DISCORD ENGAGEMENT FOR THE YOUNG PEOPLE OF CARDIFF

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Acknowledgement

Abstract

Messaging and online chatting applications have become a mainstay of communication in recent years and have provided an ease of communication that had previously been lacking. My dissertation seeks to provide, through Discord way to educate and engage the young people of Cardiff. I use Discord to create a server for the young people who interact with Cardiff Youth Service. In doing so, I explore how COVID caused a push for interaction through an online platform, why Discord was chosen, and the final solution of the project. The project aimed to focus on the suggestions given by the young people, as the client wanted the foundation of the server to be predominantly from the ideas of the young people. Surveys were conducted at the start of the project to get a general idea of what the young people would like. Their feedback and suggestions were taken into account at every step of the process. To achieve a final product based on my prior experience, it took some time researching servers in Discord, popular bots used, and various other integrations. There would be multiple roles on this server, but the central focus would be on the youth workers and the young people. The end goal of the server was to provide young people with a haven for general conversation, education, fun and support on their needs from a community keen to extend their reach.

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1.0 Introduction

Cardiff Youth Service (CYS) is part of Cardiff Council's Education department. They work with young people aged 11-25 to develop personal, social, and educational development through various opportunities (User S, 2022). This is done in communities through participatory experiences and offers information, support, and guidance to enable young people to reach their unique and full potential. They work with young people in a variety of settings providing both universal and, for those identified as vulnerable, targeted support. CYS engages with young people in youth centres, youth clubs, on the street, in schools, and communities. There has been a significant push for engagement with young people in digital spaces due to the effect and aftermath of COVID-19, showing how important a combination of online and in-person contact is.

Over the past 18 months, CYS has been adopting a more online range of digital platforms as an opportunity to reach out to younger children in the city. Covid catalysed this push for a more digital space due to a significant increase in demand for youth services over the Covid period. Additionally, during this period, youth services also suffered from fund cutting. This push for an online reach would allow for those young people who 'would not walk into a youth centre' to receive the same benefits and more of those who would walk into a youth centre. This could be due to social issues or just finding it more uncomfortable to jump straight into a meeting in person. CYS Digital team aimed to consult with a wide variety of young people from different backgrounds in different youth programmes and groups across the city. They visited Llanishen High School behaviour unit, Cantonian High School LGBTQ+ club, CYS inclusive group, and The Pupil Inclusion Project in the Gabalfa Youth and Community Centre. They conducted focus groups with the young people present. CYS also conducted surveys online with young people across the youth service using Microsoft forms.

Discord is a popular group-chatting application initially built as a place for gamers to build communities and talk. This would be through free voice, video, and text chats. These communities are known on Discord as 'Servers'. These servers act as a dedicated virtual room for you and anyone you invite. It can be public or private and can contain multiple moderation features to keep your server engaged and safe. There are 'Channels' in the servers: A dedicated space for text or voice chat. These are separated by topics and categorised to help keep conversations ordered throughout the server. Discord, designed as a platform for gamers to communicate, has since found many different areas of usage, including workplaces, education, and a casual space for talking. Discord allows for the addition of Bots on servers. These bots provide extra functionality in the servers that aid in engagement for users through various activities and prompts. Discord was decided as the most applicable since it allowed usage from both mobile and desktop. It contained servers that allowed for chats across multiple topics while not overlapping with one another. It was one of the most proficiently used social media by the young people to interact with one another. Below is the general layout of a Discord Server:
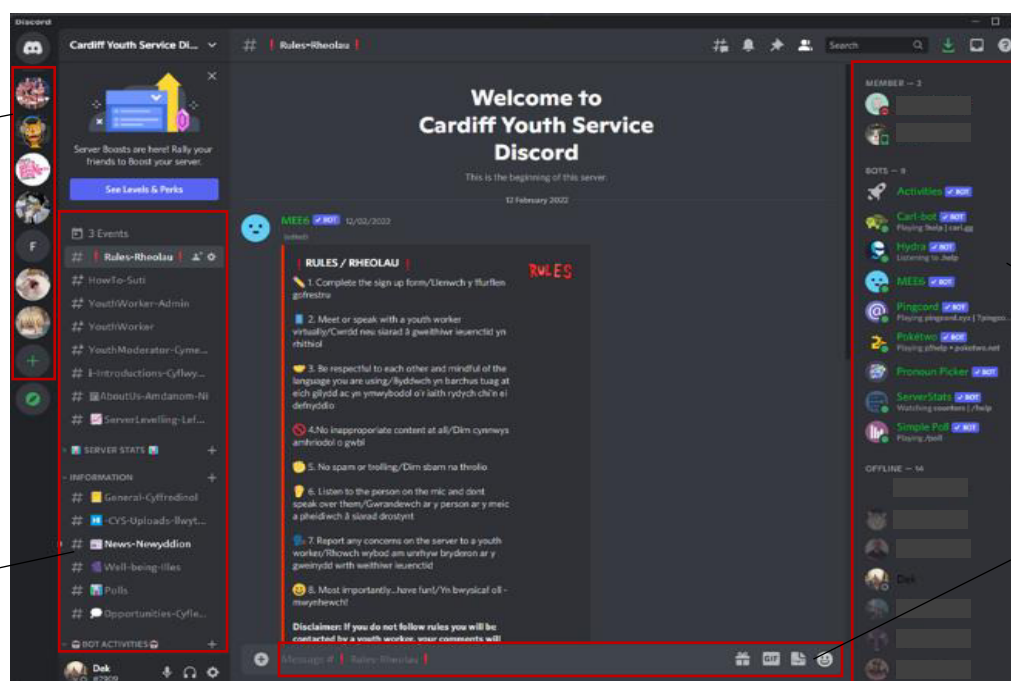
Different servers the user is a part of.

