

# smash.gg

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# Executive Summary

## Goal

For our Informatics 132 project, we applied various UX research methods toward the goal of redesigning Smash.gg, a free tournament planning web app aimed toward grassroots competitive gaming communities.

In this document, we review our process of redesigning existing design issues with Smash.gg. We discovered that Smash.gg's overall layout, information architecture, and search functionalities made it difficult to navigate and find information on the web page. We also review the four different redesigns of specific parts of the website, conduct an overall heuristic evaluation, and suggest further changes we could have made. Included in the appendix are the survey questions and protocol, the interview questions and protocol, the usability tasks, the cognitive walkthrough tasks with notes, the accessibility report, and each team members' heuristic evaluation.

## Methods

The following is a summary of our design process:

- Conducted **research** on rival competitors, as well as, on our target users.
- Administered **usability tests** with target users
- Organized a **cognitive walkthrough** as a group
- Created three **sketches** each for our four design targets
- Collaboratively transformed our sketches into **high fidelity mockups**
- Performed a **heuristic evaluation** on the new designs

# Introduction

Our team decided to evaluate the user experience and user interface for Smash.gg, a website that helps grassroots competitive gaming communities organize. Its main functionality is as a tool for individuals to run tournaments and automate complicated processes like seeding algorithms.

Smash.gg contributes to social good because it helps empower small eSports communities, who often don't have the resources available to have a professional tournament management team. Using the website, they can run events with an efficiency that can compete with more established sports. The Melee at UCI club (a club on UC Irvine's campus focused on the game Super Smash Bros. Melee) held a tournament on April 13 that used Smash.gg's platform to organize brackets and seeded matches for a singles tournament, doubles tournament, and other exhibition matches. Clubs like Melee at UCI typically do not have the same funding that a professional esports event will have, so platforms like Smash.gg that offer a bracket building service for free offer great value and service to organizations of similar sizes.

The product is accessed by visiting the website from an internet browser, usually through a desktop computer or mobile device. We will primarily analyze the competitive league functionalities from the perspective of organizers and competitors. This includes (but is not limited to) the ability to organize a tournament, build brackets for competitors, post updates about the event, and handle registration and ticketing for an event.

Smash.gg is a privately owned for-profit company started in 2015 that is funded by several venture capital investors. The platform is relatively new (just over three years old), but the user interface has gone through multiple versions throughout its existence. The interface in 2017 showed more text in the sidebar, while the current interface's sidebar has been modified to show only the icons of the general most relevant actions to a user. The interface in general seems to be more streamlined, with there being more of an emphasis on icons and less on plain text. This makes the interface more pleasing to the eye. Also, there is a more consistent color scheme throughout the current interface, while previous iterations seemed to have more variance in the way that event pages looked.

# Competitive Analysis

**Our Product: Smash.gg**

<https://smash.gg/>

**Description:**

An online tournament bracket generator that also offers registration, advertising, and announcement capabilities for event organizers.

**What problem does it address:**

Smash.gg creates a bracket for a selected game/event using “seeds”. It empowers eSports communities of all sizes by allowing anybody to create an event and potentially join a league.

**What are its functionalities:**

Smash.gg allows a registered user to create a tournament for a game of their choosing. For those who use Smash.gg as their main tournament bracket builder, they are given the opportunity to create a “league.” A league is essentially an organization that runs multiple tournaments. Users may also submit a ranking and request a reward shop for their tournament participants.

**What is the user base:**

Smash.gg is mainly targeted towards gamers, specifically those interested in competitive gaming.

**Direct Competitor #1: Challengo.com**

<https://challonge.com>

**Why are they a direct competitor:**

- A source for hosting tournaments and events
- League features for events/tournaments that last for long periods of time
- Competing user base

**Description:**

Challonge is a platform that allows users to create brackets for tournaments or create event pages with multiple tournaments. Users can register to be part of a tournament if the tournament allows people to register.

**What problem does it address:**

As with Smash.gg, Challonge gives users the ability to create tournaments. Along with this, users can also create communities to host multiple tournaments, leagues, and events.

**What are its functionalities:**

Users must first login or create an account. After this users can create a tournament with either a list of participants or a signup sheet for other users to register with. Users can also choose whether participation in the tournament is free or paid (only allowed for tournaments with signup sheets).

Challonge also has communities where users can plan and promote tournaments to other members of the community. There is also a paid pro community feature with benefits that aren't included in the free community feature.

**What is the user base:**

The Challonge user base are mainly gamers. However, smaller athletic communities also use the platform to create tournaments.

**Other similarities/differences:**

Unlike Smash.gg, challonge has a free bracket generator that allows users to create a bracket without logging in or creating an account. However, brackets are not saved unless the user logs in to an account.

**Direct Competitor #2: Battlefy.com**

<https://battlefy.com/>

**Why are they a direct competitor:**

- Free online tournament bracket generator
- Aimed towards eSports

**Description:**

Battlefy is a platform that allows a user to create their own brackets for a tournament that they are hosting. Users create or join an organization and are assigned roles that determine what actions they may perform within that organization.

**What problem does it address:**

Similar to Smash.gg, battlefy allows users to create a tournament for participants to join. These tournament brackets are adjusted by administrators and moderators within an organization to prevent conflict and cheating.

**What are its functionalities:**

Battlefy has groups called organizations which consist of members and tournaments. Within organizations are members who are assigned one of the four following roles:

1. Owner: can edit anything about the organization and delete it as well
2. Admins: similar to the owner but cannot delete the organization or remove other admins
3. Moderators: can create and edit tournaments for the organization
4. Bracket managers: report and resolve disputes in a tournament (changes to score)

Users may also browse tournaments created by other organizations.

**What is the user base:**

Battlefy is used by eSports organizations looking to plan multiple events/tournaments. They offer a wide variety of games supported on both PC and console.

**Other similarities/differences:**

A noticeable difference is that Battlefy does not allow a user to create a tournament until they create an organization. This may be inconvenient for users looking to create a tournament bracket for a one time use.

**Indirect Competitor #1: Google Forms**

<https://www.google.com/forms/about/>

**Why are they an indirect competitor:**

- Allows for event planners to create an easily accessible registration form
- Allows for individuals to register for an event
- Shows statistics on the results of the form

**Description:**

Apart of the Google Suites, Google Forms is a platform that allows users to create a form that collects information from its participants.

**What problem does it address:**

Similar to Smash.gg, Google Forms can be used as a simple registration tool.

**What are its functionalities:**

Users must login or create a Google account. From there the user can create a form to get information from their participants. There are many different options that the author can choose from when creating this form, which makes this service very powerful. Once the form is finalized and published, the authorized users can view and export the responses that have been submitted.

**What is the user base:**

Google Forms can be used by many different types of organizations and people. It is simple for both the author and the participants to use, and can be scalable.

**Other similarities/differences:**

Google Forms is not specifically designed for eSports tournament management, it can be easily used to gather participants for an eSports tournament by creating a form for registration. While an account is not required for participants to complete a registration form, the idea behind Smash.gg is to create a community for eSports to grow.

**Indirect Competitor #2: VEX Tournament Manager**

<https://vextm.dwabtech.com/>

**Why are they an indirect competitor:**

- Allows users to create tournaments
- Has a different target user base to Smash.gg, even though some functionalities are quite similar

**Description:**

VEX Tournament Manager is an application where users can create tournaments for robotics competitions. The application is not web-based, but can be downloaded and installed on PC and MAC. The application also has a mobile version.

**What problem does it address:**

Like Smash.gg, this application gives its users the ability to create tournaments. However, unlike Smash.gg, VEX Tournament manager is focused on robotics competitions.

**What are its functionalities:**

Users must first download the application whether that be through desktop/laptop or mobile. After installing the application, users can begin to create the tournament. When creating the tournament, there are many different options the user must go through. Once the user has indicated all their preferences, they can confirm the tournament. This opens up a new window that the user can use during to tournament to input winners, see rankings, etc.

**What is the user base:**

The application's user base are officials for robotics competition tournaments such as the tournament managers or judges.

**Other similarities/differences:**

Unlike Smash.gg, the application is not targeted towards the participants of the tournament due to the complexity and multitude of options it presents when the user creates a new tournament. This application seems to be used more for professional use, especially within the field of robotics competitions.

# Target Population Research

## Target Population

The target population we aim to gather data on people who are passionate about competitive gaming and/or esports. People involved in gaming at any level (competitive or casual) was the original target audience but it has been refined to include those who organize and coordinate tournaments, people who play games at a competitive level in tournaments and organizations, and people who enjoy watching esports online and at in-person events.

The age range we are aiming for are young adults (18-25) with specific backgrounds. The ideal group of users we are targeting consist of students attending a university and are part of their university's gaming organization. Students in a gaming organization are looking for a software that can meet their needs without breaking their budget. Gaming organizations consist of people who are tournament organizers, players, and spectators. Another group of users targeted are those who organize and coordinate tournaments at a professional level. This group tends to consist of young adults with a lot of experience with esports and games at a competitive level, they do this for a living. We want them to pick our product over other competitors.

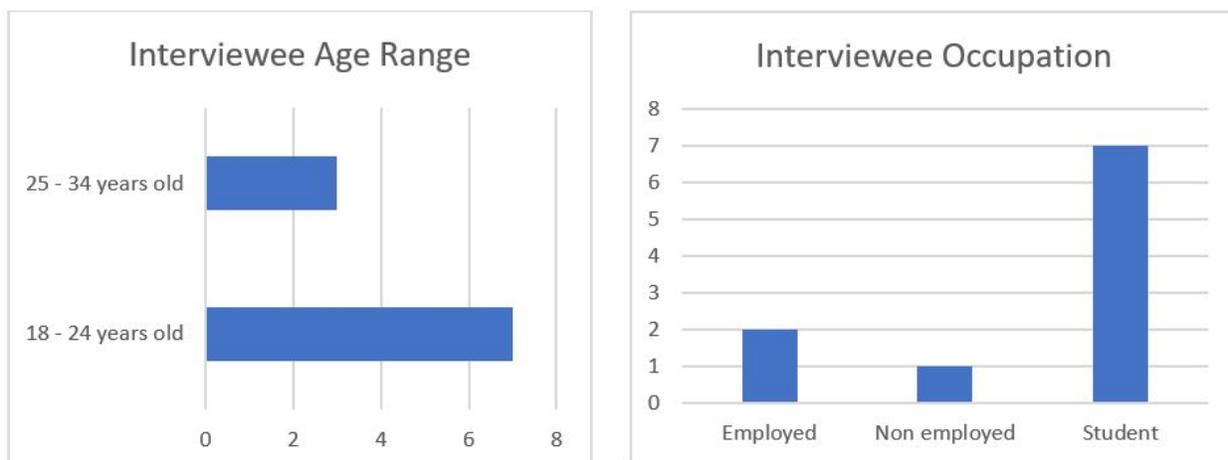
## Interviews

To recruit participants for the interviews, we looked for UCI students who are members of The Association of Gamers (TAG) since they reflect our ideal target audience. However, we did not want to limit our data to only UCI students so some of our group members used their connections to get interviews with participants of a variety of backgrounds. We included employees of a company that supports competitive gaming (Blizzard), and gamers who play competitively but not necessarily in college.

The interview was a semi-structured interview. We created a template, but we were not strict about following it. We created a template to serve as a guideline, but we wanted the interview to feel more like a friendly conversation. We asked questions to "break the ice" first then slowly warmed up to the important part of the interview. Towards the end of the interview we allowed the participants to express any concerns or comments they had before concluding the interview. We aimed for each interview session to take anywhere between 20-35 mins. The interview template alone would last approximately 15 minutes, but interviewers were encouraged to ask follow-up questions to gather more information.

To analyze the data, we had each interviewer take notes during the interview and fill out the template afterwards to have a consistent set of data. Interviewers were encouraged to include as much data from the interview as they felt was necessary.

The following are the statistics of the interviewees:



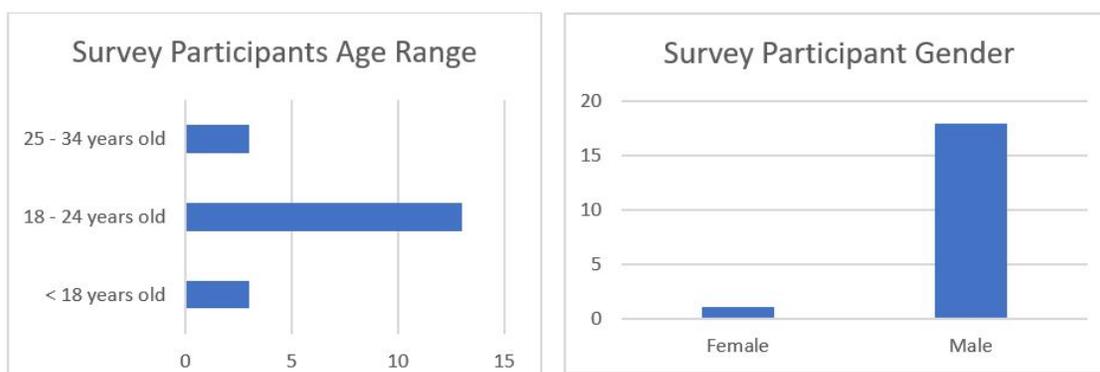
## Surveys

To recruit participants for the survey, we sent out the survey to friends and “online friends we game with” and encouraged them to share the survey with their friends. We originally wanted to contact TAG to see if they would share the survey on their page, but we never got a response back or followed up with them. Instead, some group members shared the survey to their Discord channels, others shared it to group chats with friends. We were still able to hit our target population through this method, but the quantity of survey results was much lower than expected.

