

November 23rd, 2020

CPSC 481

STAGE 4

REPORT

TEAM QUEUE

Prepared by: Brian Du, Pragya Chopra,
Jase Pasay, Lougheed Wan, Chuks
Nwakanma

TA: Philmo Gu

Project Description:

To help ease the hurdle of meeting new people in both familiar and unfamiliar online gaming environments we intend to create a social networking web application that will make it easier for members of the gaming community to find, and play with one another. Users will be able to search for others based on either personal, or game-related criteria using our automatic matchmaking system. Users may also take full control of the matchmaking process if they prefer to build their group manually. Once grouped, users will be able to communicate with the other members via voice or text chat and begin playing.

User Tasks

Vertical Tasks	Horizontal Tasks
<ul style="list-style-type: none">• Matchmake Automatically• Matchmake Manually• Edit Profile Page• Settings Page	<ul style="list-style-type: none">• Login• Signup• Browse Games• Change Settings• Access FAQ Page• Use Support/Report System• Text Chat• Voice Chat• Set Search Criteria• Create a Lobby

Heuristic Evaluation:

Process:

To conduct the heuristic evaluation we split our team into two groups, one of three evaluators and another of two reviewers. Where members Lougheed, Chuks and Jase were the evaluators, and members Pragya and Brian were the reviewers. The evaluators each conducted their own evaluation of the system separate to the other evaluators and then reported their results to the rest of the team. All evaluations were done in accordance to the following ten UI design heuristics:

1. Visibility of System Status
2. Match between system and real-world
3. User Control and Freedom
4. Consistency and Standards
5. Error Prevention
6. Recognition rather than recall
7. Flexibility and efficiency of use
8. Aesthetic and minimalist design
9. Help users recognize, diagnose, and recover from errors
10. Help and documentation

Once each evaluator had completed their inspection of the system, the reviewers took the evaluators reports, and again separate to one another, classified each identified problem in the reports based on its perceived severity. The evaluators then met to compare their individual findings and to make some initial decisions about the found issues and how they could be fixed, as well as if they should be fixed in this stage of the project. Lastly, the team met all together to summarize this process, our findings, and decisions into one finalized heuristic evaluation.

Findings and decisions:

From our finalized heuristic evaluation, issues were raised in four of the ten UI design heuristics, being:

1. Error prevention
2. User Control and Freedom
3. Aesthetic and minimalist design
4. Help and documentation

The error prevention issue found had to do with a user being able to login without inputting any login information. This was classified as a minimal severity problem and as a team we decided that we did not feel it was necessary to fix this issue in this stage of the project. As our prototype has not included any coding we felt that implementing exception handling into our prototype seemed unreasonable. However, we still felt it was a notable error and it is something to be acknowledged once we are at an implementation stage in development.

Further, the lack of a “back” button on some pages we felt was a minor severity user control and freedom problem, and as a team we felt this too was unnecessary to implement now. Since our application will be a web application it makes more sense to simply use the browsers own back button as users will be guaranteed to be familiar with it and its functionality. Also, similar to the exception handling, in our prototyping tool we are unable to track the page before, and thus a functional back button was not feasible.

A minimal severity issue that was raised in regards to aesthetic and minimalist design, more so on the minimalist design, had to do with some pages feeling cluttered. This issue felt easily solvable to the team and thus we decided to focus some of the pages to better serve a single purpose (eg. splitting our support page into a separate FAQ and contact page), and take away some extra items where possible (eg. extra text on login/signup pages). Lastly, it was felt that there was a lack of help and documentation for the add friends feature in our application and was deemed a minor severity error. As a team we decided it was something worth implementing in this phase of the project and thus we created a tutorial in our support section to better document this feature.

Reflection:

As a group we again managed our time very well throughout the duration of stage four. We set out our meeting times, their expectations, and a rough timeline. As a team we stuck to these well, and adding to the successes of our time management was our effective communication. We adapted to having members with varying availabilities due to external factors such as workloads and timezones well because of this effective communication.