List of members and bots in the server.

List of different channels in the server.

Input for typing in text channel.

Figure 1 – Server Layout

1.1 Aims and objectives

The aims and objectives of this project are to create a Discord server for the CYS team that will allow them to engage with the young people of Cardiff on an online digital platform. To do this, I want to create a safe space where young people can engage with each other through voice chat, video chat, and text chat. The platform will be able to be used for gaming, streaming, and general updates on in-person activities the youth service team provides for young people. Additionally, the server will allow students to reach out for mental health support, study support, and career support for those who need or want someone to speak to on these matters. In the process of making this server, I aim to encapsulate as many ideas as possible from the young people to ensure their requirements and suggestions are heard and implemented. There will be challenges that must be adhered to, such as safeguarding young people. This will be done by keeping the server private with access through direct invites only from the youth service team, limiting permissions of members to allow only the youth service team to make changes, and allowing read-only access on the server outside of working hours or when a youth service worker is offline. I will aim to add some basic analytics that will be used to assess the progress the server has made throughout its creation. Another challenge that I will aim to tackle is monitoring what is being sent in the channels, which I will do through the usage of bots. The server will be designed by myself to create a user-friendly and 'aesthetic' platform that will allow for seamless and constant interaction through the channels. Channel content will need to be age-appropriate due to the ages of the young people interacting with the server.

- Gain an understanding of Discord and the objective of the application.

- Gain an understanding of the commonly used bots used for moderating and administrative purposes.

- Gain an understanding of permission control and sever statistics

- Ensure the ideas and concepts proposed by the young people are utilised and implemented.

- Ensure there are necessary actions for safeguarding and monitoring.

- Ensure the server can work smoothly without the need for myself being present.

- Ensure later instructions are clear, concise and accurate.

- Ensure the server is user-friendly and can be easily navigated by a new user.

1.2 Project Scope

The project's scope developed as the process of building the server went on. As more young people were consulted for their ideas, and surveys were taken, many more requirements were developed. Decisions were constantly made where things were added and later removed due to them being essential or non-essential. As I conducted research regarding Discord, finding out how I would lay it out and how moderation of the server would be considered, I had to keep in mind the target audience the server was being made for. The critical consideration for the project was ensuring that the young people felt heard, and the views shaped the server as it was built for them to use. Being a casual user of Discord and being on different servers myself I had a basic understanding of what makes a server tick and how it should be presented to keep it engaging without being overwhelming.

2.0 Background

Utilising digital resources fosters young learners' engagement both outside and inside the classroom. Their engagement is a key factor in deterring successful learning (Ho, TML and Nguyen, T.B.K., 2022). The last two years, in particular, have been a challenging experience for everyone worldwide due to the effects and aftermath of COVID. We have experienced several lockdowns and periods of isolation where people have suffered from loneliness and mental health difficulties (Mental Health Foundation, 2021). Just as many sectors felt the brunt of Covid, so did those in the education sector, who had to find multiple ways to keep their students engaged on an online platform. The power of online communication allowed us to thrive even during this unfortunate unseen event. The benefits have proven to be endless, allowing us to communicate with those from many different places and keep in contact with those we are unable to see. During this time, all the youth services across the UK suffered. There was a 66% increase in demand for youth services, while more than half of youth organisations reported that the cost of delivering their services to young people had increased since Covid hit. Not only that, but 83% of youth organisations said their income had decreased (UK Youth, 2022). This difficult time affected the young people who needed support from the youth organisations but could not seek definitive help due to the guidelines implemented during Covid. During the Covid period, Scotland Youth Service tried to interact with young people using Facebook groups as the primary functioning space. Over time, it was boring, and the young people hated it as it was not a platform, they felt they could engage with (Link, Youth 2020). Just as with school, lower student engagement is related to problems regarding lower achievements, less motivation, and higher dropout rates. It was perceived that student and young adolescents' engagement is critical in keeping young people educated with their activities, courses and their learning. This meant that the more engaging something would be, the more learned. A method being pushed by several youth services all around the country is the Discord and the benefits it brings. Jorge Ramon Fonseca Cacho created an experimental discord channel where surveys were conducted to measure students' responses to using Discord as an optimal component of class (Fonseca Cacho, J. 2020). In a total of 23 questions asked, 98.5 students found that they enjoyed Discord and would like to see it implemented in future classes. A further 62% of respondents felt they engaged more than they would have with standard working classes and felt more comfortable using Discord as an application. This survey was taken several months after using Discord in an online class. Although this experiment was run for programming class it can and wants to be adopted into the same perspective for CYS. The idea for CYS's Discord server is to promote learning and give the young people fun experiences, advice, and a place where they can feel comfortable meeting more people their age and talk to an adult about issues they might have. The right step has already been taken to choose an engaging platform for young adolescents who are already familiar with the platform and its features.