We asked a combination of open-ended and closed-ended questions. The survey started off by asking some statistics about the general population of the surveyors, then went straight into the questions. The survey had a similar format as the interview (three sections: basic, participating, organizing) but did not have the follow up questions that were included in the interview. The survey took no more than 5 minutes to complete.

To analyze the data from the survey, we downloaded a spreadsheet of the responses and will create charts to compare quantitative data. For the qualitative data, we will read through all of them and categorize the responses. These responses will give us an idea on what to focus on when redesigning Smash.gg.

The following are statistics on the survey participants:



## Findings

In general, the demographics of the people that we surveyed and the users that we interviewed was very consistent. We found that 19 out of 20 of the survey respondents and that 14 out of 20 of the survey respondents were between the ages of 18 and 24 (Figure 1). For our interviewees, all of them were male and 7 out of 10 were between the ages of 18 and 24 as well.

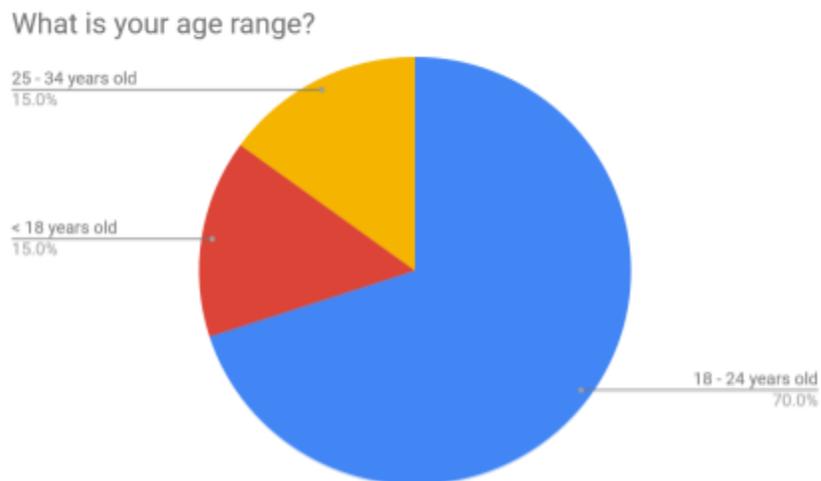


Figure 1

The majority of the people we interviewed and our survey respondents were competitive gamers to some degree. 95% of people in our survey said that they have played at least one game in some form of ranked or competitive gamemode while 70% responded that they have played in a competitive gaming tournament before (Figure 2). For the people that we interviewed, all of them claimed to either play video games competitively or watch some form of competitive esports.

### Which of the following do you have experience with?

20 responses

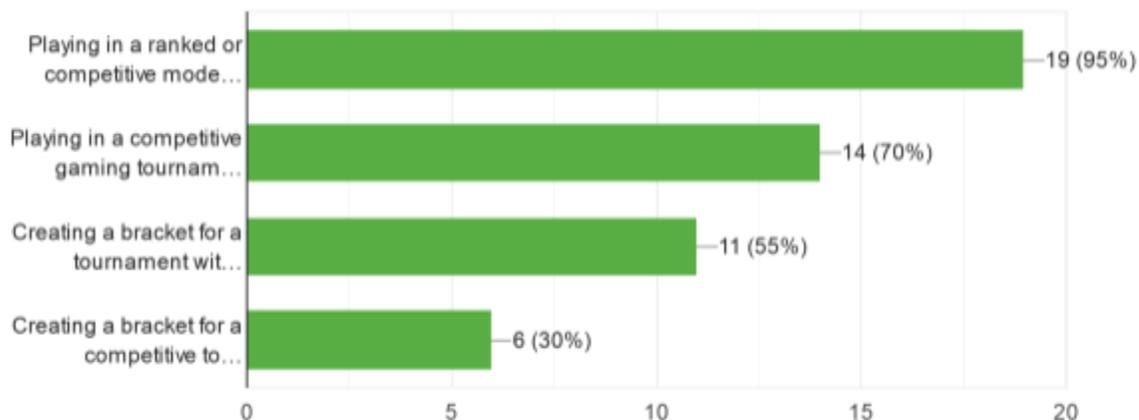


Figure 2

We were very pleased to find that all of these results from our interviews and surveys perfectly line up with the target population that we described earlier. The strong skew towards male competitive gamers in our data was not a factor that we were directly focusing our target population towards, however it was a result that we expected. The competitive gaming community tends to be a male-dominated space, so for us to have these heavily skewed results was to be expected. Nonetheless, all of the other demographic factors lined up almost perfectly with the users that we are attempting to serve in this project.

When we took a look at which tournament bracket software was being utilized the most by our users, we found differing results between the survey and interviews. There are other bracket organizing tools that serve as direct competitors to Smash.gg such as Challenge or Battlefy. We asked in our interviews and in the survey which tools that they had used, including these direct competitors as choices alongside Smash.gg (and a few other lesser known services). 45% of our survey respondents said that they have used Challenge before while only 35% said that they had used Smash.gg before (Figure 3).

### If you answered "Yes" above, what specific software have you used?

20 responses

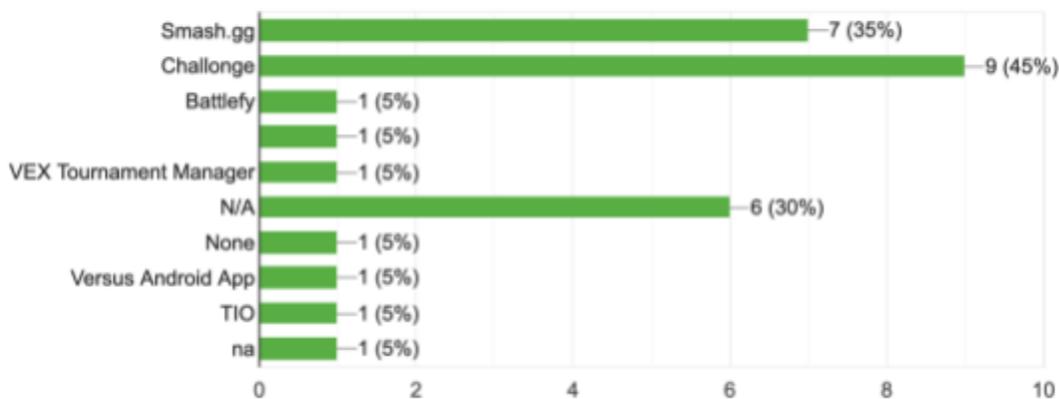


Figure 3

However, 80% of the people that we interviewed said that they had used Smash.gg before while 50% said they had used Challenge before. While this shows a clear difference between the general population of the people that we surveyed and interviewed, it doesn't really demonstrate which service is more popular. The majority of the people that we interviewed and surveyed marked that they play Fighting games competitively, which is the genre of game that Smash.gg tends to be used the most to organize tournaments for. So many of our users played multiple types of games competitively that it is hard to tell which service is most popular overall, since they target different types of gamers.

There were two uses of Smash.gg that seemed to be the most common for our survey respondents. The respondents that were competing in tournaments wanted to look up who the next opponent in a tournament that the user was going to face in whatever tournament they were playing in. Some responded that they looked at that opponent's statistics, while others claimed that they simply just wanted to see who they were playing and what time their match would be held at. Respondents that just followed tournaments that used Smash.gg primarily used the tool to look at the path that their favorite player or friend had to take to get through the tournament. Whether they were following a tournament or competing in one, our users clearly valued the ability to easily find who the next matchup is for themselves or a player that they are following. Unfortunately, in our interviews one of the most commonly suggested changes was a better labeling system for brackets to make it easier to find yourself in a big tournament. Several people that we interviewed discussed their irritation with how challenging Smash.gg can be to use when they are trying to find themselves or a pro player they are following in a large bracket or pool. For one of the most commonly used features to be one of the most criticized features in the user interface shows how important it is to our users to be able to navigate a bracket in a quick and easy manner.

While Smash.gg is focused on people that use the tool to follow or participate in tournaments, it is used to an even further extent by tournament organizers. We wrote specific questions for the people that we interviewed and surveyed to find out what feedback tournament organizers had for the tool. The biggest pain point that every organizer that we interviewed said was that they needed better ways to seed players. Seeding in a competitive tournament is crucial, as you would not want the best player in orange county starting his matches for the day against someone who has never competed in a tournament before. However, there are not official rankings for amateur tournaments, which means that organizers have to find some other way to seed the players by skill level to the best of their ability. One organizer that we interviewed said that he usually uses word of mouth for organizing since there isn't an exhaustive record of all the matches that they have played competitively. First-person shooter games like Overwatch assign a competitive skill rank to players based upon ten matches that they play. However, fighting games such as Super Smash Bros, which is one of the most common games that Smash.gg organizers build brackets for, does not have the same kind of robust skill rank that other competitive games of different genres do. So, the only way for organizers to seed is based upon outside data from different third-party websites that keep a collection of match history for players (which still isn't a comprehensive history, it simply is a history for the tournament that was using that third-party tool).

Our users seemed to prioritize and value ease of use above all else when it comes to the different features and tools from Smash.gg that they use. Specifically, competitors want an easy way to see when, where, and who they are playing in their next match while tournament organizers would like to see an easier way to seed matchups above all else.

## Personas

Ken Holt		
Age: 19 Gender: Male Occupation: Student Favorite game: CS:GO (Counter-Strike: Global Offensive)	Goals: <ul style="list-style-type: none"> <li>• I want to become a pro CS:GO player.</li> <li>• I want to find others who can take my gameplay to the next level</li> </ul> Challenges: <ul style="list-style-type: none"> <li>• Finding CS:GO events in my area is hard</li> </ul>	
"I enjoy playing games competitively."	Background: I have played CS since middle school with my brothers. In high school I won my school tournament with a couple of my buddies. Now that I am at university, I have only participated in one CSGO event on campus.	

Irene McClain		
Age: 21 Gender: Female Occupation: Student Favorite game: Smash Ultimate	Goals: <ul style="list-style-type: none"> <li>• I want to know when certain people are competing.</li> <li>• I want to see the current rankings for a tournament.</li> </ul> Challenges: <ul style="list-style-type: none"> <li>• I want to watch more tournaments</li> </ul>	
"I'm so busy with school work and classes that I always end up missing the matches that I really want to watch."	Background: I used to watch esports tournaments all the time through live streams when I was in high school. Now, because of college and the extensive workload, I don't have as much time to watch. When I do watch, I'm always going in and out of streams so that I can still do my school work.	

Marshall Smith		
Age: 23 Gender: Male Occupation: Esports employee	<p>Goals:</p> <ul style="list-style-type: none"><li>• I want to be able to organize tournaments without having to use more than one site.</li></ul> <p>Challenges:</p> <ul style="list-style-type: none"><li>• Communicating with players can sometimes be problematic.</li></ul>	
“Organizing a tournament is a lot harder than most people think”	Background: I was part of my university’s gaming organization and became president of the club my senior year. I worked with Tespa as a tournament coordinator while majoring in Computer Science. Now I work at Blizzard.	

# Identifying Usability Issues

## Usability Tests

As a group, we decided to conduct an in-person moderated usability test, using the think-aloud protocol to help record each participant's thought process while working on the tasks.

To recruit participants for the usability test, we created a usability testing interest form and posted it publicly on the Smash Ultimate @ UCI Facebook page, as well as on the UCI subreddit. Individual members also privately shared it in their online gaming communities, as well as personally asked friends who are part of the target audience. We purposely chose online spaces where members of our target group were likely to frequent, and intentionally recruited UCI students so that coordinating meeting times would be easier.

We recruited the first five people who responded with an availability that worked with at least one team member. Unfortunately, one of our initial testers cancelled in advance, so we recruited another tester on short notice through a means other than the interest form.

The following table provides more information about the testers we recruited, including their genders, a non-specific description, level of familiarity with the product, and any other outstanding information.