We stayed supportive to one another's ideas, contributing to a polished high fidelity prototype as well as effective time usage in meetings. A challenge we faced was in our high fidelity prototype tool. Not all members were experienced with Adobe XD, and its learning curve slowed progress some. This did cause a minor delay in our timeline and shortened our window for error, however we adapted to this well and it did not cause excessive time pressures because of our effective time management. Something we would do differently the second time around is to account for the fact that not every member was fluent in XD, this could have spared us some time that could have been spent elsewhere.

Appendix

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High-fidelity brainstorming:

Look at existing systems that you like and ask yourself; what would it take to transfer my low-fi into something similar to this system? Write down your thoughts and share it with your team. (Discord)

- Large space for chat
- Always shows friends list
- Fast and easy to use
- Clear voice and chat communications
- Ability to set status
- Ability to change profile information

Tasks breakdown:

Tasks:

- Review low-fi prototype
- Create hi-fi prototype
- Update Project idea summary
- Update horizontal and vertical tasks
 - Make a line or two of details about each task
- Heuristic evaluation
 - Discussion of evaluation
 - 1 or 2 paragraph reflection
- Iterate hi-fi prototype (adjust based on heuristic)
- Demo (3-5 mins)
- Presentation (8-12)

Brian:

- Preferences
- Manual Search

Pragya:

- Edit profile
- Guest profile
- Login
- Signup

Jase:

- Friends Direct Chat
- Support/Report

Chuks:

- Lobby

Lougheed:

- Login
- Browse

Hi-fi done by Thursday tutorial (19th)

- Heuristic Evaluation done by 21st

Jase (evaluator):

- Report

Chuks (evaluator):

- Demo

Lougheed (evaluator):

- Submitting

Brian (reviewer):

- Review
- Presentation

Pragya (reviewer):

- Review
- Report
- Format

Evaluators done by 20th

Reviewers done by 21st

Meetup on 21st at night

Presentation and Demo done by 22nd

Stage 4 Due 23rd 11:59pm

First Group Meeting: (Nov 19)

- Completed before meeting:
 - Hi-fi
- During meeting:
 - Check hi-fi prototype
 - Discuss heuristic evaluation

Second Group Meeting: (Nov 21 10pm-12):

- Completed before meeting:
 - Heuristic Evaluation
- During meeting:
 - Heuristic Review
 - Iterations
- Demo
- Presentation (Will be done night of 22nd)
- Report

Third Group Meeting (decide if needed during second meeting)

Changes for stage 4:

- A change to indicate that user is in queue
 - Add queue timer
- Confirmation for saving profile changes

Hi-fi prototype software: Adobe XD

Hi Fidelity Prototyping tools

	Adobe XD	Whimsical	Axure	Framer	Figma	Webflow
Cost	Free	Free single project	Free 30 days	Free 14 days	free trial	2 free projects
Runs on	OSx, Win, And, IOS	Web	OSx, Win	OSx, WinMob, And, IOS	Osx, Win	Web
Prototypes for	All	And, IOS, Web	All OS,s	All	And, IOS, Web	All

	Item	Max grade	Your grade	Feedback
Report (6 marks)	Updated project idea	0.25		
	List of updated tasks	0.25		
	Heuristic evaluation process	1.5		
	Heuristic evaluation review / findings	1		
	Reflections and decisions	1		
	Appendix, the quality of the appendix components will be graded	2		
Presentation (14 marks)	Prototype functionality	2		
	Prototype interactivity	2		
	Prototype UX design	2		
	UI visual design	2		
	Prototype suitability for usability testing	2		
	Heuristic evaluation process	1		
	Heuristic evaluation findings	1		
	Reflections	0.5		
	Changes that were made to improve the prototype design after heuristic evaluation	1.5		
	Penalties (late submission / missing submissions)			
	Final mark			

Changes made:

The screenshots illustrate the evolution of the sign-up form from a basic two-field form to a more complex multi-field form.

