P4: final report

CPSC 481

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Executive Summary

This report describes development process of EPICGamersunite, a website for gamers around the world to find other people to play games with and build meaningful relationships with them.

The report highlights the user-centered design process. The introduction and project description state the initially identified problem and our project idea to solve it: gamers often find themselves in a situation where there is no one to play games with.

Then the report describes what kinds of stakeholders are involved, and how these stakeholders are researched in order to correctly identify what they want out of the final product; out of the IDEO methods, the surveying and character profiling methods were chosen to compliment each other.

Upon reflection of the research results, task descriptions of the system were identified to generate rough ideas of the prototype, which would include an algorithm to match users with similar behaviours while playing games.

After many iterations of prototyping, the final prototype was evaluated by another group in the same tutorial section. Overall, the functionalities and flow of the prototype were deemed good, but the little details are missing, such as the logo for the website. These problems were then fixed according to their suggested solutions.

Finally, the user testing was done to get the real feedback from the stakeholders. Most found the website easy to use, but they found the homepage a little confusing, where a map of the matched users is. Therefore, we introduced a walk-through feature so that users can be accustomed to the website more quickly, also the rest of the user complaints were taken in and used to fix the prototype even further. For the future, we want to bring in a reporting (flagging) functionality for banning inappropriate users, and a tagging feature for tagging traits/contents on the user profiles.

Introduction

Our project idea is to create a semi-anonymous matching service for gamers. Multiplayer games have their own matchmaking systems which matches users with other random users over the anonymity of the internet. We intend to improve that match making system by having the users complete a profile stating their interests and preferences.Our service will match users based on these profiles but is also very flexible by allowing the user to customize their experience through filters.. Unlike LFG (looking for group) websites/applications, our approach

is to match users one on one in order to make the match more meaningful than just simply playing with teammates.

The matching system is visualized as a web graph, where the user's profile is located in the middle. The closer the other users are to the center, the better "match" they are to the user. If the user prefers to find other users playing a specific game/genre, filters could be applied to the graph. When the user wishes to talk to another user, they must first send a request to them, and will no be able to chat with them unless the other user accepts their request. If the other user rejects their request, they will no longer appear in the user's web graph.

Problem Description

The intended functionality of our system is to combat the anonymity between random teammates in matchmaking systems in order to build deeper and more meaningful relationships. Many users would like to find similar people with similar interests when playing games to enhance and enrich the experience, however modern matchmaking systems do not take this into account. There are many times where people get matched with either toxic or unskilled players leading to an unsatisfactory experience. Instead our system would match users based on their preferences so they are able to play and enjoy the experience. Through that we have identified multiple stakeholders that would be interested in our system.

Stakeholders

Experienced users who play multiplayer games:

These users have experience in playing games where they need other players to play. Thus, they will have previous experience of in game or out of game programs that help to match players. They may feel the need for finding people who have the similar rank (experience level) as themselves to play a game. They will have more knowledge on the games that they play regularly and will looking for specific people to play games with (eg. those who play the same games regularly). They may also be part of game communities, forums, etc. Which also connects them to new people in the game community. As well, these users could also be looking for new friends with same interests in games to connect with.

Normal users who have trouble finding people to play games with:

They will not have as much experience and may not be as invested into games as an experienced gamer. But since they are not regular players they may not know many people who play a specific game they want to play and may just use in game team making mechanism in order to be matched with random people to play with. Most of these users will not be greatly invested in game communities and forums. Thus, their gaming social network may be very limited to offline gamer friends. May also be just looking for new friends with the same interest in games and/or lasting friendships.

Users who are looking to try new games:

Since they are starting off in a new game, they will not have much information on game mechanics and people who play the game. Thus, they will need a way to find people to play with. These users will not have a wide social network within the specific game they want to try out. They may be experienced in using apps that give information on games or find information on the website that reviews the new games that they want to play.

Users who have never played games but want to start:

These users will have very little background knowledge on games and programs, communities, people related to games. However, they can have experience with social media apps, dating apps, and other non-game related matching apps. This experience will help in understanding a social app designed for gamers. These users will have no experience using programs where they can find new people to play with. Also, they will not have a very wide social network within the game community in general and may have an interest in finding lasting friendships within the community.

Streamers/content creators (Youtube):

If they are content creators related to games, they will have lots of information and experience using programs regarding games. They will be similar to the experienced gamer. They will have interest in widening their social network with other gamers.