#	Gender	Description	Experience with product	Notes
1	Male	UCI freshman, Bus Econ	No prior experience	Recruited through form
2	Female	UCI freshman, U/U	No prior experience	Recruited through form
3	Male	UCI sophomore, CGS	Basic understanding	Recruited through form
4	Male	UCI senior, English	Frequent use as a player, at least once a week	Recruited through form
5	Male	UCI sophomore, CompEng	Basic understanding	Cancelled last minute - replaced with tester 6
6	Male	OCC junior, Food Science	Infrequent use as a competitor, once every other week	Recruited last minute to replace tester 5

Each tester was asked some introductory questions about their position in their gaming communities to ease them into the test. They were then asked to complete four common tasks while employing the think-aloud protocol. The tester took notes using word processing software, since we collectively deemed any sort of voice recording too difficult as well as invasive. The tester also asked follow-up questions about using the site, especially with the more experienced users who were test. Our test was designed to take about a half hour, but most of our testers were able to complete the introductory questions and the tasks in less time.

The notes we took during the usability tests formed the bulk of our qualitative data. We especially focused on specific UI elements they found difficulty with, as well as took down verbatim quotes that revealed the testers' thought processes. The testers' observations were consistent with the findings of our cognitive walkthrough, which is detailed below.

## Cognitive Walkthrough

On top of administering usability tests with participants, the team decided that the best way to understand the product better is to conduct a cognitive walkthrough. Prior to meeting as a group, each member of the team put together a list of tasks and the accompanying steps necessary to complete said task. Together, we chose three tasks that we thought were most important to smash.gg. The tasks are listed below with a summary of why we believe these task were significant.

- 1.) Create an account: Coming from our usability test, we thought it was important to also experience this task to better empathize with our users.
- 2.) Edit the user's profile: After registering for an account the user must complete their user profile. Since every user needs to complete this task, we thought it was important.
- 3.) Create a tournament: We believe that this is an important task because it allows for everything else to happen. With no tournaments, users are not able to get the competition they are looking for.

To analyse each step of our cognitive walkthrough we answered these four questions.

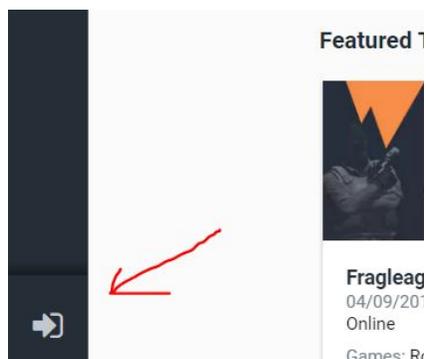
- 1.) What is the user trying to achieve at this point?
- 2.) Are the necessary actions obviously available in the interface?
- 3.) What are the possible reasons why a user might not recognize that the control does what they want?
- 4.) If the user performs the correct action, will they get good feedback and not try to undo or redo the action?

Through this process we found similar observations as our participants of our usability tests.

## Findings

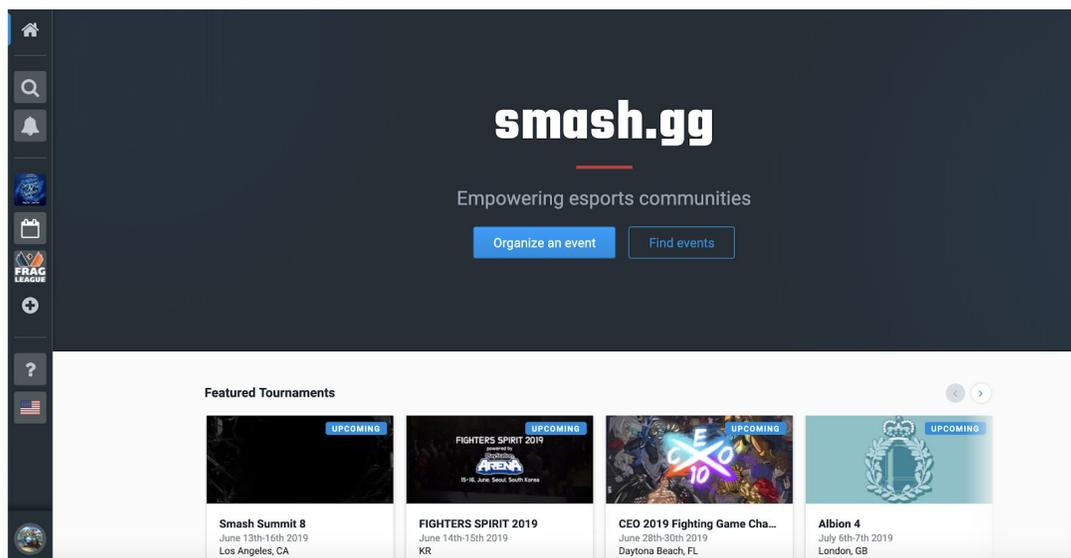
### Misrepresentation of Button Functionality

One unanimous design problem that our testers found was an issue with the default menu. Notably, the login button does not resemble any universal symbol used by other software: A more appropriate icon to use for the login functionality would be a simple button that says “login”, or a silhouette of a person to indicate account information can be accessed here. Typically, web pages use an icon in the shape of a person to denote the login button. Smash.gg chose to use an icon that looks like an arrow pointing to a door. It can be interpreted in multiple ways and is not the universal standard, which might confuse new or less tech savvy users.



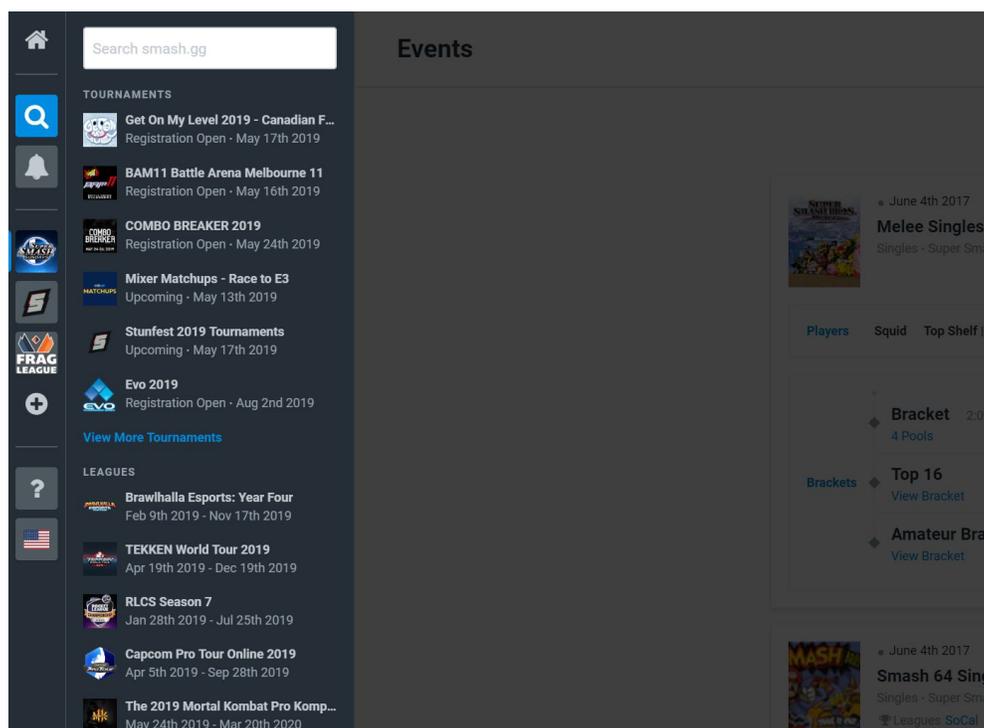
### Ambiguous Homepage Functionality

The position of the icon is also troublesome. Most web pages follow a universal “standard” where the login button is located in the top-right corner of the web page. Instead, Smash.gg places it in the bottom left where users could easily miss it. Additionally, the icon itself is small and blends in with the sidebar which again causes users to miss the button. On top of this, while the icons in the sidebar do look nice, they can be confusing for new or returning users to figure out what their functionality is. Many websites today choose to use buttons with text in their navigation bar instead of icons to help users know what action the button performs.



## Poor Search Functionality

The picture above is a screenshot of the search functionality. After clicking on the search icon, a pop out menu appears with a search bar at the top. The website automatically suggests popular pages, such as the page for Evo 2019, the biggest fighting game tournament in the nation. However, the search results are not sorted in any way that makes sense, like reverse chronological order. Additionally, the search results may return pages for tournaments that are far away. For example, searching for the local upcoming “Wednesday Night Fights” weekly bracket may instead show me a tournament that has already ended, or a bracket taking place in Oakland instead of Los Angeles. Based on other popular search engines, we expect search results to be sorted in order of relevance by location, or at least in reverse chronological order.



# Redesigns

## Introduction

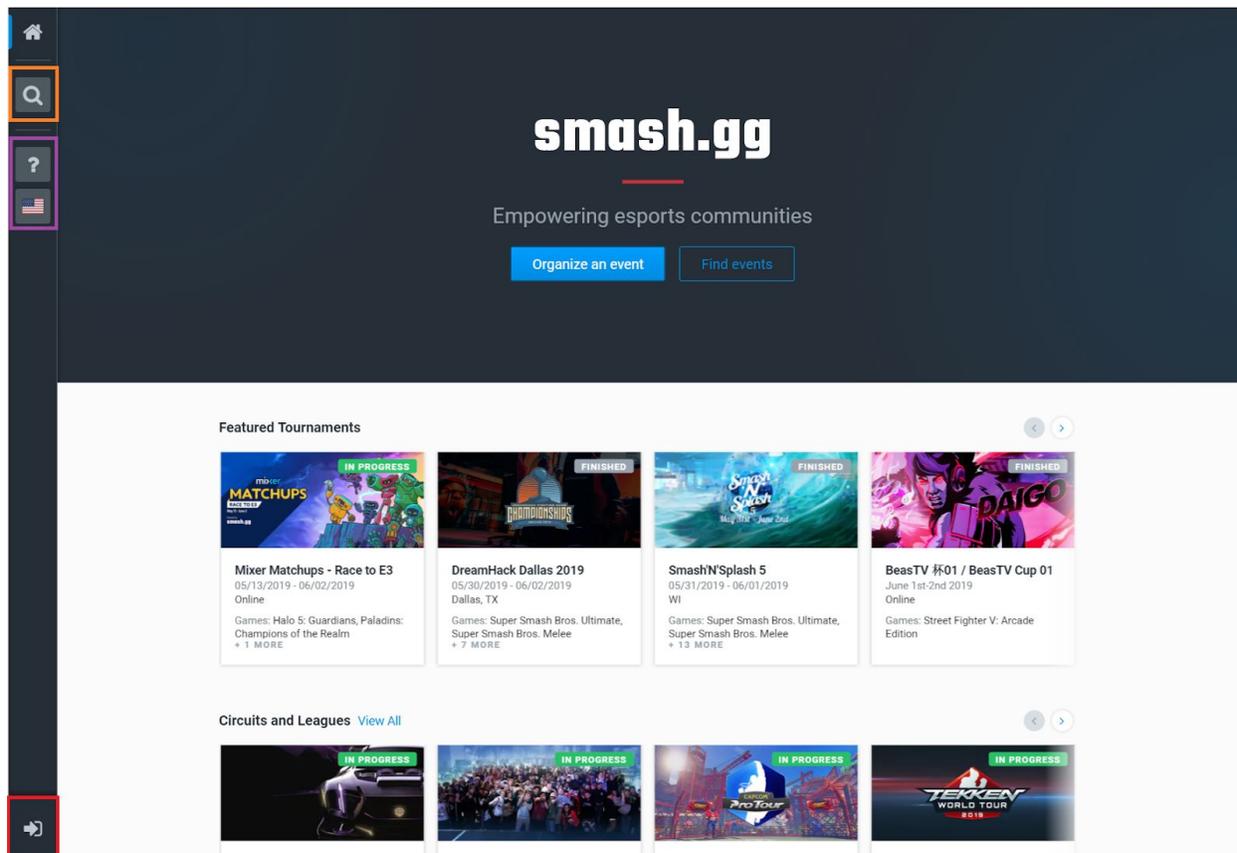
We established four main design targets for our overall redesign: the homepage, search bar and results page, account information, and adding a “my tournaments” page.

- **Homepage:** Based on our usability testing, we discovered that our users were unsatisfied and even confused with Smash.gg’s non-descriptive icons and their placement. It was also noted that the search bars placement was not prominent enough. We addressed these issues in our redesign by changing the icons to text and changing the layout of the homepage, moving the former icons to the top of the page. We also moved the search bar to the center of the page, making it more prominent.
- **Search Bar and Search Results:** During the usability testing and cognitive walkthrough, we found that the search feature wasn’t very useful, with very few results initially appearing unless the user clicks on the “view more tournaments” link. This is inefficient since most of the tournaments listed initially may not be relevant to the user. In order to address this issue, we decided to add a separate results page that users are taken to immediately after using the search feature so users can see more results at once and add filters to find tournaments more relevant to them.
- **Account Information:** Through our cognitive walkthrough, we found that having a separate page for each link seemed unnecessary. The current interface is visually unappealing and can confuse users if categories overlap. We addressed this issue by consolidating the majority of the account settings into one page and using hyperlinks on the side to help users jump to a specific section.
- **My Tournaments:** Our users complained about how there was no easy way to view information on their upcoming tournament and status. We added a new page called “My Tournaments” where the users can clearly see all of their currently enrolled tournaments. They can see all tournaments that are completed that they were enrolled in as well as upcoming tournaments. This functionality was moved to its own page and place on the navigation bar as it was previously buried in the account settings.