- Screenshot 1:** Shows a simplified sign-up form with fields for **USERNAME** and **PASSWORD**. Below the form is a section titled "Want to join the fun?" containing a **Sign Up!** button.
- Screenshot 2:** Shows the addition of a **CONFIRM PASSWORD** field and a **Data of Birth** dropdown menu with options for Day, Month, and Year. The "Want to join the fun?" section remains.
- Screenshot 3:** Shows the addition of a **Gender** dropdown menu and a **Region** dropdown menu. The "Want to join the fun?" section remains.

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TEAMQUEUE

FAQ

How do I...
You can do this by...

Can I...
Yes! By going to...

What do I do if...
You can use the form to the right to...

If someone else...
You can use the form to the right to...

[How to add friends](#)

Question still not answered?
Send us your question/concern here

Subject: Report a user

Users Involved: User involved...

Email Address: Enter your account email address...

Message: Message...

SEND

TEAMQUEUE

FAQ

Send us a message!

Subject: Report a user

Users Involved: User involved...

Email Address: Enter your account email address...

Message: Message...

SEND

How do I...
You can do this by...

Can I...
Yes! By going to...

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[How to add friends](#)

Question still not answered?
Send us your question/concern here

Evaluators findings:

Heuristics Evaluation of Team Queue

By: Chuks Nwakanma

Date: Nov. 21, 2020

1. Visibility of system status

- Always keep users informed about what is going on.
- Provide appropriate feedback within reasonable time.

Evaluation

Users are provided with assistive buttons on pages they may require additional information on keep them informed about what they may perform at the page. There are also a variety of prompts that provide users with feedback depending on the action they took.

Degree of Heuristic parameter satisfaction

(Scale [1-5]) 4

2. Match between system and the real world

- Speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms.
- Follow real-world conventions, making information appear in a natural and logical order.

Evaluation

The system does a good job of using terms that its target audience (video gamers) understands and are familiar with. Words like 'queue' and 'lobby' are well understood terms within their context and use in the application. The flip-side to this is that these terms may be harder to understand by the average individual, although this is yet again addressed by the fact that a user seeking to play a game that requires the use of said terms is usually already familiar with them.

Degree of Heuristic parameter satisfaction

(Scale [1-5]) 4

3. User control and freedom

- Users often choose system functions by mistake.
- Provide a clearly marked "out" to leave an unwanted state without having to go through an extended dialogue.
- Support undo and redo.

Evaluation

The system features a consistent use of backtracking options allowing the user to exit an instance and return to the previous or main page. Possible mis clicks may be easily reversed or cancelled with very little to no additional dialogue.

Degree of Heuristic parameter satisfaction

(Scale [1-5]) 5

4. Consistency and standards

- Users should not have to wonder whether different words, situations, or actions mean the same thing.
- Follow platform conventions.

Evaluation

The app maintains an overall consistent design. Functionality of the main systems also remain consistent where possible, such as the manual lobby search and automated search systems, which stay fairly similar across game options. One noticeable inconsistency was how prompts seemed to vary in appearance.

Degree of Heuristic parameter satisfaction

(Scale [1-5])3.5

5. Error prevention

- Even better than good error messages is a careful design which prevents a problem from occurring in the first place.

Evaluation

The system allows for very few error cases due to its simple use pattern. Various confirmation prompts are present to reduce the possibility of unforeseen actions by the user.

Degree of Heuristic parameter satisfaction

(Scale [1-5])4

6. Recognition rather than recall

- Make objects, actions, and options visible.
- User should not have to remember information from one part of the dialogue to another.
- Instructions for use of the system should be visible or easily retrievable whenever appropriate.

Evaluation

The apps' lobby search systems are similar across games with the only varying aspect being the criteria available to users. This allows users to easily acquire a sense of how things work and build repeatable use patterns.

Degree of Heuristic parameter satisfaction

(Scale [1-5])4

7. Flexibility and efficiency of use

- Accelerators -- unseen by the novice user -- may often speed up the interaction for the expert user so that the system can cater to both inexperienced and experienced users.
- Allow users to tailor frequent actions.

Evaluation

Users will always have access to their profile via the button to the top right displaying their user icon, as well as, access to the main browse page via the app's icon. These shortcuts allows the user to effectively access the sections of the app that they'll need most of the time.