Game companies:

They will have lots of information about the gaming community and what gamers are looking for. Some game companies will be interested in the product since it will get more people to be invested in their games, especially if they are a multiplayer game company. The companies will also hold an interest in the product since it will give more exposure to their games.

Advertisers:

They will be interested in the product if the product has a lot of traffic (many people use it), they can use it as a platform for their advertisements. Depending on what they advertise they will have a lot or very little knowledge on games and game programs that help people to find other players to play with. If they are trying to advertise specifically to gamers, they will have more information on the topic compared to advertisers who are aiming for a general population.

Research Methods

The two research methods that we used were a survey and character profiles. We decided to use the survey method because it is very effective in targeting a large group of people in a short time span. Since we only had a little over a week to conduct these research methods, we decided that a survey could be very effective in learning what features may be useful in our project and to learn more about our users. Surveys also provide many unique

perspectives from people all around the world. What we learned was that most of our users are between the ages of 20 and 25 and that there is an equal distribution of genders. Most of users play many different types of games varying ranging from mobile games to computer games. They play games almost every day of the week and play around 2 to 5 hours on average. Most of the responses say they mainly play games on the computer and that they either have no trouble finding people to play with, or a lot of trouble. The responses favored message chat, a way to add friends and to be matched with users of similar skill level as features they would like in the application.

The second research method we used was character profiles. We used this method because a lot of our friends play games and we could base some of the profiles off of them, and use the survey responses as a part as well. This would help us easily develop these profiles and we could get a general idea on our potential user base. Understanding our different types of customers will help us develop new and more ideas to target them and use our application.

Some of the profiles we developed were a 23 year old female named Naomi who likes to play instruments. She often likes to play multiplayer party games such as Overcooked, Mario Party, and Mario Kart. She wants to have a good time with friends and has an easy time finding friends to play with. However she still wants to find new people and make new friends but wants an easy way to contact them with no hassle and to block unfriendly users. Another user, with a different personality, would be Jason Wang, he is a 26 year old male student who is a serious and hardcore gamer. He has a low tolerance with silliness and prioritizes winning. This means he likes competitive games with a robust player base like League of Legends, Dota 2, and CSGO. He would like to find other competitive players of similar skill levels that will take the game seriously and be able to connect in real life. So from developing these profiles we learned that there are mainly two audiences we should try to target, the casual gamer trying to find new people to play with and the serious gamer who wants to win and find equally competitive people.

The responses we received from the questionnaire can be found at: https://docs.google.com/forms/d/1Ncx7qQBUeMO6OhAmcMoMSN6FKiK4nPQdp0LNrMdPf_Q/edit?fbclid=IwAR29MdX7f7G1KzzC2TS1FIvHRakfFE_q7_9U1yiecMmUCyOXS09BoIDScus#responses

The character profiles can be found at: https://docs.google.com/document/d/1bB8U_Avjb9zCaJ3jfhblixKPU9DxOg0Rpq41Im5KCPc/edit?usp=sharing

Reflection

The two research methods that we chose – survey and character profiles – were very quick and efficient to carry out for the scope of the project. The survey research method garnered more responses than we were expecting; we were able to gather 45 responses for the survey within a week. Because the survey covered the questions that we wanted to know about the stakeholders, it was easy to see what kinds of users there were and get the rough structure

of what the system should be. By doing the character profiles based on the survey responses, we were able to visualize the little details about the users which were not too clear just by looking at the survey responses. The profiles helped us to think and to develop ideas in what people would want to do/achieve with our system from a user's perspective.

However, there were problems with our chosen research methods. For the survey method, the questions were derived purely by us and the responses were confined to just those questions. Even if a user had patterns/personalities/habits that would affect the way that he/she used the system, we would not have been aware of them because the survey questions would not be able to cover all these. Also, there were a couple of joke responses among them and it was impossible to verify whether any of the "serious" responses were accurate. For the character profiling, it added even more ambiguity to researching the users because they were created based on our inferences and some creativity. Of course, these characters were created using the survey responses, but they were pretty much just barebones because we had to make a lot of assumptions due to the survey focusing on what the users wanted rather than who the users were.

Overall, our two research methods were very efficient in terms of time and effort to carry out. The survey method gave us a wide view of all the different types of potential users, and the character profiling method refined these views and put us into the perspective of the users. However, they left us with inaccuracy and ambiguity, and did not provide us with full details of the demographics of the potential users. In the future, we should triangulate our survey and character profiles with another research method like interviews, so that we can ensure more accurate information on the potential users.