## Homepage

Based on our usability testing, we discovered that our users were unsatisfied and even confused with Smash.gg's non-descriptive icons and their placement. It was also noted that the search bars placement was not prominent enough. We addressed these issues in our redesign by changing the icons to text and changing the layout of the homepage, moving the former icons to the top of the page. We also moved the search bar to the center of the page, making it more prominent.

### Previous UI problem:



The items circled in the figure above are the changes we want to implement.

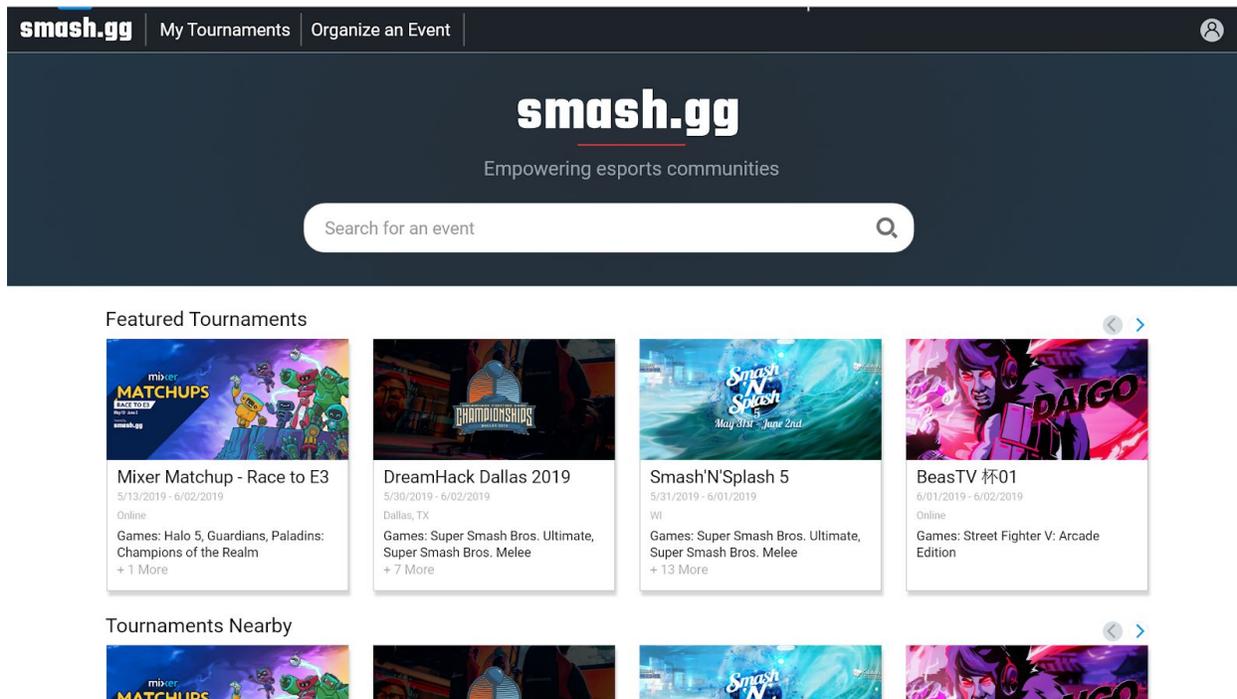
The idea behind moving/changing the symbols is that we want to make the web page feel as “natural” to users as we can. By this, we mean moving the location of functionalities to more recognizable places and using symbols to better indicate a button’s functionality.

The button in the red circle is they log in/sign up button. Throughout the redesign process, we noticed this was one of the top problems with the website’s UI.

The orange circled search bar will be replaced with a more user-friendly search feature (see design target 2 for more details).

The purple items are functionalities that will be removed/relocated. The flag button will be moved into user account settings. The help button will be relocated closer to the profile button on the sidebar.

### New implementation:

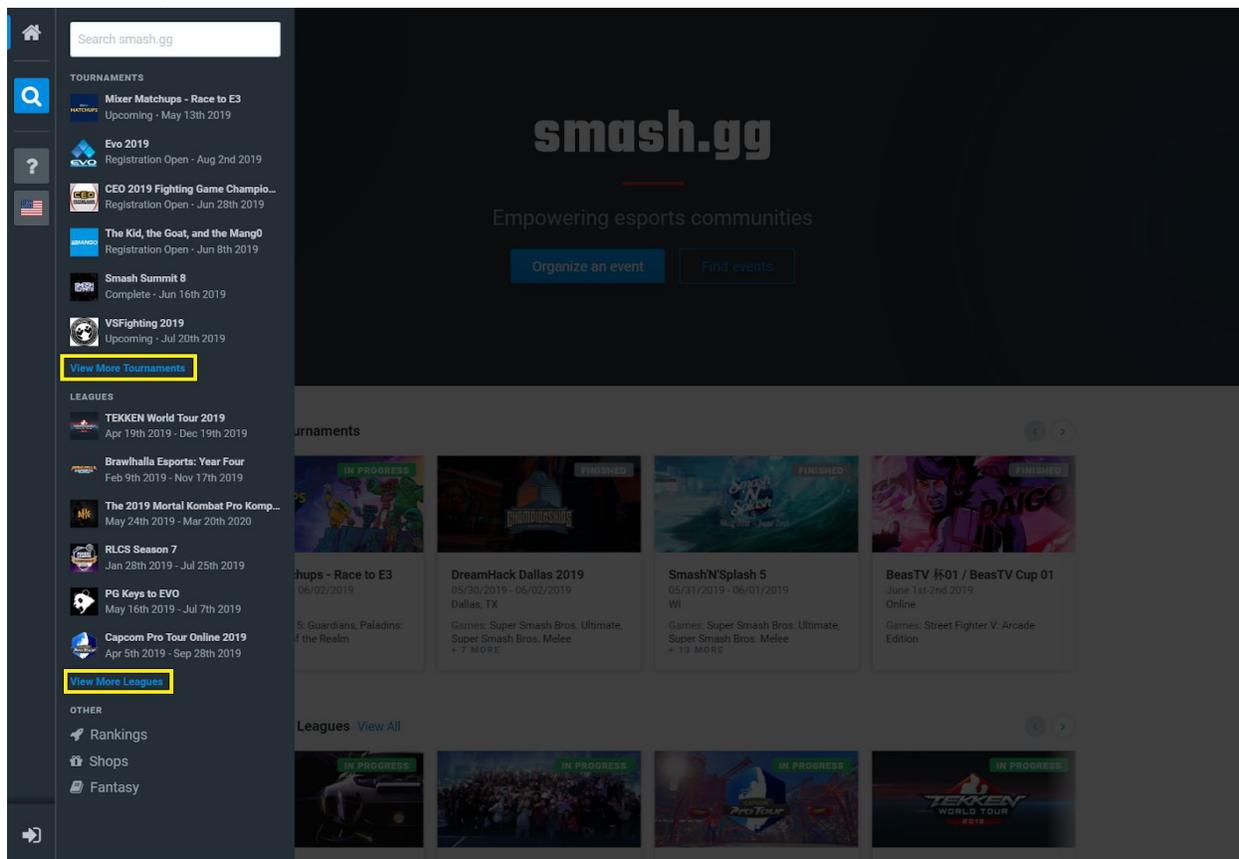


The main change we made was moving the main toolbar from the left side of the screen to the top. We took inspiration from popular websites with search functions such as Twitter and Facebook, where the main menu is usually at the top of the screen. Additionally, we moved the buttons in the middle of the splash screen to the toolbar. Since smash.gg is a place to look for tournaments for the average, we wanted to make the search button front and center. To that end, we created a large search text entry box right in the middle of the screen, above the "Featured tournaments" section. Finally, we moved the login button to the top right of the screen and changed the icon to that of a user profile. This way, users will more easily associate a "user" icon with logging in and out, rather than the existing logo which many users are confused by.

## Search Bar

During the usability testing and cognitive walkthrough, we found that the search feature wasn't very useful, with very few results initially appearing unless the user clicks on the "view more tournaments" link. This is inefficient since most of the tournaments listed initially may not be relevant to the user. In order to address this issue, we decided to add a separate results page that users are taken to immediately after using the search feature so users can see more results at once and add filters to find tournaments more relevant to them.

### Previous UI problem:



When a user selects the search button, this sidebar is displayed and users can complete their search here. However, if a user wants to find a tournament using more filters, they can do so by clicking the yellow circle. During the usability testing and cognitive walkthrough, we discovered that many users were getting frustrated because they did not know how to navigate to the full search page.

The following figure is the full search page:

The screenshot shows the 'Tournaments for All Games' search results page. The header includes navigation links like 'Quicklinks', 'Featured Tournaments', 'Circuits & Leagues', 'Open Registration', 'Online', and 'Over 200 Entrants'. The search bar is set to 'Upcoming' and 'Time' filters are visible. The results list four tournaments:

- Underworld eSports 2v2 tournament**: June 2nd, 2019, Online, 2 Attendees. Entrants: The\_OG\_Objective / UND3ADTH3P3NGUINL0RD.
- Arthas paye sa tartibaf' #1**: June 2nd, 2019, Thonon-Les-Bains, FR, 61 Attendees. Games: 1v1 super smash bros, Super Smash Bros. Ultimate, Tekken 7. Entrants: Radiance, Arkivana, S5YHrok, S5YExtrange, Sieg, SewanSensei, S5YNescoffe, S5YMumei, SilisValous, SilisSis.
- Fair Game 9**: June 2nd, 2019, ONLINE ULTIMATE CIRCUIT. Games: Ultimate Singles, Super Smash Bros. Ultimate, Ultimate Doubles, Super Smash Bros. Ultimate. Entrants: demon\_B, LDNAfro Smash, S5Javey, Spengal, Haggis, Cloaked, MOWNSKI, Can-O, Samuroleon, Laffon.
- Sector Z #5.0 (NTSC)**: June 2nd, 2019, ROAD TO DON'T PARK ON THE GRASS. Games: Melee SingleZ, Melee, Random Bracket, Melee. Entrants: +1 more events.

Our goal is to make the search functionality more accessible from the home page to ease the frustration of users looking for tournaments.

New implementation:

The screenshot shows the 'smash.gg' search results page. The header includes 'smash.gg', 'My Tournaments', 'Organize an Event', and a user profile icon. The left sidebar contains filters for 'Tournaments', 'Users', 'Distance' (set to 20 mi), and 'Price' (set to \$ Min - \$ Max). The main area displays search results for 'Mixer Matchup - Race to E3', 'DreamHack Dallas 2019', and 'Smash'N'Splash 5'.

