Course Assignment for INFO110 - Spring 2018
Evaluation of Information Systems

VERSION 1
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Discord

Quick background

Discord is a freeware communication and community hub designed with gamers in mind. The platform is completely free to use and supports secure voice, video and text chat. Everyone can sign up and create their own server for free or join existing servers. Each server serves as a small community hub where people can share picture, communicate using the methods mentioned above or invite someone to play a game. Discord is available on a magnitude of platforms such as Windows, MacOSX, Linux, Android, IOS or in a web-browser. With over 87 million unique users Discord has dominated this market over the last 3 years and risen above other platforms in the same field such as Teamspeak, Skype and Mumble.

Motivations

Since we did not know anyone who could give us access to an information system we chose Discord for it's well documented API and because the source code can be found online. Everyone in the group is familiar with Discord and we all use it a lot in our spare time. We believe Discord could be the next big thing when it comes to online communication platforms within a few years and could branch out to a larger target market then mainly people who play games.

Quick description of evaluation project

We are going to evaluate the usability and the user interface of Discord as an information system, and find out whether it is possible to improve some of these aspects. To evaluate the usability, we will do testing on our own, as well as having people that are new to the platform test it and give us feedback. We are also going to evaluate it against other similar platforms, to identify any problem areas Discord may have. In addition, we will evaluate Discord according to requirements for good usability, as well as requirements for good user interface.

Describe the organization you will be evaluating.

The concept behind Discord came from CEO Jason Citron, who previously owned a social gaming platform for mobile games known as "OpenFeint", that he then eventually sold for a total of $104 million. He then invested that money in 2012 to found the company we know as "Hammer & Chisel", a game development studio. As their first MOBA game on mobile platform flopped due to low popularity, he came up with the idea behind Discord while playing video games with his friends. They used voice over IP also known as voip, to communicate with each other over games, and as he was using these more and more, he started listing issues he had with these programs.

Some of the voip options available such as Teamspeak required its users to share various IP addresses to connect to the servers. Services like Skype and Teamspeak were resource heavy taking a toll on your hardware and making gaming performance worse as well as the fact that they have well known security issues. This led to his team of developers developing a voip and chat service designed for gamers combined with a more friendlier ui and updated technology. Although designed for gamers, the great amount of privacy Discord provides, as well as other features such as voip, chat, video chat, conference chat, communities etc. has drawn in a lot of other people interested in the software alone.

Although Discord Inc was created by a small company, its success started early as reddit communities started replacing IRC servers with Discord ones. Discord found its huge success through games and other gaming platforms such as electronic-sports, twitch.tv etc. People started fleeing from other voip programs that they previously used such as Skype and Teamspeak and started using mainly Discord instead as it had a lot of good features from the previous programs they used. The gaming community considers Discord as the biggest voip program made available to them.

Even though the software comes free of charge, the developers had added ways to monetize it. They added a option called "Discord nitro" which is a $4.99 USD monthly subscription that provides the enthusiast with: **Animated avatars**, where you can upload a gif of a avatar that plays on your profile if it is hovered over in chat. **Discord tag**, nitro users can choose their own discriminator (#0001-#9999). If you have Nitro you also get higher quality screen share, you can upload bigger files and you can create your own emojis which you can post on

every server available. By the end of 2017, the service had drawn nearly 90 million users. Discord has over 14. million daily users, as well as over 315. million messages are sent everyday.

The internal structure of the organization.

Discord currently employs 43 employees, at their headquarters located at Potrero Hill in San Francisco. The employees are everything from gamers, nerds, moms, dads, engineers, marketers and support. Discord is a small group of gamers who wants to bring people together around games. Discord wants to hire diverse and inclusive employees as they work in groups and they are built as a team. At Discord Inc they focus on helping each other out, and since people are so diverse at Discord they have deep knowledge about different topics. To work as a team, so that they can create a better better product, better decisions, and a better work environment is the motto behind Discord.

Discord has had problems with hostile behaviour. There has been a problem where chats have been raided by other communities or groups and spammed with controversial topic like, race, religion, and revenge-porn.