Task Descriptions

Task Description 1 (Typical User, Typical Routine)

Justin is a 20 year old student/junior developer who cooks and bakes in his free time. He also frequently plays games with his online friends, but sometimes struggles to find people to play with. Justin is playing a game called League of Legends, and his friends do not play the game as frequently anymore. He plays more casually and likes to fool around and have fun rather than take the game seriously and competitively.

Justin wants to meet some people to play the game with who also play casually, and possibly befriend them. He uses our system to hopefully find some people who fit his criteria.

He browses some profiles, and "swipes right" on profiles that play League of Legends and who are also more casual than competitive. Half an hour later he checks the system and finds out that 2 people "matched" with him. Justin messages these 2 matches and after a few messages they exchange game-info and play some games together.

Task Description 2 (First-time User, Typical Routine)

Jenny wants to play the new video game Apex Legends but she doesn't know anyone who plays the game. Since this game is designed with parties of three, Jenny would like to find one or two other people to play with casually. This is her first time using the system.

Setting up her profile she inputs a variety of information including her gaming preferences, and some things about herself.

Since she wants to play Apex Legends, if the profiles do not indicate they play Apex Legends she instantly “swipes left” on them, but if they indicate that they do play the game, she takes a deeper look at the profile. After looking through the profile, she “swipes right” if their profiles give the impression that they may get along in voice chat.

She gets more than 10 “matches” and since she is very social online, she has longer message conversations with each of her matches than what the average user does. One user was particularly rude, so she blocked that user and reports them to the system. She eventually exchanges game-info with 2 people and arrange a play-session.

Task Description 3 (Uncommon User, Uncommon Routine)

Jason Wang, an extremely competitive player, wants to compete in CS:GO tournaments seriously. He wants to find a group of people who share his competitive nature and drive to win, and also around his skill level.

He “swipes right” on profiles that indicate they are competitive players who play CS:GO. He gets a few matches and after messaging them all he finds someone who has a group and invites Jason to play with the group. They play a couple games, but Jason gets into a disagreement with all the other players, and decides to find another person.

However, in the middle of contacting another person. His previous match is harassing Jason through the message feature. Jason reads the messages, then blocks him and reports the messages to our system. He then resumes contacting the second person. This time they get along, and they get into regular contact. Jason still wants to find other people to complete his team, but he decides he will continue the search another day.

Task Description 4 (Uncommon User, Common Routine)

Olivia is a 22 years old female student who likes interacting with people. When hangs out with her group of close friends, they usually play “social” games such as board games or Mario kart, etc. that require physical presence of people. When she was in high school, it was very easy to set up a time to meet with her friends and play games; she and her friends went to the same high school, and they would just go to a friend’s house to hang out about 3-4 times a week after classes. However, as she became a university student, and some of her friends moved away to other cities, their schedules started to not line up very well.

She still wants to play social games with her friends, but she now has a hard time finding people to play those games with. She is reluctant to use match-making apps such as Tinder because those are for dating, not to find friends to play games with. She discovers that there is a system for finding gaming friends, and tries it out. However, she finds out that the system is only for finding online gamers, not the boardgames (before the sign-up). Disappointed, she tries to search for other ways of finding people to play boardgames with.

Task Description 5 (Common User, Common Routine)

Maranda is from Australia, who likes outdoor activities. She doesn't play games because she has other priorities and she doesn't have friends who plays games regularly. She is against spending the whole day on the computer because she thinks that it is too unproductive.

Her coworkers suddenly get hyped about League of Legends, and convince her to play with them. However, they have troubles finding a person for the support position. Each person creates an account on the system first so that they can find a support role quicker, and skips any of the profile fields that would give out personal information (for the sake of one-time use). Each person tries matching with anyone who plays League of Legends. Once matched with someone, he/she tries talking to the match to see if that person is on League of Legends at the moment, and if that person is willing to play the support role for the team. It is frustrating for them to find a person to play the game with them; it requires them to iterate the process of sending requests to get matched, and if they are matched with someone, they still need to see if that person is available at the moment or not. They keep going at it for the spur of the moment.

However, Maranda gets tired of "swiping", and she tells her coworkers that she wants to stop. She deletes her account from the system so she does not get unnecessary notifications from the system.

Task Description 6 (Common User, Common Routine)

Adrianne wants to have separate groups for gaming and social lives. She doesn't want to reveal that she is a game nerd to her offline friends, but she still wants to play games with people. She thinks that her offline friends do not understand the hobbies that she has; she thinks they are too "normal."

