naming between the form and the project was inconsistent making it a bit confusing. |

|  |  |  |  |
| --- | --- | --- | --- |
| **Question 3 –** On a scale of 1 - 5, how easy was it to select your desired pack? | | | |
| **Question Type – Linear Scale** | | | |
| **Condition A** | | **Condition B** | |
| **Number of testers** | 6 | **Number of testers** | 6 |
| **Mean** | 3.5 | **Mean** | 4.16667 |
| **Median** | 4 | **Median** | 4 |
| **Standard deviation** | 1.22474487 | **Standard deviation** | 0.7527727 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Question 4 –** Did you feel like the pack details allowed you to make an informed choice? | | | |
| **Question Type – Open** | | | |
| **Condition A** | | **Condition B** | |
| **Number of testers** | 6 | **Number of testers** | 6 |
| **Positive / Negative** | 6 / 0 | **Positive / Negative** | 3 / 3 |
| **Consensus** | The details are very informative and detailed. | **Consensus** | There are a lot of details, which makes it very overwhelming. |

|  |  |  |  |
| --- | --- | --- | --- |
| **Question 5 –** Did you feel like the pack details made purchasing a pack appealing? Why, or why not? | | | |
| **Question Type – Open** | | | |
| **Condition A** | | **Condition B** | |
| **Number of testers** | 6 | **Number of testers** | 6 |
| **Positive / Negative** | 4 / 2 | **Positive / Negative** | 1 / 5 |
| **Consensus** | The information gives users more security in their choice. However, it often did not make a purchase more or less appealing. | **Consensus** | The page is very overwhelming, and the information can feel very confrontational, making it less appealing to make a purchase. |

|  |  |  |  |
| --- | --- | --- | --- |
| **Question 6 –** Did you understand the different options for purchasing a pack? | | | |
| **Question Type – Open** | | | |
| **Condition A** | | **Condition B** | |
| **Number of testers** | 6 | **Number of testers** | 6 |
| **Positive / Negative** | 3 / 3 | **Positive / Negative** | 4 / 2 |
| **Consensus** | It is somewhat unclear what currencies can be used to make a purchase. | **Consensus** | It is somewhat unclear what currencies can be used to make a purchase. Additionally, the placeholder value for “Total invested” did not make sense and caused some confusion. |

|  |  |  |  |
| --- | --- | --- | --- |
| **Question 7 –** Please elaborate on any additional findings during this quest. | | | |
| **Question Type – Type** | | | |
| **Condition A** | | **Condition B** | |
| **Number of testers** | 3 | **Number of testers** | 5 |
| **Findings** | * Pressing the “open” button, which is supposed to purchase the pack, lacks feedback. * The ability to check card details anywhere is nice. * Animations were nice | **Findings** | * Attempting to purchase a pack lacks proper feedback. * Scrolling through packs feels nice. * Feedback for hovering over clickable items is nice. * Pity mechanic is a bit unclear. * While the “pack details” menu is overwhelming, it does contain the information required. |

|  |  |  |  |
| --- | --- | --- | --- |
| **Question 8 –** On a scale of 1- 5, how Intuitive was it to inspect a card? | | | |
| **Question Type – Linear Scale** | | | |
| **Condition A** | | **Condition B** | |
| **Number of testers** | 6 | **Number of testers** | 6 |
| **Mean** | 4.66666667 | **Mean** | 4.66666667 |
| **Median** | 5 | **Median** | 5 |
| **Standard deviation** | 0.81649658 | **Standard deviation** | 0.5163978 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Question 9 –** Was there anything missing for you in terms of searching tools? | | | |
| **Question Type – Open** | | | |
| **Condition A** | | **Condition B** | |
| **Number of testers** | 6 | **Number of testers** | 6 |
| **Satisfied / Unsatisfied** | 5 / 1 | **Satisfied / Unsatisfied** | 4 / 2 |
| **Findings** | * Potentially add winrate as a filter. | **Findings** | * There should be a way to hide / filter by card sets. * A filter for card “archetypes” would be nice |

|  |  |  |  |
| --- | --- | --- | --- |
| **Question 10 –** How easy was it to navigate back to the Main Menu? | | | |
| **Question Type – Linear Scale** | | | |
| **Condition A** | | **Condition B** | |
| **Number of testers** | 6 | **Number of testers** | 6 |
| **Mean** | 4.83333 | **Mean** | 5 |
| **Median** | 5 | **Median** | 5 |
| **Standard deviation** | 0.4082483 | **Standard deviation** | 0 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Question 11 –** Is there anything you want to comment on regarding **the layout** of the project? | | | |
| **Question Type – Open** | | | |
| **Condition A** | | **Condition B** | |
| **Number of testers** | 5 | **Number of testers** | 4 |
| **Findings** | * Incentive to explore the “cards” section is low when looking at the layout. * The “Play” button feels redundant. * Purchasing options felt hidden. * Layout is clear, but not visually exciting. | **Findings** | * Layout is clear and easy to navigate. * The layout’s similarity to other games is nice, as it makes it feel more familiar. |