To deal with this hostile behavior and to protect its users and its services, Discord implemented a trust and safety team that is on call around the clock to monitor servers and respond to reports. Although they might not work in HQ, their job is to be moderators to filter and scim through what is against the TOS (terms of service) of Discord. It is the moderators job to deal with user harassment, servers that violates Discord TOS, and other malicious spam or bots. While the moderators can not directly monitor every message, the trust and safety team can determine malicious activity from service use patterns and take appropriate steps to deal with them. They also rely on user reports and their feedback do do their job effectively as it is hard to monitor everything. Since this team has been created, Discord Inc has shut down everything from alt-right to revengeporn sites.

External factors which affects Discord as an organization is competition from other voip programs as they all have a similar foundation. What Discord does great is going into depth to bring what gamers want and need. Discord get its funding from investors, gaming events/sponsors and Nitro subscribers. Discord is working very hard to keep everything legal, especially in the United States of America where often laws are state bound. So Discord Inc

does everything in its capacity to keep Discord league in every state as well as world wide. (Different states often have different laws, around data collection, how long they can collect the data and what they can do with it).

Since Discord is mainly built around gamers and internet communities, they have a very stable and loyal user base. As it is right now there is not any other existing competitors who can rival Discord by providing its services to gamers and internet communities.

Discord's client is built on an Electron framework using web technologies, which allows the program to be run on multi-platform, personal computers, phones and the web. The software is supported by eleven data centers in different locations of the world to keep the latency with the client to a minimum. The Discord application for personal computers is specifically designed for use while gaming, as it also includes features such as low-latency, free voip and chat and their own dedicated server.

As Discord got further in development video calling, screen sharing and conferences calls have been added to the program to support both gamers and people who work in offices. Discord has integrated an API known as GameBridge which allowed game developers to directly interact with Discord within games. You can also connect your game ID from various gaming programs such as steam, league of legends, origin etc. To share your ingame name with your friends to make it easier to play with your friends and new people.

We do not have access to the whole system around Discord, but we have access their API, so we would collect data via their open source code as well as their API. Json is an example of a program which can be used to gather data.

We will evaluate the **usability** and **user interface** of Discord. The reason that we chose to focus on these two aspects is that we believe they are key aspects in information systems of this kind. Furthermore, measuring usability and user interface makes it easy for us to collect good data from user tests.

The usability of Discord is key to a good user experience and may help explain why the users prefer Discord over their. Usability and access enables Discord to be one of the most used voice chatting service amongst gamers, in comparison to i.e. TeamSpeak, Mumble, and so forth. The user interface is also an essential part of the user experience, therefore it is an interesting and necessary aspect to take a closer look at.

The way we will evaluate usability is by heuristic evaluation. This is a good and structured way of measuring usability and user interface. Hereunder we shall focus on the ten heuristics as described by Jakob Nielsen in his book *Usability Engineering.*