In order to build a social network of online friends who are comfortable to join up and jump into a casual game on short notice, she creates an account on the system, and puts up fake information about herself; the only information that she correctly fills out is the game interests. She is able to see the potential matches that are to her taste even though she filled out fake information on the profile. Exploiting on this, she makes up more fake information and updates her profile based on the ideal gaming "persona" that she is presenting herself as.

Sometimes people who wanted to build a meaningful relationship with her would bash on her for being fake and has lied to them, but when that happens, she just blocks them and continues on using the system.

Design And Justification

This section discusses our iterative process, how we arrived at our current design, and the justifications for our current design.

The first major design decision we had to make was how we were going to format our project. We've had seen other platforms trying to tackle the matchmaking problem, from dating apps to looking-for-group websites, but our problem was slightly different. Problem exclusively dealt with gamers, which was a different problem than dating apps, but it also aimed to create more of a personal connection with other gamers than what a Looking-For-Group website provides.

During our ideation phase we came up with 3 distinct ideas. We first came up with something almost identical to Tinder, but instead of dating, the focus was on gaming. The idea was that since our problem was somewhat similar to dating apps in matching individuals together, we should take some inspiration from them. But we realized that the core of dating apps, specifically Tinder, is its emphasis on pictures on the profiles. And this worked because how a person looked was important information for the user to know about a potential date. However, there were two problems with this. Firstly, the gaming demographic tends to not post pictures of themselves on the internet; and second, but more importantly, pictures are usually not important to someone who is looking for a gaming/online friend relationship. Therefore this approach was deemed not suitable for our design problem, so we moved on.

Figure 2.1
Sketches of the Tinder Format

Next, we tried a LFG (Looking-For-Group) format. The goal for LFG websites is to match groups looking for individuals with other individuals looking for groups, hence the name. We thought that forming and joining groups was a good idea if we wanted people to play together. This seemed great because unlike the dating app format, the ideas of a LFG format was directly aimed towards gamers. However, our problem was about fostering meaningful connections between gamers. The LFG format did not address this. Rather, it focused on matching gamers together to play a session or two together more than fostering friendships. For this reason, we moved on.

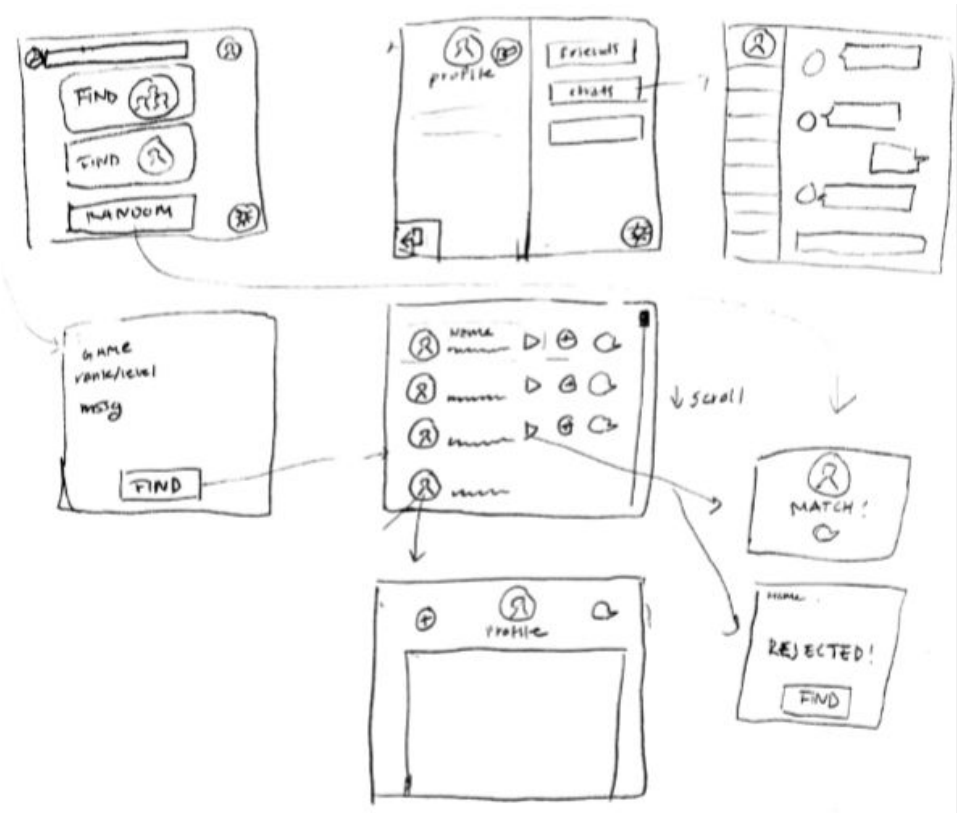
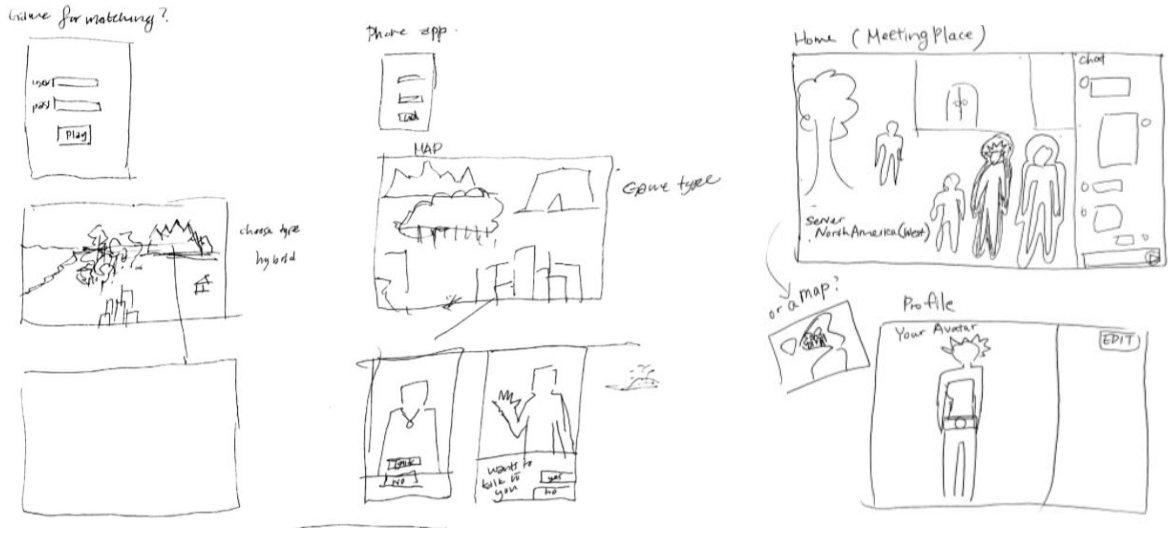