2.1 Audience

The target audience for this platform will be the participants of the project. They are people that interact with the benefits and programs that CYS runs. This includes young people ranging from age 11 to 17, youth workers and outside visitors and guests who come along to give talks. Everyone will be assigned different roles such as "Youth Worker" or "Youth Moderator" to be differentiated and assigned specific permissions controls accordingly.

2.2 Approach

As the project's primary focus is on CYS's need to offer a range of digital services and opportunities shaped by the young people themselves, a survey was created to analyse the needs and wants of the young people. The survey gave me a basis of ideas to start and learn from, as my initial ideas on what I know about Discord might defer from what they would require. The feedback was acquired in two different ways. One was an online Microsoft form that allowed people to send information on social media and what they would want. The latter was in-person visits done by the CYS team to different youth programs and schools across Cardiff. The survey questions were outlined as below:

1. What social media apps do you use?
2. How old are you?
3. What do you know about Discord?
4. If you use Discord, what do you use it for?
5. Which of these would like Cardiff Youth Service to provide on Discord? (Prompts such as group chats, study support, etc., were given)
6. Would you use the Cardiff Youth Service Discord? If not, why?
7. What would you want to do on our Discord? / What would you want on our Discord?

The Discord consultation survey was undertaken by 38 young people engaging in CYS programmes such as the Pupil Inclusion Project, the Inclusive group, and various young people attending the service's monthly trips. The result from each question is as follows:

What social media apps do you use?
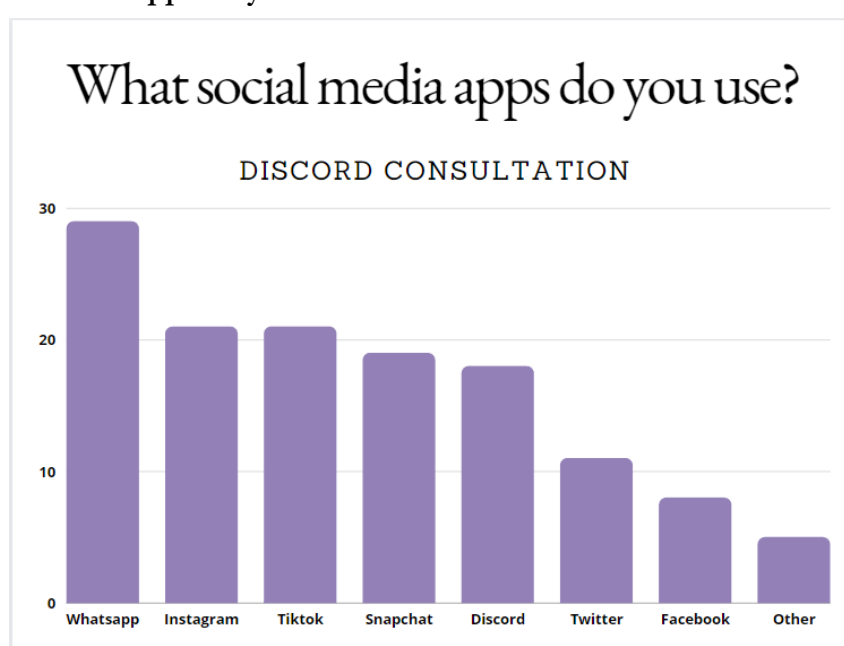
Figure 2 – Graph 1

How old are you?

11-14 **13**

15-19 **9**

19+ **2**

Other **7**

What do you know about Discord?

Selection of quotes from the young people:

"Place where you can communicate with others, voice chat, similar to chat room"

"Free chatting app like WhatsApp but better, audio is really good, more Well-known than WhatsApp"

4

"Very Complicated"

"I know how to operate Discord in more or less its entirety"

"Talk to friends meet new people and join a server with bots"

"Haven't heard of it"

If you use Discord, what do you use it for?

Selection of quotes from the young people:

"Voice call, video call, text – main way more than texting even – all the time!"

"Calling people, game together"

"Band meetings (musician)"

"Meet up with friends, use it on weekend"

"To talk with my friends and to join new communities"

"I don't use it I'm not allowed without parents' consent"

"I used it for people in my interest"

Which of these would you like Cardiff Youth Service to provide on Discord?