To check if Discord's user interface is met with Jakob Nielsen criterias we have to use these measurements;
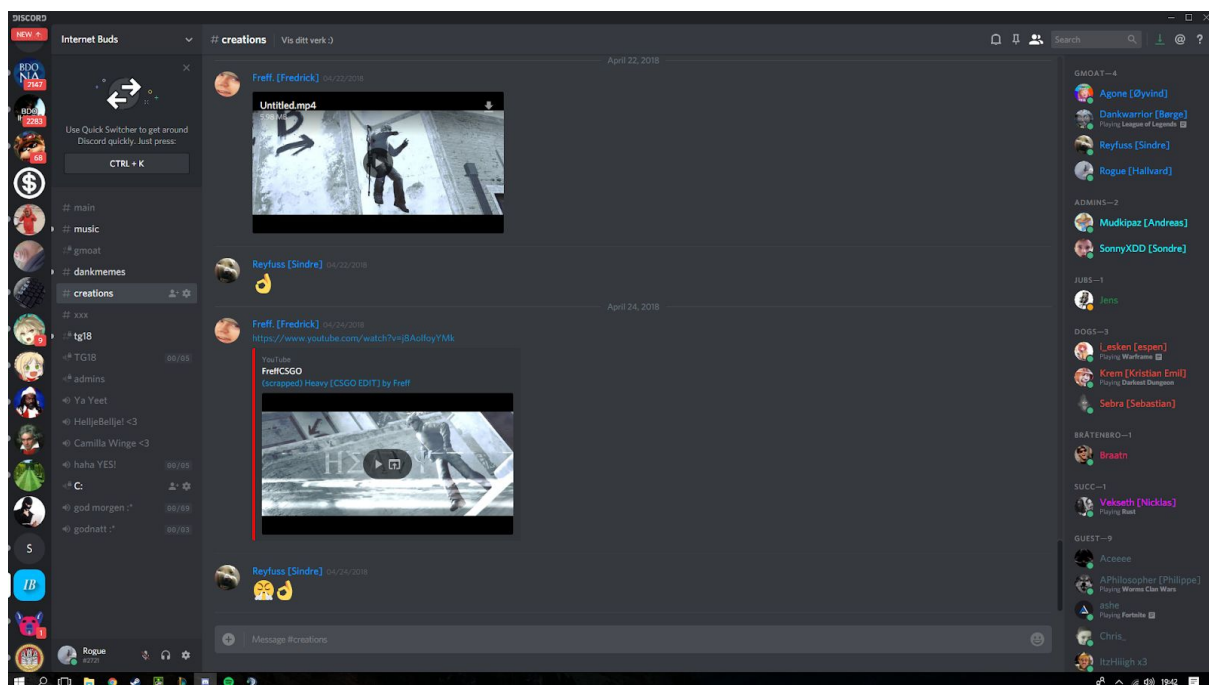
Visibility of system status: The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.

Discord's design philosophy is making the experience while you are using the application as fluid and intuitive as possible. To further explain this, as you can see on the picture below you have your avatar picture, username, discord #id and your three main tools; Mute, Deafen and User settings. The green dot to the bottom right of the avatar picture allows its user to keep informed about your current status. If the dot is green; it signals you are online, if it turns yellow; it signals you are currently having internet issues/weak internet signal but is still online, and if it is red; it means the user is currently offline/have no internet connection.
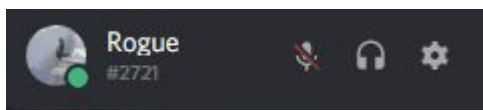
If discord has any issues regarding its server, it usually pops up a message with a pop up link on the top of your client as seen in the picture on the previous page.

Match between system and the real world: The system should 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.

Discord supports 27 different languages on its client, its app and its web browser, which is very helpful for those who only speak their mothers tongue. Discord has also opened the ability to write code in Discord as well as directly connecting them to games and making it so people can code their game to work together with Discord. If you type to much or do a command discord is not familiar with, a pop up like the one on the picture below gives the user an explanation. Since the system is built around gamers, they often throw in banter like shown on the picture below having it say it is way to spicy, gamer term/slang.
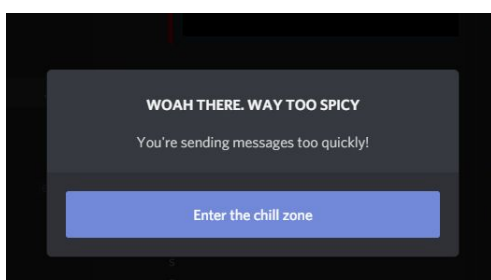
Discord supports add ons which lets you use emotes from popular gaming websites like twitch.tv.

User control and freedom: Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

When you are a user of Discord you have complete control and freedom. If you want to close the application you can press the x button on the top right corner shown in picture 1. Discords usability buttons on the top right corner is universal to all web browsers such as internet explorer, google chrome etc. making it intuitive for its users on how to close, minimize or maximize the application. Timestamps/datemarks help know all the people in your server as well as those you personally messaged know when you sent the message.
If you did a type error or want to edit/delete your comment you are freely to do so, but if you edit your comment a little (edited) mark shows up to tell other users/admins that it has been edited.
Normal:
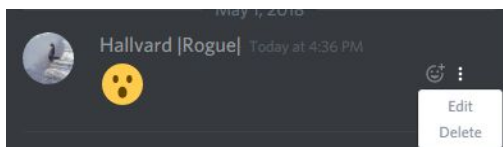
Edited:
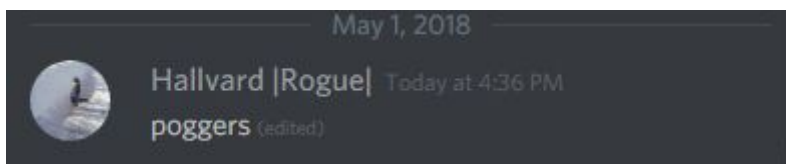
If you are an admin on a server you have access to view edited and deleted comments to make sure nothing illegal/bad for your server is happening. Giving its admins/mods full control of the server.