**Search Results:**

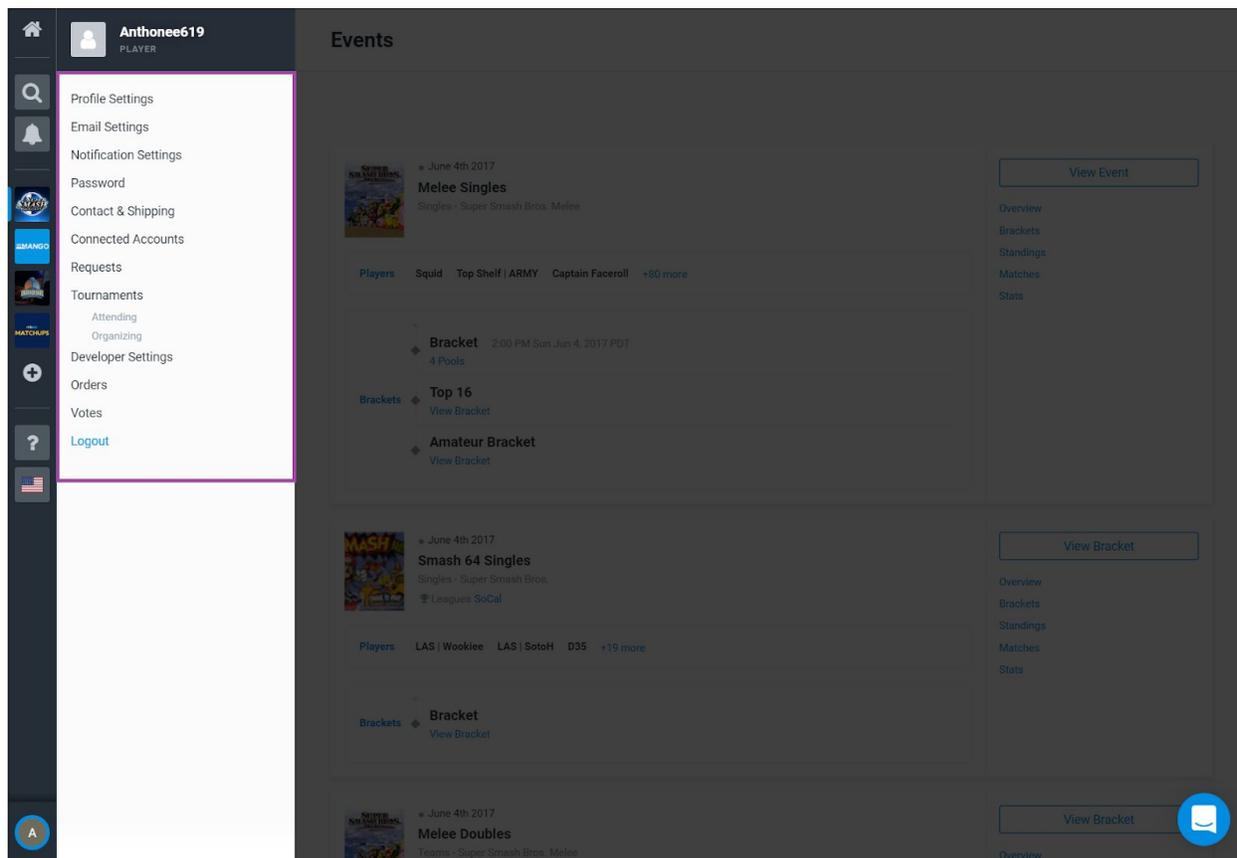
- Mixer Matchup - Race to E3**: 5/13/2019 - 6/02/2019, Online. Games: Halo 5, Guardians, Paladins: Champions of the Realm. +1 More.
- DreamHack Dallas 2019**: 5/30/2019 - 6/02/2019, Dallas, TX. Games: Super Smash Bros. Ultimate, Super Smash Bros. Melee. +7 More.
- Smash'N'Splash 5**: 5/31/2019 - 6/01/2019, WI. Games: Super Smash Bros. Ultimate, Super Smash Bros. Melee. +13 More.
- Daigo 2019**: 5/13/2019 - 6/02/2019, Online. Games: Halo 5, Guardians, Paladins: Champions of the Realm. +1 More.
- Mixer Matchup - Race to E3**: 5/30/2019 - 6/02/2019, Dallas, TX. Games: Super Smash Bros. Ultimate, Super Smash Bros. Melee. +7 More.
- DreamHack Dallas 2019**: 5/31/2019 - 6/01/2019, WI. Games: Super Smash Bros. Ultimate, Super Smash Bros. Melee. +13 More.

For our design target 2, we wanted to make the search functionality mimic well known travel and hotel websites; where users are able to filter and sort the results based on set criteria in order to get the listings they want. While an initial search request is useful, the power to tailor the results to specific criteria is crucial for our platform. To do this, we removed the sidebar pop-out and replaced it with its own search results page. Here, the users will be able to filter and sort the results based on various metrics.

## Account Information

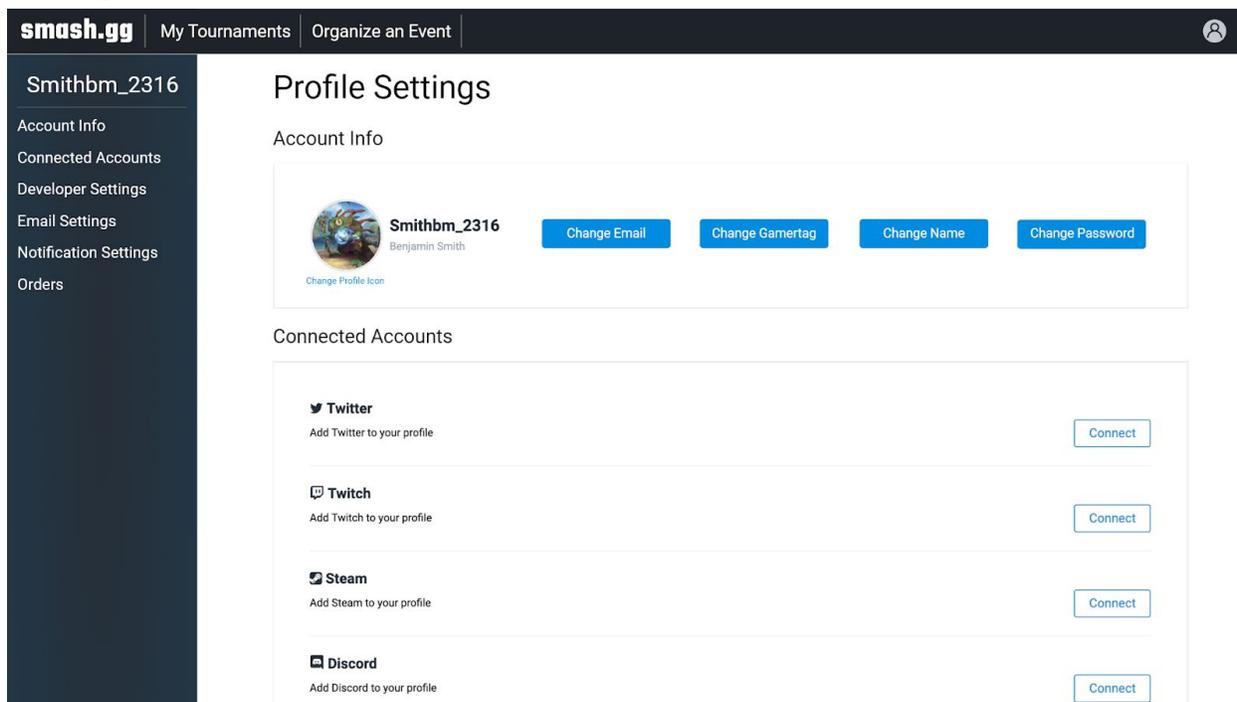
Through our cognitive walkthrough, we found that having a separate page for each link seemed unnecessary. The current interface is visually unappealing and can confuse users if categories overlap. We addressed this issue by consolidating the majority of the account settings into one page and using hyperlinks on the side to help users jump to a specific section.

### Previous UI problem:



The previous figure shows the account settings structure. We want to update this to make it more visually appealing. We also want to reduce the number of account setting categories because there are options that overlap, which can potentially confuse the user when looking for a specific settings to modify.

## New implementation:



Our profile settings redesign focused on keeping the side menu bar concise, since many of the users we surveyed found the sidebar overwhelming. Where the old menu bar had eleven different sections to change (thirteen including the tournament sub-headers), our new menu bar has only six.

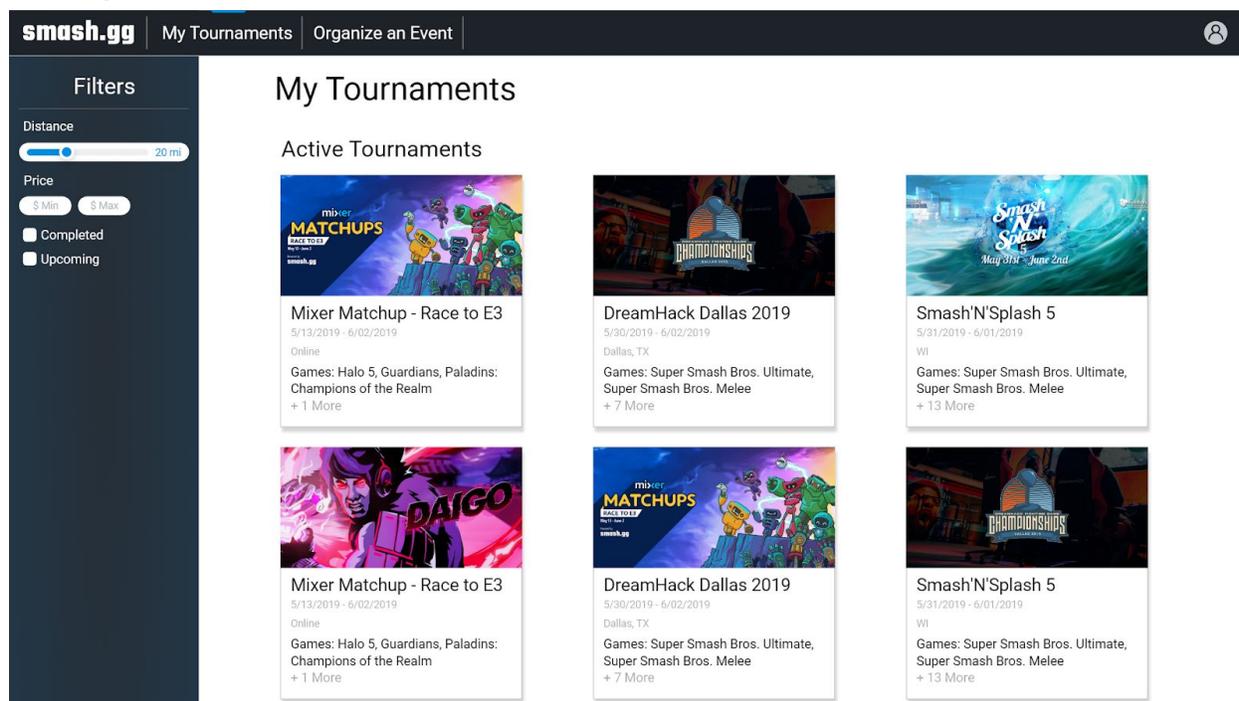
In order to compensate for the smaller sidebar, we grouped up similar topics and put them in the same section. For example, the “Account Info” section combines the “Profile Settings”, “Email Settings”, and “Password” section from the old menu bar. This way, users can still access these important functions without getting lost in a huge sidebar. We also decided to move all tournament-related settings into the “My tournaments” page. The users we surveyed mentioned that all the different places they had to go to find the right settings was frustrating. By making this change, we hope that users will find the task flow of the site more logical.

## My Tournaments

Our users complained about how there was no easy way to view information on their upcoming tournaments. In order to access your previous or current enrolled tournaments, a user must navigate to their account page and select “Tournaments”. We want to make this a simpler process by allowing a user to click a button to view all tournaments they have participated, spectated, or moderated. To that end, we created a new section of the site called “My Tournaments” so that the user can access everything tournament-related in one place.

There is no existing implementation for this feature, so the mockups for this section were created almost entirely from scratch.

### New implementation:



The screen shot above is our design for the “My Tournaments” page. This page consists of all the tournaments that the user has participated in and the tournaments that they will participate in. On the left of the page the user is able to sort and filter the tournaments to make it easier to find a specific tournament.

# Heuristic Evaluations

Individually, each group member did their own heuristic evaluation on our newly redesigned systems. Since each group member focused on different parts of the site over the quarter, we each have different opinions on how our designs align with Nielsen's general design principles. Because we had ten weeks for this project, our design focused on only a few categories in the heuristic evaluation. With more time and design iterations, we could have created many more redesigns that touch on more areas of user experience design.

## Visibility of system status

We collectively noted that we could have added more interactivity in our designs, such as an element changing color when a user hovers over it with the cursor. However, we already included elements to show the site's status, such as a clear title at the top of each page that shows what part of the site the user is on. Overall, our designs clearly show the user what is happening on the page, though we could have added more small touches to the site. In the future, we could include elements like loading pages and hover elements.

## Match between system and the real world

Our redesigns use general language that novice and experienced users can all understand. The most specialized language we used in our designs are words or phrases that any user who knows about gaming could understand, such as "Esports." Otherwise, the rest of the terms and phrases used on the website are introduced by the creators of the tournament. Additionally, it is worth mentioning that our redesign focused on the overall usability of the website. A feature that most similarly resembles a real world system would be the tournament bracket system. With more time, we believe that this could benefit from a redesign.

## User control and freedom

The menu bar at the top of the page is the primary element that gives the user control over their experience. Using that toolbar, a user could access almost every important part of the website. The search filter sidebars that we created also allow the user greater control over the searches they make. In the future, we could include a "Clear filters" button in the search filter sidebar that allows a user to start a new search from scratch at the click of a button, rather than having to click into each text box and delete the entry.

## Consistency and standards

This was by far the most important theme of our redesigns. Many of the users we surveyed noted that elements of the site did not match other sites they had used, and found it confusing. The major changes we made are inspired by existing sites; for example, our top toolbar matches a design standard used by social media sites like Twitter and Facebook. We even looked to travel sites to design a search result filter. Additionally, the users we interviewed unanimously

agreed that the existing design of the login button was confusing, so we moved that element to the top right of the page and changed the “login icon” to a plain text “Login” button.

## **Error prevention**

Almost exclusively focusing on having our designs follow existing design standards meant that our designs did not address this heuristic. In the future, we could design more features like confirmation pages for when a user makes changes to their profile, registers for a tournament, or logs out of the site.

## **Recognition, not recall**

We agree that our designs help users recognize, not recall the different elements. One of the biggest ways we did this was changing some of the buttons with icons to plain text, so that users would not have to remember what the icons stand for.

## **Flexibility and efficiency of use**

The existing website does not have any keyboard shortcuts we know about, and we did not add any in our redesigns. In the future, we think it would be useful to include a function that could let a user cycle through different tabs of a tournament page with the arrow keys.