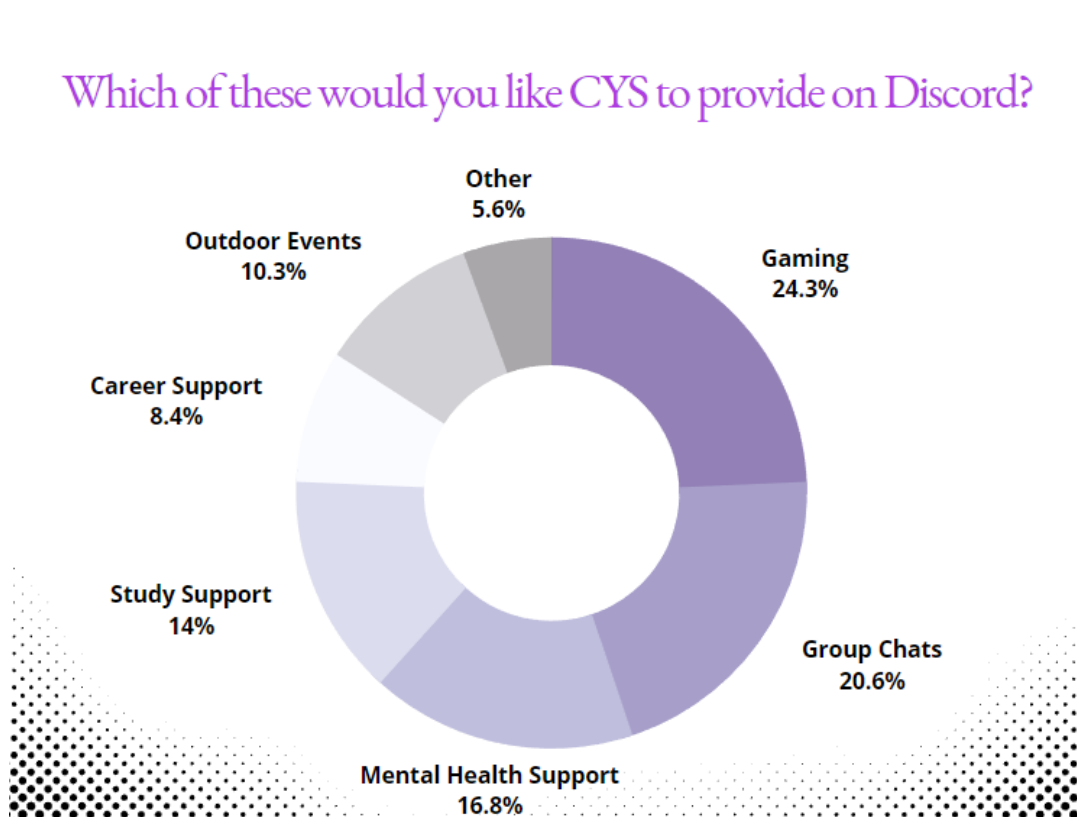

Which of these would you like CYS to provide on Discord?

Other
5.6%

Outdoor Events
10.3%

Gaming
24.3%

Career Support
8.4%

Study Support
14%

Group Chats
20.6%

Mental Health Support
16.8%

Figure 3 – Graph 2

Would you use the Cardiff Youth Service Discord? If not, why?

Yes **31**

No **7** – "Don't like gaming", "I don't know what it is", "I might use it don't know"

1. **What do you want on our Discord? / What would you want on our Discord?**

This question had a large amount of the same answers among the young people, so I decided to sum up the consensus from all the responses:

- The young people were keen on having different channels for different ages due to content. This allowed the older people to still enjoy their age-related content on the server for all.

- Regular updates and events were a must as they wanted a reason to log on to the server most days, mainly after 5 pm, as it was the most popular time right after school.

- Polls were another favoured suggestion, whether this is for movie streams or playing games just so there was always a range of choices of activities to do.

- There were additional suggestions for there to be a chance that the young people themselves could go through an interview process to become server moderators.

- Music channels for recommendations and listening were also of significant interest to most people.

- Having a channel where people could introduce themselves allows people to know who a person was when they joined, almost like having a natural icebreaker.

- Mental health support was a massive must for the young people. They felt having external talks, or even just a youth worker they could feel comfortable talking to about private matters in confidentiality was essential.

- News channels that report on sports, general news headlines, and major updates on upcoming games could be excellent possibilities.

- Young people who had experience with Discord demanded that specific bots be used, which will also be discussed later.

- Young people were keen on conversations and advice for those older than 16 for job help and sexual education.

Keynotes and results were made by the CYS to be made aware of for the project:

- Female, young people, were less engaged, which was common throughout the Discord consultations and needed to be addressed. Most were unaware of Discord's uses and so did not use it.
- The majority of young people had Discord already, and some didn't, downloaded it during the surveys and were keen to get help from their peers on using it.
- Some young people's perception of Discord was that it seemed alien and complicated.

- A few young people were so excited by the prospect of the Discord server they wanted to join immediately. Unfortunately, the server process had not started yet, but they were shortlisted to be starting members.
- Overall, 92% of young people surveyed knew what Discord was and what it was used for, and of the 92%, 81% of them were keen to join the Cardiff Youth Service Discord page when it was ready.

Following the survey's findings, the project's premise was able to be put into action. There was already a considerable backing for the usage of Discord based on the requirements CYS thought would be necessary to support young people before the survey took place. However, the survey gave the digital team a stronger sense of security that Discord was the right step to push extend their reach on an online basis.

2.3 Research

The survey gave me a lot of ideas and a lot of learning to do to make sure the server was up to standard for CYS to deploy. As I had been on servers in the past, I had used fully developed servers but never had the opportunity to see the building process. I had to do some research on which steps to take.