|  |  |  |  |
| --- | --- | --- | --- |
| **Question 12 –** Is there anything else you want to comment on? | | | |
| **Question Type – Open** | | | |
| **Condition A** | | **Condition B** | |
| **Number of testers** | 5 | **Number of testers** | 4 |
| **Findings** | * UI Animations are very nice. * Card design could be better. (Especially when communicating health and attack) * The style of the product is nice. * The “cards” button on the main menu has a bug where it sometimes doesn’t retract when you stop hovering. * Some specific navigation paths can feel a bit strange. | **Findings** | * Overall, product looks good and professional. * The form itself made giving a review more enjoyable. |

## Box plots of the results (Optional for Good)

-Draw a box plot to better showcase the results from the A/B test. -

**Question:** On a scale of 1 - 5, how easy was it to find the custom match page?

A picture containing chart

Description automatically generatedA picture containing graphical user interface

Description automatically generated

Chart, box and whisker chart

Description automatically generated**Question:** On a scale of 1 - 5, how easy was it to select your desired pack?

Chart, box and whisker chart

Description automatically generated

**Question:** On a scale of 1- 5, how Intuitive was it to inspect a card?

Chart

Description automatically generatedChart

Description automatically generated

**Question:** How easy was it to navigate back to the Main Menu?

Table

Description automatically generatedChart

Description automatically generated

(just to clarify why Boxplot B is empty: it turns out that when all data points are the same, the boxplot becomes a line, and is effectively invisible)

## Analysis of the results (Optional for Excellent)

-Provide an insightful analysis of the statistical results and the Box Plot. -

This section is going to end up fairly long, so I wanted to explain my process here. I will be going over each question in the survey, analyze the answers and find out what they tell me. After this I will add a quick reflection on the question itself (was it helpful? Would I change anything if I were to do this again?).  
With that out of the way, here is my analysis of the results:

**Question 1: On a scale of 1 - 5, how easy was it to find the custom match page?**

**Answer Analysis**

Users were very positive in their answers for this question. By a funny coincidence the results for the A and B versions are identical. This makes sense since nothing changed between the versions for this question. I believe that the answers show that the custom match button is in the correct place, but it’s not impossible to improve upon.

**Question Reflection**

Using this question, I hoped to figure out if the location of the custom match page was intuitive. I also hoped to find out if there were too many submenus the user had to go through before getting into the game. I believe this question helped me get a general gist of the answer to these questions.

**Question 2: Can you elaborate on why you felt this way?**

**Answer Analysis**

Users seemed to have little trouble finding the location of the “Custom Match” screen.

**Question Reflection**

First, this question was marked as optional, to prevent every person taking the form from filling out a ton of open questions. I believe this strategy worked well.

This question was placed here to catch additional feedback that can’t be expressed through a number. In that regard, this question was very successful.

However, as one of the answers points out, there is an inconsistency between the term used by the form and the term inside the actual product. I would go back to fix this if I could.

**Question 3: On a scale of 1 - 5, how easy was it to select your desired pack?**

**Answer Analysis**

The answers to this question differed significantly between the A and B version. I’m glad they are because this question is about a section that is different between the 2 versions.

The results from the B version seem to tend more towards to higher numbers compared to the A version, which tells me that the variation in version B works better than the one from version A.

**Question Reflection**

This question was intended to measure one of the major changes between the A and B version: the selection process for card packs. I’m glad that the answers reflect this change, and therefore I believe this question worked well.

**Question 4: Did you feel like the pack details allowed you to make an informed choice?**

**Answer Analysis**

While there were differences between the A and B version for the details panel, I expected very minimal differences in the answers. In reality, the differences between the A and B version were quite significant. For the A version, answers reflected that the information was clear and helpful. Meanwhile, for version B, answers reflected that the window felt very cluttered and overwhelming.

**Question Reflection**

This question was added to make sure the details panel was helpful for making a decision, which was one of the goals for this product. What I did not expect was how helpful this question was for showing the difference between version A and version B. This question ended up being a very valuable addition to the survey.

**Question 5: Did you feel like the pack details made purchasing a pack appealing? Why, or why not?**

**Answer Analysis**

The answers for this question once again show the results of a small difference between version A and B. For version A, users found that the details page helped them make a purchase, or at worst did not affect their likelihood to make a purchase. While in the B version, most users reported feeling so overwhelmed it made them less likely to make a purchase. They also mentioned that some of the information was very confrontational and made them less likely to make a purchase.

**Question Reflection**

This question was meant to confirm if it was still appealing to make a purchase, since that was one of the requirements for this product. I did not expect it to show a difference between the versions, but because it did, I’m glad I added this question.