## **Aesthetic and minimalist design**

Our designs strived to mimic the original website’s design standards as closely as possible, since we unanimously agreed that the site looked very pleasing on its own. In the future, we think we could add some little touches to make the landing page look more alive, like a low-opacity picture on the dark teal background.

## **Error diagnosis**

Our redesigns did not include any new features for diagnosing errors. Currently, the error page for smash.gg is a plain text page showing the error code and a possible reason. In the future, we could change that page to align more with the site’s design standards.

## **Help and documentation**

The original website has a very robust help page that walks users through complex tasks such as setting up and registering for tournaments. Although we strove to redesign the site in such a way that a user would not need to refer to it much, we should include a link to the help page in a more obvious place, such as in the top toolbar.

## Conclusion

Our team started off the redesign project by completing a competitive analysis on smash.gg. First, we did an analysis of smash.gg to figure out what problems their website has. Then, we took a look at direct and indirect competitors to get an idea of what functionalities these competitors use that smash.gg could benefit from. After the competitive analysis, we came to the conclusion that smash.gg has more to offer than their direct competitors. Smash.gg is both a bracket generating website and a tournament hosting website.

Our team wanted to complete research on users of smash.gg and/or direct competitors to get to know our users' needs and wants. The methods we decided to use to complete the research was interviewing and surveying people involved in the gaming community. We asked them what features they would like to see in a tournament website and what functionalities they disliked (if they had any experience). Our team came to the conclusion that the focus of the redesign project should be targeted to create a better user experience for the players.

The next step was to create complete usability tests and a cognitive walkthrough to get an understanding of what features needed to be redesigned on smash.gg. After completing both tests, we decided to focus on a redesign of the home page, search functionality, and account information page.

In order to create a high-fidelity mockup, we started off with sketches from each team member to ensure we have a wide selection of redesign options. We had four design targets in mind when creating the sketches: homepage redesign, a new search functionality page, update account information page, and add a "my tournaments" page. Each team member created a series of sketches for each of the design targets and presented them in our team meeting. We combined sketch ideas from each team member, and created a final draft of the redesign.

Lastly, we completed a heuristic evaluation to verify our design choices met the scope of our project.

Overall, this design process was centered around users. We conducted research to get to know our users, tested the product with users, and made design choices based on user feedback from the tests. Moving forward, the next step of this UX project is to create a prototype and conduct more interviews, surveys, and usability tests on the newly-designed prototype.

# Appendix

## Sample Survey

### Tournament Bracket Software Usage Survey

Thank you for your interest in our survey on tournament bracket software. For our class in Informatics 132, we are conducting research on different types of tournament management software in order to redesign some aspects and suggest new features. We would like to learn about your demographic, competitive gaming habits, and any problems you might have when competing.

The entire survey will take about 5-10 minutes. The only personal information we will ask you for is your gender and your age group. We collect your email address only so we can follow up with any questions about your response. If you have any questions about this survey, please email the project lead, Alice Lee, at [alichel11@uci.edu](mailto:alichel11@uci.edu). If you have questions about the context of the course, please email the instructor, Juliet Norton, at [jnnorton@uci.edu](mailto:jnnorton@uci.edu).

### Section 1: Basics

1. What is your gender?
  - a. Male
  - b. Female
  - c. Other
2. What is your age range?
  - a. < 18 years old
  - b. 18-24 years old
  - c. 25-34 years old
  - d. 35-44 years old
  - e. 45+ years old
3. Which of the following do you have experience with?
  - a. Playing in a ranked or competitive mode in a video game
  - b. Playing in a competitive gaming tournament
  - c. Creating a bracket for a tournament with friends
  - d. Creating a bracket for a competitive tournament
4. What type of games do you play competitively?
  - a. First-person shooters (e.g. Counter-Strike: Global Offensive, Apex Legends)
  - b. Multiplayer Online Battle Arena/MOBA (e.g. League of Legends, DOTA 2)
  - c. Fighting (e.g. Super Smash Bros., Mortal Kombat)
  - d. Card (e.g. Magic: The Gathering, Hearthstone)
  - e. Real Time Strategy/RTS (e.g. Starcraft II, Total War: Warhammer)
  - f. Sports (e.g. Rocket League, FIFA series)

- g. Other
5. Have you ever used bracket generation or tournament planning software?
    - a. Yes
      - i. Go to Section 2: Participant
    - b. No
      - i. Go to Section 4: Conclusion
  6. If you answered "Yes" above, what specific software have you used?
    - a. Smash.gg
    - b. Challonge
    - c. Battlefy
    - d. Google Suite (Forms, Sheets etc.)
    - e. VEX Tournament Manager
    - f. Other

## Section 2: Participating in tournaments using tournament bracket software

Please answer these questions about your experience using tournament bracket software as a player ONLY. If you have never used tournament bracket software as a player, skip the questions and press "Continue."

1. How many tournaments have you played in that use tournament bracket software?  
Description: This question is to get a better idea of your experience using tournament bracket software. We would prefer a number, but if you're not sure, put in a number range or the amount of time you've spent using the software (ex. "I've competed in tournaments that use Smash.gg for the past three months")
  - a. (short answer response)
2. What type of games do you play that use tournament bracket software for their tournaments?
  - a. First-person shooters (e.g. Counter-Strike: Global Offensive, Apex Legends)
  - b. Multiplayer Online Battle Arena/MOBA (e.g. League of Legends, DOTA 2)
  - c. Fighting (e.g. Super Smash Bros., Mortal Kombat)
  - d. Card (e.g. Magic: The Gathering, Hearthstone)
  - e. Real Time Strategy/RTS (e.g. Starcraft II, Total War: Warhammer)
  - f. Sports (e.g. Rocket League, FIFA series)
  - g. Other
3. How long does an average session of usage take for you? (in minutes)
  - a. (short answer response)
4. What goals do you usually have when you use tournament bracket software as a player?
  - a. (long answer text)
5. What are some of the difficulties you run into when using the app in this way?

- a. (long answer text)

### Section 3: Organizing tournaments with tournament bracket software

Please answer these questions about your experience using tournament bracket software as an organizer ONLY. If you have never used tournament bracket software as an organizer, skip the questions and press "Continue."

1. Approximately how many tournaments have you organized using tournament bracket software?
 

Description: This question is to get a better idea of your experience using tournament bracket software. We would prefer a number, but if you're not sure, put in a number range or the amount of time you've spent using the software (ex. "I've been using Smash.gg for all my tournaments for the past year")

  - a. (short answer text)
2. What games do you use tournament bracket software to organize tournaments for?
  - a. First-person shooters (e.g. Counter-Strike: Global Offensive, Apex Legends)
  - b. Multiplayer Online Battle Arena/MOBA (e.g. League of Legends, DOTA 2)
  - c. Fighting (e.g. Super Smash Bros., Mortal Kombat)
  - d. Card (e.g. Magic: The Gathering, Hearthstone)
  - e. Real Time Strategy/RTS (e.g. Starcraft II, Total War: Warhammer)
  - f. Sports (e.g. Rocket League, FIFA series)
  - g. Other
3. How long does it take you to set up a tournament? (Please enter a number in minutes)
  - a. (short answer text)
4. What are some of the difficulties with using tournament bracket software as an organizer?
  - a. (long answer text)
5. When you organize tournaments, what tasks would you like software to help with the most?
  - a. (long answer text)

### Section 4: Conclusion

Thank you for answering the questions to the best of your ability. We appreciate the time you took to share your experience using tournament bracket software. Again, if you have any questions, comments, or concerns about this survey, please email the project lead (Alice Lee) at [alichel11@uci.edu](mailto:alichel11@uci.edu).

## Interview Questions and Protocols

“My name is [name], and I am conducting this interview because I identified you as a user of Smash.gg, a program that I am analyzing for my project in INF 132. The interview should take about half an hour, and I plan to ask about ten questions. If you feel uncomfortable answering any of the questions, please say so. You are free to leave at any time.”

*High-level objectives:*

- Identify functionalities that the users use
  - Discover differences in experiences between tournament organizers and players
  - Discover differences (if any) between users who play different games
  - Identify the age group of target population
- 

### SECTION 1: INTRO

1. What is your name, and what is your role in your competitive gaming community?
  2. What games do you play competitively?
  3. Do you use bracket generation/tournament planning software? If so, which ones?
  4. Do you use tournament planning software to run tournaments and/or play them?
    - a. If they say YES to playing in tournaments, ask questions in section 2. If they say YES to running tournaments (mention the term TO), ask questions in section 3.
- 

### SECTION 2: Playing in tournaments

1. How many tournaments have you played in that use Smash.gg?
  2. What games do you play that use Smash.gg for their tournaments?
  3. How long does an average session of usage take for you? Walk me through a typical session of use. (ex. “I login, find my tournament, register, etc etc)
  4. What are some of the difficulties you run into when using the app in this way?
  5. If you could change only one thing about Smash.gg, what would you change? Why?
- 

### SECTION 3: Organizing tournaments

1. How many tournaments have you organized using Smash.gg?
2. What games do you use Smash.gg to organize tournaments for?
3. How long does it take you to set up a tournament? Walk me through a typical timeline of the planning process.
4. What are some of the difficulties with using Smash.gg to organize?
5. What are the actions you need the most help from when organizing tournaments? (such as collecting fees, seeding etc.)

## Usability Tasks

Goal / Output:	Create an account (or access existing account)
Inputs:	Email address, password, birthday
Assumptions:	Not logged into smash.gg
Steps:	<ol style="list-style-type: none"> <li>1. Open smash.gg</li> <li>2. Click "Login/Register"</li> <li>3. Click "Register"</li> <li>4. Enter email and confirm email</li> <li>5. Create a password and confirm password</li> <li>6. Enter your birthday</li> <li>7. Accept the terms of service</li> </ol>
Success criteria:	Successfully logged into the site
Notes:	Differs based on whether the participant already has a smash.gg account

Goal / Output:	Search for specific tournament
Inputs:	Login info, name of tournament
Assumptions:	Already logged into smash.gg
Steps:	<ol style="list-style-type: none"> <li>1. Login to smash.gg</li> <li>2. Click "Search"</li> <li>3. Type name of tournament into search bar</li> <li>4. Click on the correct tournament in the search results</li> </ol>
Success criteria:	Successfully accessed page of correct tournament
Notes:	

Goal / Output:	Register for a tournament
Inputs:	Login info, gamertag, location info, contact info
Assumptions:	Already searched for tournament, tournament
Steps:	<ol style="list-style-type: none"> <li>1. Click on tournament</li> </ol>

	<ol style="list-style-type: none"> <li>2. Register for appropriate date</li> <li>3. Select "Standard" Venue Fee</li> <li>4. Register for an event</li> <li>5. Enter contact information</li> <li>6. Enter location information</li> <li>7. Enter payment information</li> <li>8. Click "checkout"</li> </ol>
Success criteria:	Successfully registered for tournament, screen shows confirmation
Notes:	Step 4 varies depending on the event the user is registering for.

Goal / Output:	Link existing social media account
Inputs:	Login info
Assumptions:	Existing social media account compatible (Twitter, Twitch, Steam, Discord, Mixer)
Steps:	<ol style="list-style-type: none"> <li>1. Click on "Profile settings"</li> <li>2. Click on "Connected accounts"</li> <li>3. Next to the desired social media account, click "Connect"</li> <li>4. Log in to the other social media account</li> <li>5. Receive confirmation</li> </ol>
Success criteria:	Successfully linked social media account
Notes:	

# Cognitive Walkthrough Tasks

## Creating an account

- Click 'Register'
  - What is the user trying to achieve at this point?
    - The user is trying to get to the modal window that allows them to register for an account.
  - Are the necessary actions obviously available in the interface?
    - Unlike most websites, the "login/register" button is in the bottom left of the screen.
  - What are the possible reasons why a user might not recognize that the control does what they want?
    - The icon that is used to login, is very similar to common logout icons.
  - If the user performs the correct action, will they get good feedback and not try to undo or redo the action?
    - Yes; the modal window will show "Register" at the top and the appropriate text fields to fill in
- Enter and confirm email
  - What is the user trying to achieve at this point?
    - The user is trying to input their information so that they can create an account.
  - Are the necessary actions obviously available in the interface?
    - Yes; there are input forms that the user is able to type into
  - What are the possible reasons why a user might not recognize that the control does what they want?
    - The possibilities are slim as to why the user might not recognize how to input their email. Each input form is labeled very well, and is consistent with common web design practices.
  - If the user performs the correct action, will they get good feedback and not try to undo or redo the action?
    - The letters are added as the user is typing into the box. However, it does not give the user a message if the text entered is not an email.
- Create and confirm password
  - What is the user trying to achieve at this point?
    - The user is trying to input their password so that they can create an account.
  - Are the necessary actions obviously available in the interface?
    - Yes; there is a password text box that the user is able to type into.
  - What are the possible reasons why a user might not recognize that the control does what they want?
    - The possibility that the user might not recognize how to input their password is very slim since the password textbox is clearly labeled and is consistent with common web design practices.