The majority of my research was from websites and videos that explained how certain aspects of servers worked, like the permissions and the importance of role hierarchies. We are in a digital age now where a lot of information from articles, comments, and websites online covered information I needed on a broad spectrum that I eventually narrowed down to suit my needs. Information regarding building servers in these two areas was endless. Although Discord is relatively conventional in its processes regarding how things are done, multiple resources could have slightly different ways of performing similar actions. It was up to my reasoning to understand and choose what would be best in my case.

2.4 Competitors

Based on the survey results, although many had heard of or used Discord, it wasn't the most popular choice known by most of the young people. WhatsApp, Instagram and Snapchat were much more popular choices, so why not use them. The main difference is the fact that Discord is much more community-focused than these other applications. Discord has server roles with much more complex permissions than WhatsApp or Snapchat, with only admins. Discord also has the additional functionality of bots that allow for extra engagement. Bots stretch in terms of functionality from simple commands like asking questions to instigate conversation all the way to moderation of servers. Discord can have multiple channels for multiple topics, including voice and private channels, which are not supported on the other apps. Although it has a mobile application, Discord is built predominantly for a desktop interface, unlike other apps. Over the last few years, Discord established itself as a solution for collaboration among communities, whether big or small. Discord's benefits outweigh the other mainstream apps in terms of the purpose that CYS wanted to adopt to allow for interactions with the young people.

Other platforms have similar functions to Discord that could be used in a scenario like this, such as Slack. Slack is a messaging program explicitly designed for the workplace. By bringing people together to work as one unified team, Slack transforms the way organisations communicate. Both Slack and Discord are very similar. They both offer team chatting with a similar interface, and both apps have team communications organised in channels. The most significant difference between the two is their target audience and the specific features they offer. Discord is a place to talk and hang out, while Slack is where you get work done. Slack is primarily a business-focused application. Slack has some benefits that outweigh Discord, such as letting you privately save messages and posts for future reference and organising your sidebar using folders. Slack also has no limit on files being sent across for the version, while Discord has 8MB. However, Slack lacks in the audio aspect. The audio channels are a primary reason for Discord's reputation. It offers audio channels as more a room you can stop by in and leave

more useful for general hanging out than Slack's call function is similar to zoom. Slack is also known to be notably less reliable than Discord in the screen sharing and video calling aspects. Slack offers tons of integrations with all kinds of business applications, from google drive to Twitter. While Discord doesn't offer official integrations, it relies on bots built by third parties. The integrations tend to be more focused on getting work done and less on building communities for engagement which steers away from the purpose of what the server is being built for. Discord offers an ideal pathway than Slack does regarding the purpose at bay here.

TeamSpeak (TS) is another voice over internet application for audio communication similar to Discord. TS lets you browse public servers by country only, while Discord offers a broader choice through the ability to browse by genre that might appeal to the user. Discord interface is also far more user-friendly than TS's as Discord is slick while TS's is outdated and very minimalistic. The UI is also often difficult to get to groups for new members. Discord outperforms its competitor here since it has much more superb social features such as bots, server creation, invite processes, and servers' free cost. TS performs better than Discord on just the connection quality for voice connections expected from an application where that is the sole focus but suffers massively when used in a community-building aspect.

Overall, I feel like although Discord has competitors against some of its features, there is not a competitor challenging it for all the features it offers, especially for the purpose of this project. The 'competitors' seem lacklustre compared to what will be needed from the server. The main feature that causes Discord to outweigh the competitors are the integration with the bots. Discord is already well as shown known by the young people surveyed. It appeared to be a no brainer in terms of choice for the platform.

3.0 Specification and Design

3.1 Business Requirements

For the implementation of the server, several requirements were agreed upon based on the recommendations made by the young people and confirmed by the CYS digital team that needed to be addressed in the server. I will outline these requirements and their purpose:

- The server firstly needs to be available in Welsh as well as in English. This was mandatory under the Welsh Language (No.6) Regulations 2017, which came into effect on 1st April 2018, as the server would be under the usage of CYS.
- The server needs to have a set of rules provided by the CYS team that must be read and accepted before allowing members to view and or access the server. These rules are vital and must be adhered to, or members risk being temporarily banned or removed from the server.
- The server must be kept private and invite-only. Only youth workers will have permission to create invite links to the server to prevent access from people from the public joining or spam accounts.
- During specific periods the server must be kept in a 'read-only' state to prevent the server or people from being used in malicious ways that would not be monitored as it would be out of hours.
- The server must contain multiple text and voice channels for different topics and be used to accommodate for various activities. This requirement allowed for a more methodical approach and the critical benefit of Discord rather than having one chat for everything.

- The server must accommodate age-restricted content for the safety of younger server members.
- The server must have various bots for help with moderation and engagement. Bots are essential for servers and must be used to help and accommodate activities. The server must allow for every member to be able to interact with bots meant for engagement.
- The server must allow all members to have the ability to type in text chats and speak in voice chats, as long as it's during server access hours.
- The server must have different ranks and an admin rank that can make changes such as creation, editing and deletion of channels on the server. The admin should also be able to add and delete bots deemed inappropriate and alter rank, permissions, delete messages, and mute, ban or kick members of the server.
- The server must have a channel where a 'How to' section is implemented for youth workers who need upskilling on performing actions in Discord and basic information for members who are new to Discord.
- The server needs to have some form of basic analytics that allows the youth worker to track engagement over specific periods to see what boosts interaction on the server.