Figure 2.2
Sketch of the LFG format

Another format that we considered was a RPG type format. A fundamental part of our design problem was figuring out how we could let people express themselves in order to be found interesting by others. The idea behind this was that allowing people to express themselves would make it easier for people to connect with each other, and thus form meaningful relationships. As we saw earlier, dating apps tend to do this by allowing people to post pictures of themselves, but that approach was not relevant to our project. So instead, we came up with the idea of avatar representations of people, where the avatar would represent their personality. Good examples of this are Bitmoji and Snapchat, where the user can create an avatar and customize it to their liking.

The idea we came up with was that other people's avatars would populate a location, like a village or a room, and the user would interact with the avatar like in a RPG game. The player would go around interacting with other people's avatar, and if they found someone compelling, they would send a friend request and get started on chatting with that person. A big issue with this was that it felt too much like a social network, or like a game with a heavy focus on social interaction. We could not figure out a way to make it more specific to our problem, so we continued ideating.



Figures 2.3, 2.4
Sketches of the RPG format

Our final idea was to have a graph, or map, where each node was a person's profile. The user's profile would be at the center of the map. If another user's profile was close in proximity to the current user's profile (center of the map), it would mean that, that user was compatible; in other words, the closer two profiles were, more compatible those two would be. This graph would be supplemented with a profile feature and some basic chat and friend request functionality. Since we had previously sketched out some ideas for chats, requests, and a login page, most of the work we did at this point was figuring about the graph. It was important for the map to be easy to read and not be overloaded with information, so we had to carefully consider which pieces of information to show, and how to show it.

We decided to display people's profile picture, the main games they play, and their competitiveness for each profile node on the map.

The profile picture was necessary in order to distinguish between individuals, so the main element of each profile node was the profile picture. Also it was essential for the user to know what games another person plays in order to create a relationship revolving around games, so we wanted a way to display the main games someone played. We decided upon having small bubble icons of the games somewhere near the profile node. This allowed us to show the games played without cluttering the graph too much.