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

Discord supports windows commands such as ctrl + c, ctrl + v etc. Making it both intuitive and supportive for those who are used to the windows platform. If you have Discord installed on MacOs you can still use the mac commands. When errors, or other messages appear the users are often greeted with slang as well as an in depth explanation of what happened/what went wrong etc making it clear for its users. By using the command CTRL + K you can search through whole servers with your keywords, either displaying the group, voip/textroom, message or person.

Error prevention: Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.

Discord has done a great job with its code and application. Discord rarely has a errors, but if a error message pops up it is often because either you are offline or if Discord is having server issues. I have been using this application since 2016 and i have not noticed a any errors/error pop ups besides those mentioned.

Recognition rather than recall: Minimize the user's memory load by making objects, actions, and options visible. The 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.

As you can see on the picture below it is quite easy to navigate through Discord. Each server has its own icon the admins can add, as well as the name over the server when you hover the picture. You have different text chat's you can edit for different purposes represented by the "#" tag. Voice channels are represented by the "volume" tag. Admins can limit how many are allowed to be in one voip room at a time, as well as who can visit each text/voip channel. By using the command CTRL + K you can search through whole servers with your keywords, either displaying the group, voip/textroom, message or person. On the right of the picture below you can see who are on your server, if they are online or not, which category they got put in by admins, as well as a search option for individual users you want to contact.