However, I do feel that this question might have been better if it was split between 2 questions, where the first question would be a multiple choice with the question “Did you feel like the pack details made purchasing a pack more or less appealing?” and the answers would be: “more”, “it didn’t change how appealing it was” and “less”. Then there would be a seconds open answer question asking the user to elaborate on their answer. This would’ve helped me get a better overview on how the feature performed.

**Question 6: Did you understand the different options for purchasing a pack?**

**Answer Analysis**

Most users simply answered the question with “Yes”, which doesn’t tell me much. The answers do show that only some users understood the different options. This tells me that the options were not clear enough.

**Question Reflection**

I’ll put it bluntly, this is a bad question. It was intended to help me confirm if the different options for making a purchase were clear. This question does not help me answer that, it only gives me vague data for me to speculate on. Additionally, the question is easy to misinterpret.

If I could go back, I would get rid of this question and come up with a different way of testing the clarity of the different purchasing options.

**Question 7: Please elaborate on any additional findings during this quest.**

**Answer Analysis**

The answers for this question point out various things that users liked or disliked. The answers also point out a few minor things that were unclear, such as the pity mechanic and the lack of confirmation on the purchase button.

**Question Reflection**

I like adding these optional open questions throughout the questionnaire, as they help me catch any additional feedback that a user may have but they feel like there is no obvious place to put it.

**Question 8: On a scale of 1- 5, how Intuitive was it to inspect a card?**

**Answer Analysis**

Most users seemed to believe that inspecting a card was very intuitive. There are a few outliers, showing that it currently isn’t *that* intuitive.

**Question Reflection**

I think this question did what I hoped it would, mainly to show if what I believed to be an intuitive feature was actually intuitive. I do whish I had added an optional follow-up question about why the user felt this way. Doing so would have given me more context for why some users felt it was not intuitive.

**Question 9: Was there anything missing for you in terms of searching tools?**

**Answer Analysis**

The answers to this question show that there aren’t any obvious features missing from the searching toolbar. There were some suggestions for additional features, filtering / hiding sets being a major one.

**Question Reflection**

Looking back, this question wasn’t great. It did show me if anything obvious was missing, which was the main reason for adding this question, but I feel there was a better way of gathering feedback here. I also believe that question would have worked better if the functionality it referred to functioned.

**Question 10: How easy was it to navigate back to the Main Menu?**

**Answer Analysis**

I think the answers to this question clearly show that users had little trouble navigating back to the main menu.

**Question Reflection**

I feel like this question may have been a bit redundant, though if the results were very different, I would have been glad that I put this question in. Overall, this question is alright.

**Question 11: Is there anything you want to comment on regarding the layout of the project?**

**Answer Analysis**

Overall, these answers are positive, meaning that the general layout of the project is at worst inoffensive. Some of the answers suggest a further simplification of the layout where the “play” and / or the “Cards” screens are merged into the main menu. Some answers also mention that the visuals of the product are boring.

**Question Reflection**

I am very happy with this question. It helped me get some inspiration of where I could potentially go with the product in the future as well as very general feedback for if users liked the product.

**Question 12: Is there anything else you want to comment on?**

**Answer Analysis**

There isn’t much of a general theme for these answers. It ended up as a catch-all for remaining feedback. Much of this feedback is very valuable and helps me understand how the product was generally received.

**Question Reflection**

I really like these kinds of questions as the final question on a survey. It allows users to leave any remaining thoughts behind before ending the survey. This helps me gather feedback on areas I did not ask anything about.

## Conclusion (Max. 5 sentences)

-Discuss if your hypothesis was validated or not using the results of your A/B test. -

I believe that in version B, users will have an easier time selecting their desired pack. I also believe that the ‘Median Results’ panel from version A may have been somewhat deterring.  
In version B, the window no longer shows which key is used for each pack which may be frustrating.

Looking back at my hypothesis, I turned out to be right on some statements, but was also proven wrong on others, so let’s have a look point by point:

1. Looking at the boxplots, users did in fact have an easier time selecting their desired pack in version B, which I speculated would be the case due to the changes made for version B in an effort to streamline the pack selection process.
2. No users reported being explicitly deterred by the ‘Median Results’ panel in version A, more interestingly, users felt more deterred in version B due to the different layout feeling very overwhelming.
3. Because of the general confusion around keys and different methods of purchasing, I was never able to prove if the lack of the target key on the pack selection screen caused frustration. I also believe that my questions in the survey were inadequate for trying to answer this question.

## Future work (Max. 3 points)

-Add a list of recommendations for future work on your prototype. -

* Iterate further upon the pack details panel using version B as a base, due to the more streamlined pack selection process.
  + Make the panel less cluttered, potentially be hiding the purchasing information in another popup layered on top of the existing one.
* Experiment with simplifying the product’s layout by moving more buttons to the main menu.
* Add a better way to communicate which key is used for which pack in the open pack screen.