- If the user performs the correct action, will they get good feedback and not try to undo or redo the action?
  - Yes; when the user types their password, the password appears in the textbox as dots.
- Enter personal details
  - What is the user trying to achieve at this point?
    - The user is trying to input their date of birth so that they can create an account.
  - Are the necessary actions obviously available in the interface?
    - Yes; there is an option dropdown menu that allows the user to enter the month, day, and year they were born in.
  - What are the possible reasons why a user might not recognize that the control does what they want?
    - While each dropdown menu is labeled well, I could see the user confusing the month and day for the other.
  - If the user performs the correct action, will they get good feedback and not try to undo or redo the action?
    - Yes the menu is changed to the correct information they inputted.
- Accept the terms of service and privacy policy
  - What is the user trying to achieve at this point?
    - The user is trying to click on the accept the terms of service checkbox.
  - Are the necessary actions obviously available in the interface?
    - Yes; the checkbox is clearly labeled and the sign up button isn't clickable until they check the terms of service box.
  - What are the possible reasons why a user might not recognize that the control does what they want?
    - Unlike the email, password, and birthday input forms, the terms of service checkbox does not have a red asterisk that indicates that it is required.
  - If the user performs the correct action, will they get good feedback and not try to undo or redo the action?
    - Yes; a check appears in the box once the user clicks on it.
- Click Sign Up
  - What is the user trying to achieve at this point?
    - The user is trying to complete their registration
  - Are the necessary actions obviously available in the interface?
    - Yes; the sign up button changes to a darker color, indicating that it is now clickable.
  - What are the possible reasons why a user might not recognize that the control does what they want?
    - The user might not realize that the color changed and that the button is not usable anymore.
  - If the user performs the correct action, will they get good feedback and not try to undo or redo the action?

- Yes; once the button is clicked the modal window disappears and the page is redirected to another page confirming that the user has signed up for an account.

### **Edit the user's profile**

- Enter in Gamertag
  - What is the user trying to achieve at this point?
    - The user is trying to change the alias that is displayed to other people.
  - Are the necessary actions obviously available in the interface?
    - Yes; above the input form there is a label that indicates the area where the gamertag can be edited.
  - What are the possible reasons why a user might not recognize that the control does what they want?
    - While most will understand, the user might not know that the box is able to be clicked on and edited.
  - If the user performs the correct action, will they get good feedback and not try to undo or redo the action?
    - Yes; as the user performs keyboard presses the associated correct action occurs on the screen.
- Choose profile photo
  - What is the user trying to achieve at this point?
    - The user is trying to add a photo to their profile.
  - Are the necessary actions obviously available in the interface?
    - Yes; at the bottom of the page in the section titled "Images," there is an area that you can drag and drop pictures into, or you can find them browsing through your file explorer.
  - What are the possible reasons why a user might not recognize that the control does what they want?
    - The user might click on the box trying to find the picture through their file explorer, however, the boxes area is not clickable. The only thing that is clickable is the red texted labeled "browse."
  - If the user performs the correct action, will they get good feedback and not try to undo or redo the action?
    - Yes; after uploading a photo the area is updated with the picture you are trying to add.
- Enter in contact info
  - What is the user trying to achieve at this point?
    - The user is trying to enter their contact information such as first and last name, phone number (optional), country, state/province(optional), and city (optional).
  - Are the necessary actions obviously available in the interface?
    - Yes, under the section labeled Account Details, there are text boxes with the appropriate labels of what goes into the text boxes. For country, there

is a pull down menu. There are also red asterisks indicating which information is required. If the user chooses a country with a state or province a new optional pull down menu will appear for the user to choose their state/province.

- What are the possible reasons why a user might not recognize that the control does what they want?
  - Although the email textbox is shaded differently to indicate that it can't be clicked on, the user might not understand and try to click on it wanting to change the email. When the mouse hovers over the textbox, the cursor changes into a red circle with a line crossing through it.
- If the user performs the correct action, will they get good feedback and not try to undo or redo the action?
  - Yes; as the user performs keyboard presses the associated correct action occurs on the screen.

### **Create a tournament**

- Click "Create a tournament"
  - What is the user trying to achieve at this point?
    - The user is trying to get to the page where they can add information about the tournament they want to create.
  - Are the necessary actions obviously available in the interface?
    - Yes; the blue button was placed in an area that is easily recognisable and was accurately labeled.
  - What are the possible reasons why a user might not recognize that the control does what they want?
    - The user might click one of the other buttons on the web page by accident.
  - If the user performs the correct action, will they get good feedback and not try to undo or redo the action?
    - Yes; after clicking on the button, a new page is loaded in the browser that allows the user to input their information.
- Input the tournament information
  - What is the user trying to achieve at this point?
    - The user is trying to input the information about their tournament.
  - Are the necessary actions obviously available in the interface?
    - Yes; each input box is accurately labeled and the button to submit is conveniently placed below the main content, following common web design practices.
  - What are the possible reasons why a user might not recognize that the control does what they want?
    - The user might manually input the date instead of using the drop down menu provided, causing an error to occur.

- If the user performs the correct action, will they get good feedback and not try to undo or redo the action?
  - Yes; when the date is not in the form that the program is expecting, red text will be displayed below the content. Additionally, the submit button cannot be clicked on until the information in the form above is in the proper format.
- Choose game for the tournament
  - What is the user trying to achieve at this point?
    - The user is trying to add the game they will be hosting to their tournament.
  - Are the necessary actions obviously available in the interface?
    - Yes, the user can choose from one of the popular games from a list, or search for the game they want to host. If the game they want isn't there, they can choose to add the game.
  - What are the possible reasons why a user might not recognize that the control does what they want?
    - If the user selects a game with multiple platforms, they might not recognize that they can select multiple options. When they choose two options, "Please make sure to select a valid combination of platforms!" appears which can confuse the user.
  - If the user performs the correct action, will they get good feedback and not try to undo or redo the action?
    - Yes, after clicking on the game they want, the page will change to indicate what platforms the game can be played on. Once the user clicks on their desired platform(s), the continue button will no longer be shaded out so the user can click on it and be taken to the next section.
- Select event type and relevant settings
  - What is the user trying to achieve at this point?
    - The user is trying to set up the rules for the event.
  - Are the necessary actions obviously available in the interface?
    - Yes; the most common rulesets are displayed to the user. Additionally, the user chooses to have a custom rule set.
  - What are the possible reasons why a user might not recognize that the control does what they want?
    - If the user is not using a mouse, (touch screen) they might not know that you can click on the different rulesets.
  - If the user performs the correct action, will they get good feedback and not try to undo or redo the action?
    - Yes; after clicking on an option, the page will update with the ruleset applied.
- Enter registration format
  - What is the user trying to achieve at this point?

- The user is trying to enter the event information such as the name, description, cost, cap, and registration visibility.
- Are the necessary actions obviously available in the interface?
  - Yes, all the sections are appropriately labeled with their corresponding textbox. The registration visibility are clearly labeled radio buttons.
- What are the possible reasons why a user might not recognize that the control does what they want?
  - For the cap, the user can enter a negative number. This could cause confusion as the event will not be able to be submitted.
- If the user performs the correct action, will they get good feedback and not try to undo or redo the action?
  - Yes; as the user performs keyboard presses the associated correct action occurs on the screen.
- Enter contact info
  - What is the user trying to achieve at this point?
    - The user is adding information about how to get a hold of the tournament leaders, as well as, other places to get information about the tournament.
  - Are the necessary actions obviously available in the interface?
    - Yes; each input form is accurately labeled.
  - What are the possible reasons why a user might not recognize that the control does what they want?
    - The user might want to click off the modal window to go back and edit previous steps.
  - If the user performs the correct action, will they get good feedback and not try to undo or redo the action?
    - Yes; the input forms are updated accordingly and upon submitting the browser is redirected to a confirmation page.

## Accessibility Report

In order to evaluate whether or not Smash.gg is easily accessible by all kinds of people, we as a group went through the WebAIM WCAG2 Level A checklist points and wrote down whether or not Smash.gg was up to code for each point. From evaluating Smash.gg against WebAIM's WCAG2 checklist, we came to the overall conclusion that Smash.gg does good work overall throughout their website, but does have a few areas that need updating to fit WebAIM's standards. We would give Smash.gg a 7/10 rating, as most users will be able to properly interact with the website, while some more niche cases might have a harder time due to some choices that Smash.gg made in the implementation of certain aspects of their UI.

In sections 1.1-1.4 of criteria, the checklist asks whether a website is easily accessed through a screen reader for users that are not able to engage with the website like normal users. Smash.gg unfortunately did not meet WebAIM's requirement of having alternative text for all images, buttons, and UI elements. Smash.gg uses some images as backgrounds, which doesn't allow for screen readers to easily denote what the user is currently interacting with. Smash.gg also does not use semantic markup throughout their site, instead choosing to use <div> tags with every single element. While this is much more common in modern website design today, it does not allow screen readers to easily decipher what part of the website it is looking at. In section 4.1.1, WebAIM requires websites to be able to pass validation and parsing errors via a test from w3.org. Unfortunately in our testing Smash.gg raised over 100 errors from the parsing tests that were run on Smash.gg.

Despite these missteps, we believe that Smash.gg should generally continue with the work that they are doing. They should highly prioritize sending a team to go and update the HTML structure of the website so that it can pass more of the parsing tests and so that screen readers can more easily view their website for users who can't use Smash.gg in the same way as the majority of their users.

# Heuristic Checklists

## Alice's Assessment

- Visibility of system status
  - The homepage clearly displays when the user is logged in with their profile picture in the top right hand corner, or a "Login" button when they are not.
  - The search results match what the search entry said, and the filter section displays the appropriate checkmarks when a filter has been put in place.
  - The "Profile settings" header clearly shows that the user is editing things related to their user profile, rather than another section like tournament settings.
  - The "My tournaments" header clearly shows that the user is managing tournament-related settings. The filter section displays a checkmark when a filter is active, exactly like the search results filters.
- Match between system and the real world
  - Every redesign we created uses simple language that both novice and experienced users can understand. The most advanced language that is used in the user interface are words that users with any knowledge of games likely know, such as "esports" and the names of specialized third-party applications like Twitch and Discord. Beyond that, phrases like those specific to FGC (the fighting game community) are entered by other users.
- User control and freedom
  - For most of our redesigns, undoing and redoing options do not apply. If a user accidentally typed the wrong search query into the search bar and got undesirable results, they can simply click on the search bar again and type the right thing.
- Consistency and standards
  - In order to keep each page focused and consistent, we created redesigns where all user profile related settings went on one page, while all tournament related settings went on another. Previously, users could find tournament settings on both a separate settings page for when they organize tournaments, as well as on their profile settings page. Many of our users noted that this made it confusing, especially since they did not know which setting could be found under which settings page.
- Error prevention
  - This heuristic doesn't really apply to many of our designs. The existing search function automatically displays the top 5 results, so that could be a type of error prevention where the user can immediately see what type of results they are returning. We did not plan to remove this function in our redesigns.
- Recognition rather than recall
  - In our designs, the top toolbar is always displayed, so users can recognize where different parts of the site are. Additionally, our search bar includes some instructions, such as how to enter information in a distance filter, so the users do

not have to worry about formatting their query correctly. We drew inspiration from travel sites to create a recognizable filter systems that will be easy for users to learn.

- Flexibility and efficiency of use
  - A default function of a web browser is that the user can press the “Tab” button to automatically move to different elements on the site. The original site did not contain any keyboard shortcuts that we know about, and we did not add any more. We also kept the function that remembers when a user is logged in, so a user does not have to authenticate their account every time they open smash.gg.
- Aesthetic and minimalist design
  - We strived to mimic the site’s original design when creating our designs, because we all agreed that the site looked good on its own. Outside of that, our designs feature text that is slightly bigger than the original site, since we wanted to balance white space between text and readability for users with vision problems.
- Diagnose errors
  - None of our redesigns featured any new error messages, since we focused on reorganizing confusing parts of the site. We follow the norm of the original site, where the site prompts a user to re-authenticate if they enter incorrect account information, and also notes when a user’s search query has returned nothing.
- Help and documentation
  - The original site offers a robust help page, as well as a pop-up in the bottom right hand corner that is meant to act as a helper. While our redesign would not affect the documentation part of the website, we strove to create designs where a user would not need to refer to said help page as much.