Above the server icons (left of the picture) is your Direct message icons, where the number (14) displays how many unread messages you have gotten from your friends. In the middle you have the text-chat room #creations where you can send links, discuss and react to other comments etc.
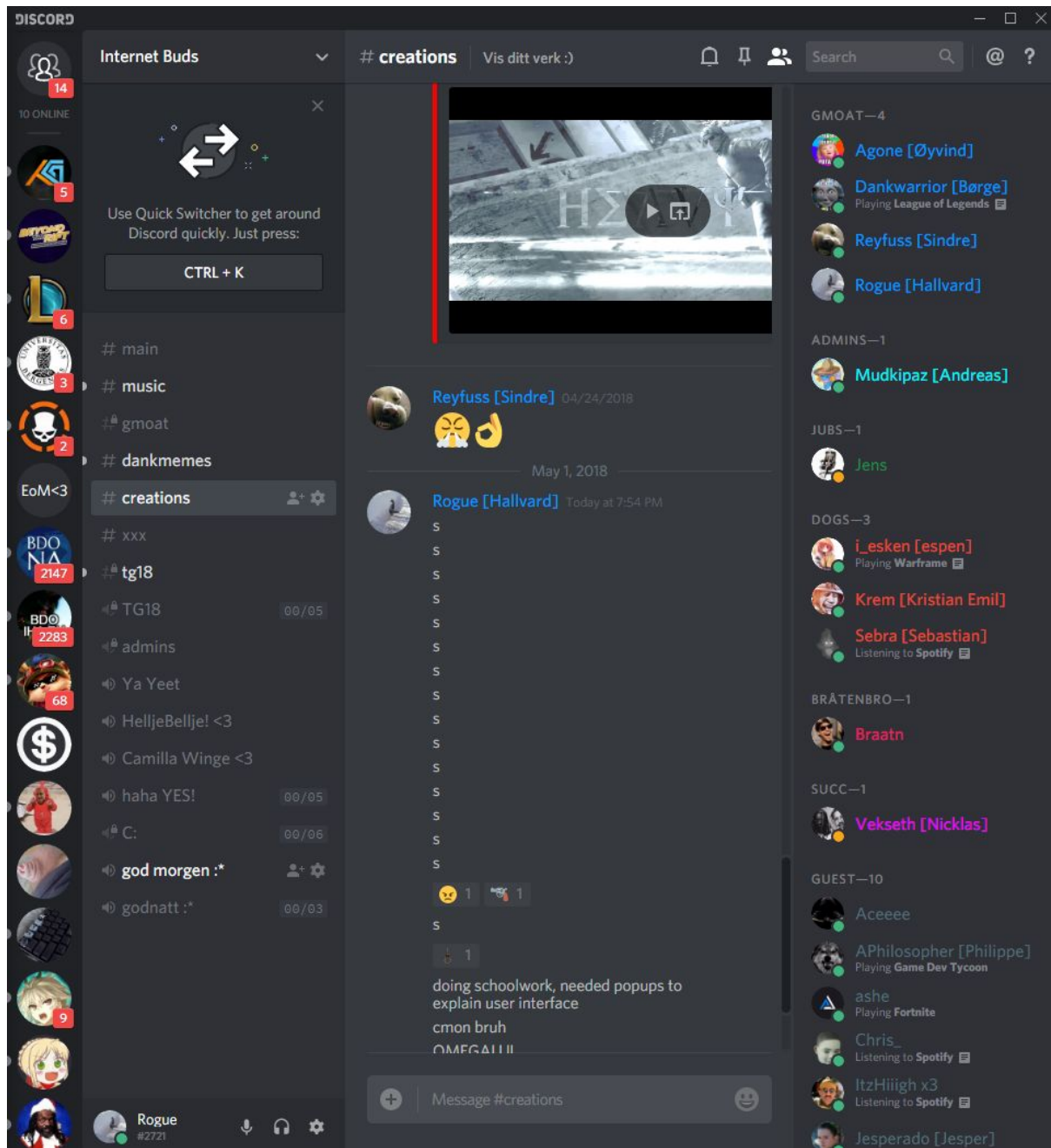
Flexibility and efficiency of use: Accelerators—unseen by the novice user—may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.
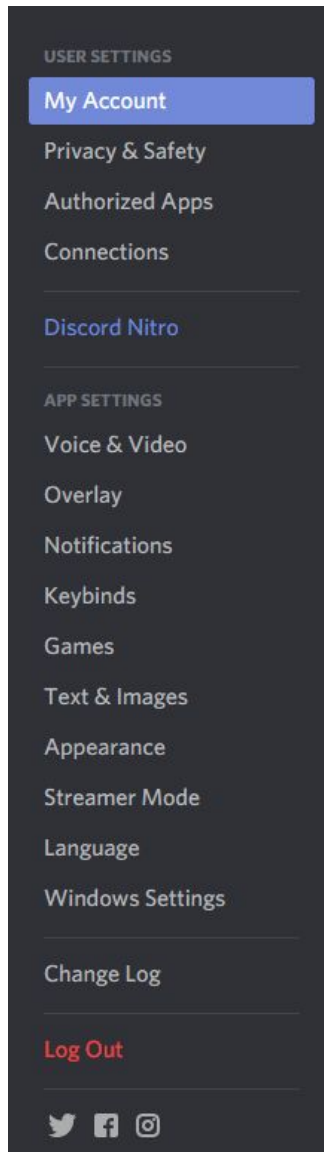
As displayed on the picture to the left Discord has went fart and beyond with implementing ways to personally customize your application as well as making it more efficient for you to use.

Since Discord is mainly an application designed for games you can add games which then display when you are online, what gamemode you are playing as well as your gamertag if you so wish. They did this because they wanted to enable people, and friends to play video games together by making it easier to access and see.
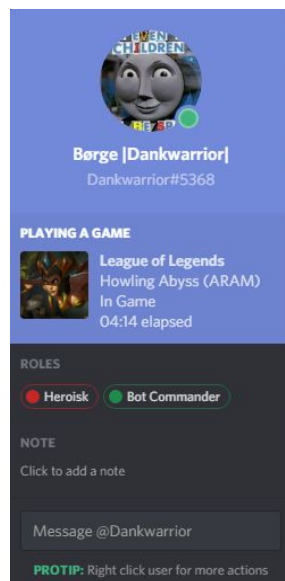
On the picture to the left you can see a picture of one of my friends, where it displays which game/gamemode he is currently playing and for how long he has been playing, as well as his server roles.