3.2 Interface

Regarding designing the server's interface, I was constrained by Discord's flexibility in regard to interface changes being made. All servers follow a basic layout designed for simplicity and user-friendliness, as shown in figure 1. I am not in control of some changes, but each user can make, such as choosing between light and dark mode. There are some aesthetic interface changes I was able to make myself to allow the server to feel more authentic than a typical server. I did this using two websites. The first was Unicode emoji charts. This allowed me to give an icon to each server relating to the purpose it would be used for. Although this did not make any changes to performance, it created a more appealing layout and would use to entice users to want to engage more in the server. The second website I used was a font generator to allow for fonts aside from the typically used to be implemented.

3.3 Functional Requirements

The functional requirements describe the server's expected functional attributes regarding the system. This project has different required functionalities, and they will be identified in the tables below. Throughout the project, requirements were changed and added. For the basis of the project, I am choosing to include the roles of the only two ranks currently being used in the server:' Youth Worker Admin' (Admin) and 'Member' (Young person).

Requirement ID	Functional Requirement	Acceptance Criteria	Completed
1 – Admin View Channels (Must)	The server enables the admin to view both text and voice channels.	When the server is opened, the channels are viewable to the admin.	Yes
2 – Admin Manage Channels (Must)	The server enables the admin to edit, delete and create new channels.	The create channel function is available to the admin and clicking on the pre-existing channel allows deletion and changes.	Yes

3 – Admin Manage Roles (Must)	The server enables the admin to create, edit, add new roles and assign members to roles.	The admin can create new roles and edit pre-existing roles and assign members to a role of choice.	Yes
4 – Admin Manage Permission of Roles (Must)	The server enables the admin to change the permission powers of each role.	The admin can alter what permissions each role can perform.	Yes
5 – Admin View Audit Log (Must)	The server enables the admin to view the audit log.	The admin can view the audit log to see any changes made by other roles with admin permissions.	Yes
6 – Admin Add New Members (Must)	The server enables the admin to add new members to the server.	The admin can create private invite links to allow new members to join.	Yes
7 – Admin Moderate Members (Must)	The server enables the admin to mute, kick, ban and deafen members.	The admin can remove and penalise members for not abiding by the server rules	Yes
8 – Admin Send Messages (Must)	The server enables the admin to communicate through text-based messages.	The admin can successfully send messages.	Yes
9 – Admin Video Chat (Must)	The server enables the admin to communicate through video calls.	The admin can successfully make video calls on the server.	Yes
10 – Admin Voice Chat (Must)	The server enables the admin to communicate through voice calls.	The admin can successfully make voice calls on the server.	Yes
11 – Admin Screen Share (Must)	The server enables the admin to share their screen in a call.	The admin can successfully share the screen during calls.	Yes
12 – Admin Manage Bots (Must)	The server enables the admin to add, set up and delete bots.	The admin can successfully moderate how bots enter and leave the server.	Yes
13 - Admin Use Bots (Must)	The server enables the admin to interact with bot functions.	The admin can successfully use bots for their designed functions.	Yes
14 – User View Channels (Must)	The server enables the user to view both text and voice channels.	When the server is opened, the channels are viewable to the user.	Yes
15 – User Send Messages (Must)	The server enables the admin to communicate through text-based messages.	The user can successfully send messages.	Yes

16 – User Video Chat (Must)	The user enables the admin to communicate through video calls.	The user can successfully make video calls on the server.	Yes
17 – User Voice Chat (Must)	The user enables the admin to communicate through voice call.	The user can successfully make voice calls on the server.	Yes
18 – User Use Bots (Must)	The server enables the user to interact with bot functions.	The user can successfully use bots for their designed functions.	Yes

Table 1 – Functional Requirements

3.4 Use Case

The use diagram of the server has been made by keeping the main functionalities of the server as the primary focus. The use case diagram represents the two major roles and functionalities of the system regarding the actors involved in the server. The Diagram was built as shown below:

Actors:

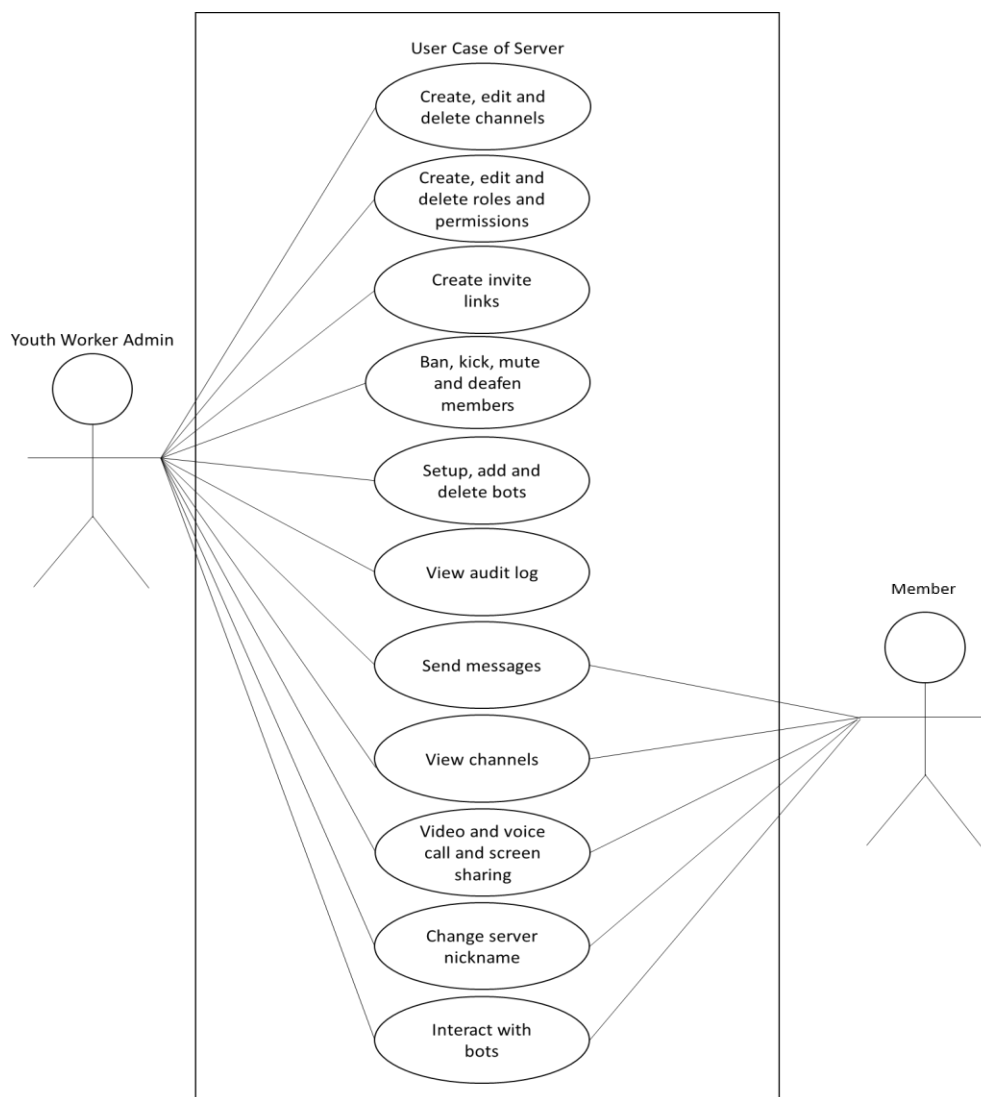1. Youth Worker Admin (Administrator)
2. Member (Young Person)

Figure 4 – Use Case Diagram of the Server

Use Case ID	UC1
User Case Name	View channels
Description	The user can see channels and the messages in the channel.
Precondition(s)	The user will need to have joined the server and have accepted the rules.
Basic Flow	1. Open the server 2. Click on a channel 3. View content

Use Case ID	UC2
User Case Name	Send messages
Description	The users can send messages in a channel
Precondition(s)	1. The user will need to have joined the server and have accepted the rules. 2. The user will need to have the right permissions to view the specific channel
Actor	All roles
Basic Flow	1. Open the server 2. Click on a text channel 3. Send message

Use Case ID	UC3
User Case Name	Voice and video calling
Description	The user can use voice and video call functions
Precondition(s)	The user will need to have the right permissions to view the specific channel.
Actor	All roles
Basic Flow	1. Open the server 2. Click on a voice channel 3. Turn on video

Use Case ID	UC4
User Case Name	Server nickname
Description	The user can change their nickname on the server
Precondition(s)	The user will need to have joined the server and have accepted the rules.
Actor	All roles
Basic Flow	1. Open the server 2. Click on a edit server profile 3. Input server nickname 4. Save changes

Use Case ID	UC5
User Case Name	Bot interaction
Description	The user can interact with the bots on the server
Precondition(s)	The user will need to have joined the server and have accepted the rules.
Actor	All roles
Basic Flow	1. Open the server 2. Click on a channel in bot activities 3. Follow prompts given by bots 4. Send message
Use Case ID	UC6
User Case Name	Channel changing
Description	The admin can create, delete and edit channels
Precondition(s)	The user will need to have joined the server
Actor	Admin
Basic Flow	1. Open the server 2. Navigate to the channel section 3. Right click to create a dropdown menu 4. Choose between, create, edit or delete 5. If create or edit is chosen input changes 6. Save changes
Use Case ID	UC7
User Case Name	Role and permissions changing
Description	The admin can create, edit and delete roles and permissions.
Precondition(s)	The user will need to have joined the server.
Actor	Admin
Basic Flow	1. Open the server 2. Click on server settings then roles 3. Click on the create role function/click on an existing role 4. If create role is chosen input a new role name and permissions/if an existing role is chosen input permission changes. 5. Save changes.