## Benjamin's Assessment

- Visibility of system status
  - Most of our user interface redesign does not have a lot of feedback other than the new page that the user is taken to when they click on a link. In the areas that there is feedback, I think we did a good job of letting the user know what options they had chosen. On our search results page, all of the filters update whenever the user clicks on a checkbox, adjusts the slider for distance, or updates the price query. However, if we had more time to implement it, I think it would have been beneficial for us to design the pop-up dialogue boxes that would appear if you clicked on any of the links in the "Profile Settings" page. This would allow the user to see instant feedback of their successful changes to their profile with some sort of banner text saying "Email changed successfully!" (depending on which of the 4 blue buttons they clicked).
- Match between system and the real world
  - I believe that most of our redesign implemented language that the majority of our target population would understand, as the majority of the changes we made were to the information hierarchy instead of the actual content. However, our redesign would have benefitted from a thorough testing of the information hierarchy in the "Profile Settings" page in order to see what information there is the most relevant and frequently used by users, so that we can structure the page's hierarchy in an order that is convenient to use.
- User control and freedom
  - While our "Search Results" and "My Tournaments" page allow the users to easily uncheck any filters that they have chosen, it does not have any sort of undo action if the user updates the price or distance filters without them manually adjusting the filter to where it was previously. I don't think that this would add much more control, though an overall "Clear Filters" button on both of these would perhaps have been a good action to add so that users don't have to undo all of the filters they chose manually.
- Consistency and standards
  - Overall, I believe that our redesign did a good job of making the user interface consistent across all pages and devices. We replaced most icons on the navigation bar with text buttons, of which use the same font as the rest of the site. The headers for each page are in the same place, there is a sidebar with more options or filters for each page we implemented, and the way we displayed tournaments used the same box style across pages. We could have potentially moved the search bar on the "Search Results" page to the top of the page instead of the sidebar in order to keep a more consistent layout with the home page, or potentially added a search bar into the navigation bar so that users do not have to go back to the homepage to use that functionality.
- Error prevention

- We did not implement any sort of error prevention into our redesign. Most of the changes we made were of the information hierarchy, rather than functionality. However as I said in the user control section, we could have added a “Clear Filters” button for users that chose incorrect filters in order to make it easier to go back to no filters at all. We also could have changed the checkboxes to radio buttons in our filters, as “completed” and “upcoming” tournaments are mutually exclusive and should not be allowed to be checked at the same time.
- Recognition rather than recall
  - I believe we made the interface much easier to recognize in changing the icons in the navigation bar to text headers, which require less memorization on the user’s end. By changing the layout of tournaments on all pages to match the homepage, we also made it easier for the user to get used to the UI and not have to remember different functions for different pages.
- Flexibility and efficiency of use
  - The majority of the expert features of Smash.gg lie within the tournament building sections of the UI, which we did not redesign. Thus we did not really make the website any more flexible between novice and expert users. With more time, we would have liked to have worked on the information hierarchy within building a tournament, as the menus there were such a mess and required users to enter in so many different fields just to create a simple tournament.
- Aesthetic and minimalist design
  - Overall, I believe that we made Smash.gg cleaner and less bloated. Smash.gg already had a pretty good visual design, most of their problems were related to the information hierarchy of certain pages. With more time, I would have changed the look of some of the UI elements we added, as they are fairly basic (as I had no prior Adobe XD experience before this class). I would update the “Profile Settings” page to have better looking hyperlinked buttons on the sidebar rather than just plain text that is hyperlinked.
- Diagnose errors
  - As I said with error prevention, we did not really redesign any parts of the UI that required the addition of this heuristic. However, I would’ve added a dialog message that appeared when a user tried to enter in a negative price into the price filters, in order to let them know of their error and fix it quickly.
- Help and documentation
  - Given more time, I would’ve added a help button either in the navigation bar or the profile settings if the user needed a basic run-through of how to use different parts of the interface. Most of the actions that we redesigned should not require much help, as they are very similar to other websites that many users have previously used, as well as the fact that most of our users are fairly young and tend to be more tech savvy than users of other websites.

## Kerrie's Assessment

- Visibility of system status
  - There isn't much feedback of system status in our redesigns. The most feedback that our redesigns include would be simply taking the user to a new page upon clicking a link. There is also feedback with the filters for the search and my tournaments pages which do provide feedback since the filter options would change to reflect the users choices. When the filters are applied, they still show what the filtered choices are so the user can go back and see their choices.
- Match between system and the real world
  - Our redesign uses language that coincides with real world language. Users will most likely have a clear understanding of what certain functionalities or pages are for just by reading the label of a button or the header of the page. Most functionalities follow real world functionalities. However, there are certain aspects of the redesigns that could better match real world language. For example, new users may not understand that events and tournaments are the same thing. The real world would most likely use one or the other rather than both.
- User control and freedom
  - Throughout our redesigns, the user has control over what they see, especially by using the filters for the search function and my tournaments page. However, there isn't really an undo or redo button for these filters which can make selecting options tedious for the user. Most of our redesigns don't have functions that require more than refreshing the page, going to a previous page using the browser's back button, or simply clicking on a new link. One thing that could have an immediate undo/redo button is if the user changes some aspect of their profile and changes their mind after saving.
- Consistency and standards
  - Our redesigns are consistent throughout each page of the site. The menu/navigation bar is always at the top and will always have the same options. Every button on each of our redesigns function just as they are described and don't have different wording for the same function. Our redesigns also follow design standards that can be seen through other tournament creation websites.
- Error prevention
  - Our redesigns didn't focus on error prevention since most of our redesigns involved redesigning the interface rather than functionality. However, I do feel that if we had more time and discussed it more, we could have designed a pop up where the user is asked to confirm that they want to make these changes to their account before saving the new information. If we had different design targets, I feel like we could have done more error prevention.
- Recognition rather than recall
  - I believe that our redesigns do support recognition over recall. Since we changed the icons of the navigation bar to text, users, novice and experienced, don't have

to remember what each button of the navigation bar does. Also because the interface is fairly consistent, users will most likely recognize what things so. For example, the way tournaments are presented remain the same no matter which page the user is on, so they will recognize what will happen if they click on the tournament.

- Flexibility and efficiency of use
  - I believe our redesigns are efficient in regards to use. Users will most likely be able to efficiently navigate the site with the new menu bar at the top as well as the redesign of the account information. Everything is button and option straightforward in regards to their functionality so users will not have to unnecessarily go through multiple pages to find a specific function.
- Aesthetic and minimalist design
  - For the most part, the original design of the site is minimalistic and aesthetic. We didn't change much of the aesthetic. The overall aesthetic is fairly similar to the original especially for the homepage. Although we did maximize the space by decreasing the amount of empty space at the top of the homepage so more tournaments are visible upon opening. We made the account information more minimal with less categories in the sidebar. The separate page for search results makes the interface simpler and easier to see everything. The "my tournaments" page also has a very minimalistic design. We probably could have improved the information hierarchy a bit more since the aesthetics of the redesign focuses more on the overall visual.
- Diagnose errors
  - We did not really focus on diagnosing errors in our redesigns. To improve this, we could probably have designed error pages like other websites have. These pages would help users who encounter an error and be able to solve the problem without having to search things up online or be confused about what the problem is.
- Help and documentation
  - Our redesigns do not include help and documentation as it was not necessary for our particular redesign targets. However, we could improve our redesigns by including a help link at the bottom of the page that would lead to a new page with frequently asked questions and other useful documentation.

## Michelle's Assessment

- Visibility of system status
  - Our redesign did not include an improvement to visibility of system status. We felt that users did not need much feedback when navigating through the site. The most feedback the website would need to give is letting the user know what page they are on, or when they are taken to a new page, which the original site does. The new search feature we implemented does let the user know which filters they have selected and the user will know when they have completed a search when they see results appear almost immediately after hitting "search".
- Match between system and the real world
  - The redesign uses language and symbols that are universally recognizable to web users. We wanted to step away from using too many symbols, as they could be misinterpreted. We decided to use words as labels to describe where those buttons will navigate the user to make it easier for users to know what each button's functionality does. We did not want to flood the website with only text so we implemented a couple of symbols into the redesign. The two symbols we used in the redesign are the "your profile" depicted by a user's profile picture, and the website's logo to depict that is how the user returns to the home page.
- User control and freedom
  - We made an improvement on user control and freedom in the redesign. Users now know which section of the website they are in by simply looking at which tab is selected at the top bar of the page. If they misclicked or want to navigate to a new section, they can simply do this by selecting a new tab on the top bar menu. The search functionality redesign gives users control over which filters they want to apply when searching. If a user misclicked or wants to change users, they can solve this problem by changing the options selected to reflect the results they want to see, or hitting the back or refresh button on the browser.
- Consistency and standards
  - The redesign offers consistency by always having the menu bar on the top of the page. We also redesigned the menu bar to offer less options and used words to describe their intended use rather than confusing icons.
- Error prevention
  - The redesign did not focus on error prevention. The only "error" we found through the usability tests was not being able to recognize symbols used on the home page menu bar. We fixed this by redesigning the menu bar and relocating it in a position that feels more "natural" to web users.
- Recognition rather than recall
  - Our redesign uses symbols and terminology recognized by people involved in competitive gaming, since they are our target audience. The use of a constant and consistent menu bar helps users recognize options rather than having to recall what they were on the home page. Also, the redesigned search page will

offer recognizable tags/options that will remain on the user's screen to remind them which filter options they have selected.

- Flexibility and efficiency of use
  - Our redesign offers flexibility and efficiency by adding the search functionality to the home page and minimizing the number of pages a user has to navigate to reach their desired goal. We accomplish these goals by making more important features part of the menu bar, and less important features become a subcategory of a main feature. We categorized topics based on prior knowledge of competitive gaming and interviews during the process.
- Aesthetic and minimalist design
  - This was one of the main focuses of our redesigned user interface. We wanted to make the website more aesthetically pleasing to users to encourage them to use smash.gg versus one of their competitors. We decided to make the home page a bit more "busy" but the tradeoff would be to make the user experience better. We wanted to the home page to offer more features to users rather than have users navigate to reach those features. Although we made the home page "busier" by adding the search functionality on the home page, we made the menu bar more simplistic to balance things out. The simplistic menu bar offers three options, all written in text, and those options will navigate a user to a new page.
- Diagnose errors
  - Our redesign did not focus on diagnosing errors. We believe the most errors a user would encounter would be in the section where they create a tournament or join an event, but this was outside the scope of the project. We wanted to focus on creating a usable, cleaner interface before working on the back-end user experience problems.
- Help and documentation
  - Our redesign did not focus on help and documentation. We did not feel the need to fix the help button or add a tutorial button because our target audience are users who already understand how to navigate a competitive gaming website. If we had more time we would consider creating a tutorial popup for users who are inexperienced when creating a tournament, but this was outside the scope of our problem.

## Roland's Assessment

- Visibility of system status
  - Besides updating to a new page, our design does not offer much feedback. While we did not discuss the very fine details of our redesign, I do believe that there are areas that we could offer great feedback to the user. A very simple fix could be that the cursor could change to a pointer finger, however, I think we could do more. For example; when hovering over a tournament with the mouse, the elements that represent that tournament could be slightly enlarged to indicate the tournament that is being selected.
- Match between system and the real world
  - The functionality that I believe mimics the system in the real world is smash.gg's tournament bracket system. Due to time constraints, our redesign focused on tournament participants rather than tournament planners. To accomplish this, our group decided to use languages that both novice and advanced users would understand.
- User control and freedom
  - Throughout the design, I believe that the system we envisioned offered the user control and freedom. The top navigation bar is consistent throughout each of our designs. This allows the user to easily maneuver to the various parts of the web page.
- Consistency and standards
  - I believe that this was the most important change in our redesign. Each page consisted of the same top navigation bar. In this navigation bar, we replaced many of the confusing icons with simple words that get the message across without taking up much space. Additionally, we replaced the login/signout button with an icon that is associated with an account and moved it to the top right of the web page.
- Error prevention
  - Our design did not focus offer much error prevention functionalities. Many of the actions that are performed in the system are not completely permanent. While in-depth details were never fully discussed, I think our designs could be improved to display better error prevention functionalities. For example, before submitting any changes in the account settings there could be a model that appears confirming that the following changes are correct.
- Recognition rather than recall
  - I believe that our design does a good job at accomplishing recognition rather than recall. As said previously, we focused our designs on being consistent and follows many common design standards. Doing this, we believe that first time users will be able to navigate throughout the web page with ease. Because of the short time on this project, our designs were not put through its own usability tests. If the timeframe allowed, it would have been very beneficial to have been able to conduct usability tests on the new design.

- Flexibility and efficiency of use
  - During our redesign we always considered other screen sizes and devices. Again due to limitations, we only made a few mockups of a mobile design to show that this system should be flexible and efficient enough to operate on devices with varying specs.
- Aesthetic and minimalist design
  - I believe that we did a very good job of having our design be aesthetically pleasing. Our goal for our redesign was never to completely overhaul smash.gg's initial designs and overall feel, but to modify its information hierarchy. To avoid this, we kept its initial color scheme and followed their own guidelines they have set.
- Diagnose errors
  - Our mockups do not offer many areas to diagnose errors. To improve upon this, I believe we should make more mockups that demonstrate areas where error messages could occur. For example, we could have come up with a design for the common "404 Page Not Found" page. Due to limitations, these pages were not prioritized, but I believe could have offered a lot of information.
- Help and documentation
  - We were not able to explain what happens when clicking on the account icon. We envisioned that the link to this section would be put there. With more time, I believe we would have been able to create a mockup to demonstrate this section.