You can also bind social media if you so wish to, such as facebook, twitter and instagram.

If you want to further customize your Discord client you can make custom keybindings where you can bind any key you want, to a certain commands such as; push to talk, voice activity, Toggle mute, Toggle deafen, Toggle overlay etc.

If you have bad vision you have the ability to change the font as well as the font size making it easier to use for the disabled, people with weak vision as well as those who have their

monitor further ahead. If you dislike something, such as emotes, gifs and emojis you can turn them off at will.
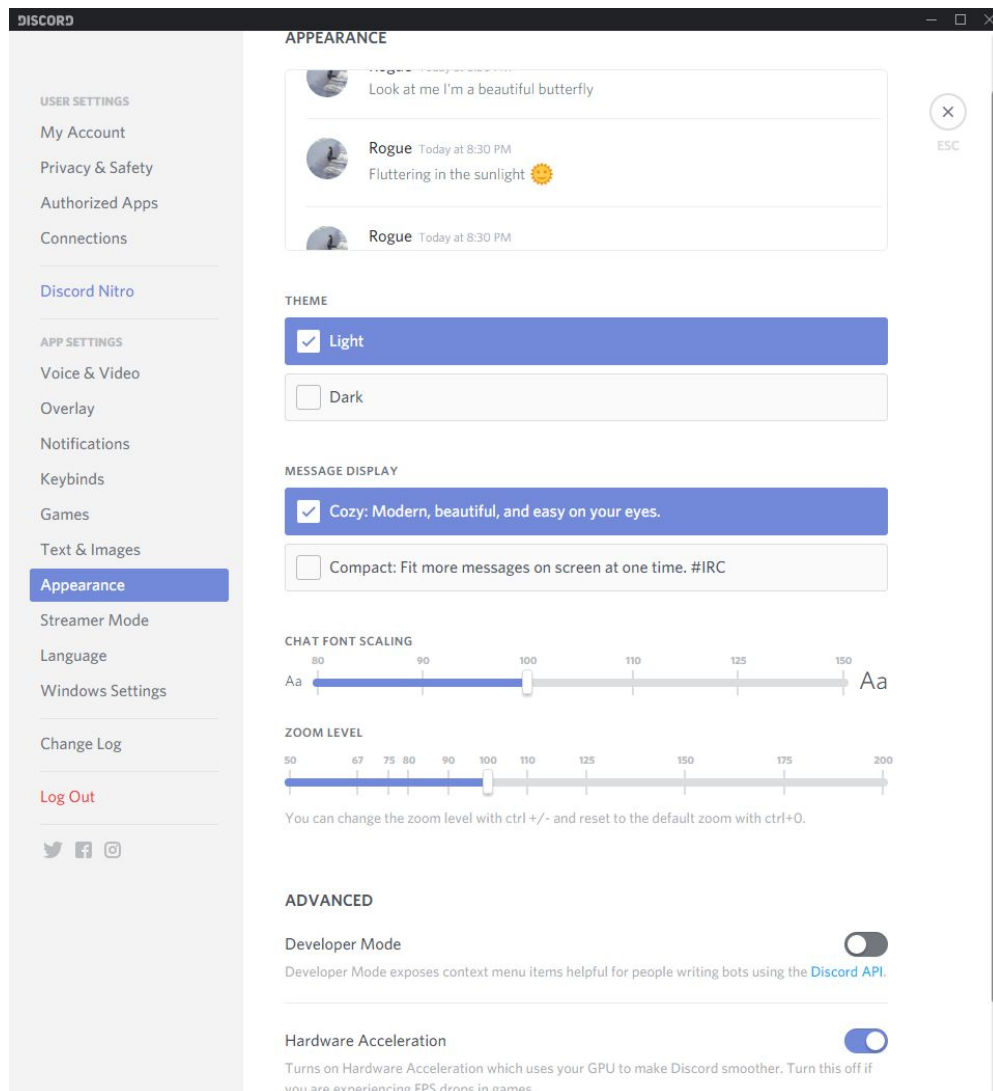
Aesthetic and minimalist design: Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

Help users recognize, diagnose, and recover from errors: Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

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. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

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