Degree of Heuristic parameter satisfaction

(Scale [1-5])4

8. Aesthetic and minimalist design

- Dialogues should not contain information which is irrelevant or rarely needed.
- Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

Evaluation

A majority of the application's pages only display the necessary amounts of information and when additional info is required "?" buttons are made available to guide users. Information overload

does not seem like a relevant user experience concern. Nonetheless, users may find that in the 'Browse Page' page elements may not be as distinct from one another and could use better spacing.

Degree of Heuristic parameter satisfaction

(Scale [1-5]) : 4

9. Help users recognize, diagnose, and recover from errors

- Expressed in plain language (no codes)
- Precisely indicate the problem
- Constructively suggest a solution.

Evaluation

Error assistance and recovery seems to be mainly addressed through the apps FAQ and Support pages. Besides these the app rarely used error messages and prompts, this however, may be due to a lack of necessity. During the stages of app development error messages may be utilized in a number of ways ranging from username unavailability to criteria check prompts.

Degree of Heuristic parameter satisfaction

(Scale [1-5]) : 3.5

10. Help and documentation

- Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation.
- Help information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

Evaluation

There are a number of assistive ("?") buttons located throughout the app where necessary. Furthermore, a "Help" button is present throughout the interface to guide users to a support page for further assistance. This button is present in most instances of the app.

Degree of Heuristic parameter satisfaction

(Scale [1-5]) : 4

1. Visibility of system status

- Always keep users informed about what is going on.
- Provide appropriate feedback within reasonable time.

Evaluation

Users are made well aware that the system is processing or has processed their actions with pop up notifications. For example, when the user sends a friend request to another users they are notified that their friend request has been sent. Likewise, when customizing and saving the users settings.

2. Match between system and the real world

- Speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms.
- Follow real-world conventions, making information appear in a natural and logical order.

Evaluation

The system takes into consideration greatly the language used by the users. Any particular preference page uses game specific terminologies that the average user would understand. However, there is a lack of explanation of these terms, as there could be a case where a user is new to the game and doesn't understand what they mean, and this case should be taken into consideration. This could help to improve the utility of the system, as users will not have to search elsewhere to understand these terms if they have never encountered them before. As well as this, the flow of navigating through the application is logical with each page's information being displayed in an again logical way.

3. User control and freedom

- Users often choose system functions by mistake.
- Provide a clearly marked "out" to leave an unwanted state without having to go through an extended dialogue.
- Support undo and redo.

Evaluation

There is always an "escape" option so to speak for users, as they are able to press the Team Queue logo in the top left to go back to browse quickly. Similarly, users can back out of direct chats to the page showing all their chats with the click of a button and leave lobbies just as easily in the same manner. There is no undo/redo functionality, however there are little to no points in the application that feel hindered by this.

4. Consistency and standards

- Users should not have to wonder whether different words, situations, or actions mean the same thing.
- Follow platform conventions.

Evaluation

All instances of words in the application hold the same meaning across the platform. Similarly, many actions and situations are all similar. A notable difference is the application allows for users to search for lobbies automatically or manually, however there are accessed in two different ways and do not overlap one another at all. As well as this there is help available to further discern between the two. The application is both internally and externally consistent as it the interface is consistent with itself as well as applications that are somewhat similar to it.

5. Error prevention

- Even better than good error messages is a careful design which prevents a problem from occurring in the first place.

Evaluation

The application is not prone to errors and none were encountered, the workflow of the system is very linear, following a similar path each time and has been designed in a way that avoids potential dead or ~~softlocks~~.

6. Recognition rather than recall

- Make objects, actions, and options visible.
- User should not have to remember information from one part of the dialogue to another.
- Instructions for use of the system should be visible or easily retrievable whenever appropriate.