Competitiveness and Casualness are two different ways gamers approach games, and these differing characteristics to gaming do not get along. A casual gamer may not get along with a competitive gamer, and vice versa. We believed that this was enough of a reason to show how competitive or casual a person was in regards to gaming. We decided to use colours to represent this, blue for casual and red for competitive. The outside ring of a node would be either red or blue depending on this factor. We chose this since using colour seems like a non-intrusive way of displaying information and thus did not overload the graph.

With our ideas solidified, we moved on to the low-fidelity prototype.

The low-fidelity prototype was created using Balsamiq wireframes. We decided to go with a web site rather than a mobile app since from the information gathered from our user research, most users used their computer rather than mobile phone to game. Thus, the application would be easily accessible when users are already on the computer to play games. From the user research we found that we could divide up the gamers into two types, someone who is wanting to play competitively and someone who is just a casual gamer. We decided to have a clear indicator by colouring the map node red for a competitive gamer, and blue for a casual gamer. From user research, we also got input on features that users may want and decided to include it into our prototype. This includes being able to chat with other people and creating a user profile.

Going from our lo-fi prototype to the hi-fi prototype, we kept everything relatively the same. Since we had a more solid idea of what our project would look like from the lo-fi prototype, this allowed us to really flesh out our ideas and take a closer look at how we would implement all the features, and the general layout of each page. For example in the lo-fi prototype, the registration process was identical to the login process. This sent the user hurling straight into the middle of our project, the matchmaking map, bypassing a vital part of the experience; the initial set-up of the user's profile and the introduction on how to use our site, leaving the inexperienced users lost. In the hi-fi prototype, we tried to mitigate this problem from the lo-fi prototype by adding a page after the user registration, where games were selected to

indicate for which games the user would want to see profiles on the map. Also, the TA gave us feedback on the lo-fi prototype. He recommended to implement a functionality to view other people who are not compatible with you on the map (e.g. the people who play different games). We implemented this to our hi-fi prototype so that if the user ever wants to find people who are playing a certain game, he/she could add the game to his/her profile by dragging the game icon to the map, rather than manually registering the games on his/her profile. Another feature we added from the feedback was the ability to add filters to the map. This also allows the user to view profiles that would not be displayed in the main map since they were not very compatible with the other users. The filtering functionality would allow the user to easily find gamers for specific game genres, competitiveness, and other categories by creating another map with just profiles related to the chosen filter.

Heuristic Evaluation and Findings

Another group in the same tutorial did the heuristic evaluation of the system. They found the following problems:

#	Heuristics Violation	Problem	Solution
1	Consistency and standards	The password is not hidden in the text fields under login and register	Hide the passwords using conventional asterisks (*)
2	Recognition rather than recall	Branding is very important, the platform/website does not have a name	Have a name to associate with the platform/website rather than a placeholder
3	User control and freedom	Clicking on a game or typing a game forwards immediately to your profile. Error in picking the game might occur	A separate confirmation button
4	User control and freedom	Expected to be able to pick more than one game in user onboarding screen	Being able to select more than one game, and a separate confirmation button
5	Consistency and standards	For the icons at the bottom of the screen, only the middle one changes color when hovered over	Make them all change colour up to show the user that it is clickable
6	Visibility of system status	When user gets a request, the user is not notified/alerted in any way	A small notification indication can be added

7	Help and documentation	Though an FAQ does exist, there are no links or guides to help a user. For example, I could not find the dropdown bar to search for my game	Provide pictures, external links to where the user might want to go, or separate video/text guides
8	Consistency and standards	When editing your profile, it's not indicative of what you can edit. For example, I failed to initially notice that an 'upload image' button was added	Change the colour of what you can edit so the edit state is evident or change editable text into text fields
9	Consistency and standards	The hamburger menu is at the bottom when usually they are at the top. Also the use of a hamburger menu on desktop.	There's more room on desktop! You can use all the space instead of hiding it in a hamburger menu. In addition, move it to the top

From the heuristic evaluation, we found out that most of the problems that the other group found were violations to either consistency and standards or user freedom and control; these were the small details that we were not too concerned with when we were building the prototype. Our group was more concerned with the main flow and the functionalities of the prototype so that the prototype is unique compared to other similar systems. However, we realized that how big of an impact it could have on the user experience if the details were not properly implemented; the overlooked problems could become major heuristic violations.

Out of these problems, the same group who did the heuristics evaluation chose the top 4 most severe ones. These were: #1, #2, #3 and #4. The solutions to these problems were easy and simple to implement, except for #1; #1 was due to the platform (JustInMind) that we used to build the prototype, so it was not really possible to change the input field. The rest of the problems were fixed: The prototype now has a logo, the functionality to select multiple games during registration, and a confirmation button for saving the game selection.