Evaluation

Help “?” indicators are present throughout the application to explain what certain functionalities or features mean or expect. Which is helpful in reducing the amount of memorization the user has to do, as the information follows them. Plus, there is no point in the application workflow where a user will have to remember details from a previous page, and even if they did the details follow them throughout the process. (Ie. the game follows them to the preference page, which also follows to the lobby with the preferences)

7. Flexibility and efficiency of use

- Accelerators -- unseen by the novice user -- may often speed up the interaction for the expert user so that the system can cater to both inexperienced and experienced users.
- Allow users to tailor frequent actions.

Evaluation

There are currently no options for speeding up processes within the application, and no options to tailor to frequent user actions. An option to make a default set of preferences that the user makes use of often could be something that could benefit this system.

8. Aesthetic and minimalist design

- Dialogues should not contain information which is irrelevant or rarely needed.
- Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

Evaluation

The majority of pages within the application only display the relevant information to that page which helps to better focus on what task is supposed to be completed on a particular page and makes individual pages and the application less overbearing. Furthermore, most pages also

achieve a minimalist design and offer a pleasing aesthetic. However, some pages such as the login, signup and help pages do not achieve a minimalist design and are fairly cluttered and busy.

9. Help users recognize, diagnose, and recover from errors

- Expressed in plain language (no codes)
- Precisely indicate the problem
- Constructively suggest a solution.

Evaluation

There were not any error messages encountered in this evaluation, these would prove beneficial as they will help users to recognize, understand and possibly recover from errors encountered. Which would also be helpful in avoiding error states. However a help page is present, which offers a FAQ section for questions that come up often, as well a section to send questions, concerns, bugs or anything to the team for more information.

10. Help and documentation

- Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation.
- Help information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

Evaluation

Help “?” indicators are present throughout the application to explain what certain functionalities or features mean or expect. These are clearly displayed on their pages and are strictly relevant to that pages purpose. These help the user stay within the expected workflow of the application as they will not need to navigate elsewhere to find help.

1. Visibility of system status

- Always keep users informed about what is going on.
- Provide appropriate feedback within reasonable time.

Evaluation

Users are mostly kept informed with notifications and pop ups within the game, throughout the system there are question mark buttons that explain to the user unclear buttons or aspects within the program. Furthermore when a button is pressed that requires feedback, such as sending a friend request, the system always gives a confirmation notice which tells the user what has happened. The system might be a bit confusing for new users, as there is no info on what the system does in detail.

2. Match between system and the real world

- Speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms.
- Follow real-world conventions, making information appear in a natural and logical order.

Evaluation

This system is definitely designed for users with gaming experience in mind. Even so, most of the vocabulary used in this system can be understood by any individual. The only time where it differs is during the preferences page, where many of the terms relate to the game selected and a user must understand the game they selected in order to understand what preferences they are choosing. The flow of the system works in a very logical manner, with the friends list being on the side at every page, it makes it easy for the user to keep in connection with their friends during every step of the system. As well, the system follows a logical sequence of pages that leads the user through choosing a game, adding preferences then getting into a lobby to meet people. Most icons and buttons in this UI are symbol related, thus it makes it easy for users of different languages to use the system as well.

3. User control and freedom

- Users often choose system functions by mistake.
- Provide a clearly marked "out" to leave an unwanted state without having to go through an extended dialogue.
- Support undo and redo.

Evaluation

The user for this system is able to back out of any page by clicking the logo at the top left hand corner. The logo will always bring the user back to the main "browse" page, in which every other page can be accessed. User mis clicks such as accidentally sending a friend request to a user can be easily cancelled with a click of a button. Leaving a lobby is simple as well, by clicking the "leave lobby" button a user is able to leave the lobby right away. Undo and redo are limited, as there is no coding done, thus it is hard to implement back buttons within the system. When the user is in the web, they should be able to use the integrated back buttons built into the browser to achieve the same affect.

4. Consistency and standards

- Users should not have to wonder whether different words, situations, or actions mean the same thing.
- Follow platform conventions.

Evaluation

There was one very similar aspect of the system which was the difference between manual and the regular lobby search. The system did a simple job of explaining the differences via a question mark notification beside the button which leads to a manual search. Since most buttons within this system are symbols, it is quite intuitive. In regards to following platform conventions, the system follows a intuitive layout that is seen in many other websites, with a navigation bar at the top with information about the user's profile and other useful buttons. Most buttons are colored differently which cause them to stand out and intuitively tell the user they are in fact buttons.