User Testing and Findings

After fixing the prototype with the solutions provided from the heuristics evaluation, user testing was done to receive full feedback from the actual stakeholders. 5 different users were approached to complete the following 3 tasks:

1. Chat with a matched user named "hhakung";
2. Send a request to play games together with a user named "sktt1faker"; and
3. Edit your profile.

We chose the tasks to cover as much of our prototype as possible. The first task would allow the users to explore the chat tab, one of the three main tabs (Home, Chat, and Profile). The second task lets the user test the map on the home page as well as other users' profiles. Finally, the third task would allow users to explore their own profiles. After completing these 3 tasks, the user should be familiar with the website, and be able to navigate freely within the system.

We asked the users to think aloud while completing the tasks, and in the meantime we observed their behaviours and measured how long they were taking to do the tasks. We asked them to give us the overall feedback at the end. The questions asked for the overall feedback was to rate the tasks between 1 to 5 (1 being the easiest, 5 being the hardest), if they would use the product in real life, what to improve on, and the general impression of the website. The following table shows the observation results:

	Task 1 (Chat with hhakung)	**Task 2 (Send a request to sktt1faker)**	**Task 3 (Edit your profile)**
User 1	User was able to complete the task really easily; he went to the chat tab and instantly sent message to hhakung.	User found this task hard. There was a mistake made, where he went to the chat tab and accepted sktt1faker's request that was sent to him, rather than sending the request himself. He did not know that he could use the map to view user profiles. When he got to know, he clicked on another user's profile rather than sktt1faker's profile. Then he finally went to the correct profile and sent a request.	User found this task very easy; he went to the profile tab and then clicked the edit button, wrote "hi" in the bio, and hit the save button.
User 2	User did not take long at all; chatted with hhakung by going to the chat page using the navigation bar.	User was confused with this task because he was on the chat page at the moment, but sktt1faker's id was already shown on the chat tab (since sktt1faker already sent him a request). He tried using the chat page only, but it didn't work out, so he sought help from the help page, but there was no appropriate instructions. He tried to exit out by clicking the help again, but he	User found this task very easy because he explored the website enough to know where things are at this point.

		couldn't find a 'X' to exit out of the help page. In the end, he couldn't complete the task in a reasonable time.	
User 3	User completed the task easily and fast; found the chat page really quickly via the navigation bar.	User actually did not complete the correct task; he accepted the request from sktt1faker on the chat tab, and thought that was the task.	User found this task a little difficult; he was able to find the profile page very easily, but once on the profile page, he took a while to find the edit profile button.
User 4	User didn't know that hhakung was already on the chat page, so he looked through each person on the map on the home page. He thought sending request to hhakung would redirect them to the chat page. It took around 1 minute.	User was confused since sktt1faker already sent a request to the user, as seen on the chat tab. However, the user found the task relatively easy because he already went through the request process during task 1. Took around 20 seconds.	User found this task very easy to edit. They went to the profile page, clicked the edit button and typed in the bio. Took around 5 seconds.
User 5	User got confused on how he got redirected to a pre-made profile right after registration. However, soon after he found the chat tab on the navigation bar, and clicked on the hhakung's id to chat with her.	User found it confusing, because he was already on the chat page after completing the first task, and it was not clear how to send a request to somebody on the chat page. The user couldn't complete the task in a reasonable time because he didn't even bother looking at the map on the home page to find sktt1faker's profile.	User found this task a little confusing because the profile was already pre-made. Soon after, however, he found the edit button. He got confused again, to see that nothing was editable. But he went ahead and clicked the save button.

In general, users found the first and third tasks very easy, but found the third task hard. They found it hard to navigate on the map to find a specific user, and some people thought they could just find a specific user on the chat page, without going to the map. Some of the naming conventions that we used on the website also confused them, such as using "Home" for the map page, or "Matches" for the friends list on the chat tab.

Most users liked the purpose of the website; if they had a hard time finding friends to play games with, they would use the website. However, some users suggested that some

games already match-make you based on statistics, so it would not be used if gamers don't mind playing with random people; they would only use it to find friends. This relates to the characteristics of the games too. If it is for MOBA (Multiplayer Online Battle Arena) games, it would not be so useful, because people tend to want to get matched with good teammates, not necessarily good friends. The website would shine if it is for RPG (Role-Playing Game) games, because people have a hard time finding a guild especially when they just start playing the game.