5. Error prevention

- Even better than good error messages is a careful design which prevents a problem from occurring in the first place.

Evaluation

The system provided is a large loop, thus there is no dead states that have been encountered. The design always includes the logo at the top left, and that logo always leads back to the main page of the system. Thus if the user does in fact get lost within the system, by clicking the logo, they are able to navigate right back to the main page of the system. Furthermore, since the main page can lead to every other page in the system, there is no way for the system to reach any dead state.

6. Recognition rather than recall

- Make objects, actions, and options visible.
- User should not have to remember information from one part of the dialogue to another.
- Instructions for use of the system should be visible or easily retrievable whenever appropriate.

Evaluation

When a user selects a game to queue up for, the title of that game is carried through all the way to the lobby page, there is never an instance where the user loses the title of the game. Thus they at all time know exactly which game they are queuing up for. Furthermore the friends list is always present on the right hand side of the screen thus a user is able to gather information about their friends at all times in the system. When preferences are chosen, they are displayed in the lobby that was either created or joined in by the user. Thus the user knows that the system did in fact take into consideration the preferences being set. If the user requires any help whatsoever, the support page is linked to the navigation bar at the top of the UI and can be accessed at any time as well.

7. Flexibility and efficiency of use

- Accelerators -- unseen by the novice user -- may often speed up the interaction for the expert user so that the system can cater to both inexperienced and experienced users.
- Allow users to tailor frequent actions.

Evaluation

The system is designed such that it will remember your login details, and thus there is no need to login after the first time the system is run on a computer. Just like many other applications out there such as Instagram and ~~facebook~~ which have the same type of feature. It might be beneficial for the system to implement a remember preferences function, which will remember a certain user's preferences and help speed up the queuing process for veteran users. Frequent chats, or more active chats will always be at the top of the chat list thus easing access for the user.

8. Aesthetic and minimalist design

- Dialogues should not contain information which is irrelevant or rarely needed.
- Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

Evaluation

The system is mainly designed with symbols as buttons, thus it decreases the amount of words and noise within the system. As well, most of the tutorials or information that the user requires are made into overlay info boxes and thus do not clog up the aesthetic of the pages. The whole design of the system is very task oriented, and thus looks a little dated with its hard lines and rounded buttons. Yet the system is easy to use and very practical. Buttons are large and easy to see, which help with the display of information.

9. Help users recognize, diagnose, and recover from errors

- Expressed in plain language (no codes)
- Precisely indicate the problem
- Constructively suggest a solution.

Evaluation

The support page in the system, is filled with FAQ's which help the user facilitate whatever problem they are facing. If the user cannot find any solution they are able to send an inquiry to us for us to further help them debug the problem they are facing. Another error a user can face is when their password is invalid, we can express that by giving an error message that tells them exactly what is wrong, such as "password invalid" or "username invalid".

10. Help and documentation

- Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation.
- Help information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

Evaluation

Again, the support page in the system allows users to read though FAQs if they have any general questions for the system. If they have more specific questions, they are able to send over inquiries which we will be able to process and reply back to them. The help page can also be accessed at any point within the system via the navigation bar at the top, and thus it is simple for the user to get help at any point.

Brian

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Problem	Severity
Lack of information on adding friends	Minor
Cluttered/distracting login and sign up page	Minimal
Use of unfamiliar words	Minimal
Inconsistencies in appearance of prompts	Minimal
Error prevention	Minimal

Major > Minor > Minimal

Pragya

Most Severe:

Based on my evaluation, I don't think there are any problems in the system that are too severe and may hinder the experience of the user and so I chose to keep this category empty.

Moderately Severe:

- Lack of required information and guides for new users or non gamers.
- Inconsistency in design and appearance.

Least Severe

- Lack of error assistance and recovery.
- Cluttered design.
- Lack of flexibility when it comes to use of accelerators or tailoring frequent actions.