The website still had a lot to improve on, according to the user testing results. The following lists the suggested improvements:

- Adding the people on the map to the matches list automatically;
- Reporting system to moderate abusive users;
- Having achievements or ranking system;
- Ability to both drag in and out a game icon to/from the map;
- Adding profile branches to the map once a game is added to the map, rather than just connecting the game map itself to the map;
- Visually improving the chat bar at the bottom of the map page;
- Improving the content of the help page;
- Directing users to an actual registration page upon registration, rather than straight into choosing games and then profile;
- Visually improving the game selection page, so that it is more comprehensive to see a game is selected;
- Visually making the filter bar on the map page more noticeable;
- Changing some of the naming conventions, such as "Home" to "Map" and "Matches" to "Friends";
- Showing names of the profiles on the map page using hover, so that it is easier to find people;
- A preferred language filter;
- A quick guide of the website upon registration; and
- Visually completing the map since it looks empty and under-constructed right now.

Overall, users felt that the website was underdeveloped. Many functionalities were either missing, or the functionalities that are present felt a little clunky. However, they found the website generally easy to use, and it would accelerate completing the tasks if a little bit more tooltips were provided.

From the user testing results, it was clear that the map page as well as the registration page needed the most fixing. Some struggles experienced by users were due to the nature of the website being still a prototype; some buttons are not implemented yet and some profiles are already pre-made. Even so, it was hard to deny that the website was underdeveloped, and did not use the screen space effectively.

Considering how the website is still just a prototype, we could not fix/implement all the things that users suggested to improve. Given the time frame, it was more sensible to implement only the most necessary functionalities. Therefore, we made the following changes to the prototype:

- Renaming "Matches" to "Friends" and "Home" to "Map";

- Directing the users to a dedicated registration page upon clicking on the register button;
- A quick tutorial for the map or pop-ups;
- Dragging the game icon to profile would add the map of game to the original map and add the game to the user's profile, instead of just connecting the game icon to the map;
- Making the filter button on the map page more visible;
- Larger edit button for the profiles; and
- Editing the help page so that it is more descriptive.

Recommendation for Future Iterations

The first improvement for future iterations would be to implement the display user data on hover. Currently the nodes on the tree only display users' profile picture and their respective games. If they wish to view any other information about other users, they are required to click on the node which would lead the user to the profile page of others. This is inefficient if the user wishes to browse through many people. The intended solution for this is to display additional information when the user hovers over other people's nodes.

Additional features that we would like to implement are flagging and tagging, as these two features would help users evaluate and determine if they want to talk to one another. Flagging, also known as reporting, is a type of feedback users can make about other users if they experience negative or malicious behaviours with the other users, or simply if the other users aren't using the application as its intended purpose (ie. soliciting). On the other hand, we plan to introduce tagging. This allows users to give other users tags relating to their behaviour or interests (ie. Friendly, Likes Cats, etc.). By adding these two features, users gain more elements to decide whether they would or wouldn't want to message other users.

Finally, we think that the visuals of the application could be improved upon, with the main focus being the main map. The nodes could have a different texture/border to contrast from the white background, since we intend to keep the background as a basic colour to draw more attention towards the nodes. For previous iterations we focused more on the layout, such as where and how we can incorporate the different elements of our prototype. Thus for future iterations, it is recommended to look more into how the elements could be visually unified, how the pages could be unified and how we can incorporate more visual design techniques.

Another recommendation would be to use animations for more visually pleasing effects. For instance, having a branching out animation for the map in the main page, having feedback animation when clicking map nodes or clicking buttons, animations when moving from page to page for a smoother feel, etc.

Conclusion

The problem that we solved was matching gamers to other gamers based on the compatibility between them and their interests so that users could develop meaningful relationships than just a one-time team formation for a game. We started out getting to know the

users of our system which was done through user research methods of *Survey and Questionnair*e and *Character Profiles*. This helped us gather information in thinking up task descriptions for our system and provided more insight into what design choices to make for our prototype. A major part of our design process was sketching and brainstorming as a group. To get the right design we came up with 4 different ideas and decided to go with the last one of using a tree map for match visualization. To get the design right, we came up with an initial low fidelity prototype which we presented. With the feedback we got from the presentation we were able to develop our high fidelity prototype. We kept adding improvements to our design as we got the heuristic evaluation from another group and as we looked at the results from our user testing. Although, if time allowed we would implement other design patterns, features, improvements, and better visuals, we ended with our current version of EPICGamersunite.