Use Case ID	UC8
User Case Name	Moderate members
Description	The admin can ban, kick, mute or deafen other users
Precondition(s)	The user will need to have joined the server
Actor	Admin

Basic Flow	1. Open the server
	2. Click on server settings then members
	3. Choose a member
	4. Choose an action of kick, ban, mute or deafen.
	5. Save changes
Use Case ID	UC9
User Case Name	Invitation link
Description	The admin can create invitation links for new members
Precondition(s)	The user will need to have joined the server
Actor	Admin
Basic Flow	1. Open the server
	2. Click on invite people
	3. Copy generated link
	4. Share the link to a prospective member

Use Case ID	UC10
User Case Name	Bot control
Description	The admin can add, setup and remove bots from the server
Precondition(s)	The user will need to have joined the server
Actor	Admin
Basic Flow (Adding Bot)	1. Open a bot invite link
	2. Choose the server to add the bot to
	3. Authorise bot permissions
Basic Flow (Setup)	1. Open the server
	2. Use the bot prompt to gain the setup command.
	3. Link bot to desired text or voice channel (depending on bot)
Basic Flow (Delete)	1. Open the server
	2. Click on server settings then members
	3. Choose the bot
	4. Choose the kick action
	5. Optional input of reason why the bot was kicked.
	6. Save changes

Use Case ID	UC11
User Case Name	Audit log
Description	The admin can view the audit log of the server to see any changes made by other admin roles
Precondition(s)	The user will need to have joined the server
Actor	Admin

Basic Flow	1. Open the server 2. Click on server settings then audit log 3. View changes

4.0 Implementation (Discord Server Building)

In Discord, the process of beginning to build a server starts off quite simple. You click 'add server' on the Discord dashboard, and it prompts you with the purpose of your server. The examples given are, 'For me and my friends' or 'For a club or community.' This process can also be skipped but choosing the purpose allows Discord to start with a basic template that can be adjusted for your needs. During this process, you are prompted with a chance to upload a profile icon for the server. In this case, the server the icon used was made by a young person.
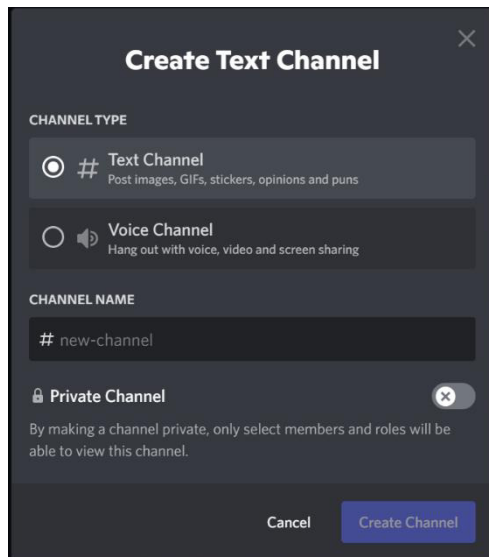
4.1 Feature – Channels

Figure 5 – Channels

Channels act as the core basis of any server being built on Discord. A server can't be considered a server without these, as they act as the foundation for everything done or used in a server. The two types of channels available are text and voice channels, self-explanatory in their names. One is used for text chatting only through typing, emojis, gifts and stickers and the other is used for speaking, video calling and screen sharing. Somewhat similar to being on a call. Discord's channel making process is quite conventional and can only be done one way. This is by choosing the create channel function in the channel section of Discord, where the prompt as shown below is then given. There are 29 different channels I created, 7 of them being voice channels, all being used for different purposes. However, some of these are only viewable by certain ranks in the server due to the permissions I put into place, but I will discuss this in more depth later. When creating a server, the layout and presentation of channels are nearly as important as the channel's purpose. In my opinion, a difficulty created by Discord when channel making is the inability to use capital letters or emojis when naming the channel. A solution to this problem was using Unicode's emoji charts and a font generator which allowed me to change the channel aesthetic to accentuate the channels, as shown in figure 6. Ensuring the views of the young people were considered and taken into account, multiple channels based on their recommendations were

Figure 6 – Aesthetic Changes

added. In the table below, I will outline the unique and vital channels in the server and a short description defining their purpose.
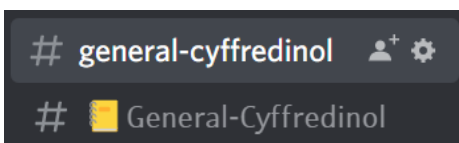
Type of Channel	Channel Name	Description
Text	General	Used for everyday chatting in the server, announcements and general updates.
Text	CYS Uploads	Used for updates of all of CYS's linked online platforms from PingCord.
Text	News	Used for providing update on important news articles on technology, gaming and sport.
Text	Well-being	Used for providing information mental health and addressing mental issues.
Text	Polls	Used for making voting polls with the Simple Poll bot.
Text	Opportunities	Used for sharing interesting courses and competitions.
Text	Recommendations	Used as a space for sharing suggestions for the server, activities, movies or games people would like to do.
Text	Pokémon	Used for interacting with the Pokétwo bot.
Text	Question of the Day	Used for interacting with the QOTD bot.
Text	LGBTQ+	Used as a space for chat, community and support for LGBTQ+ people
Text	Gaming	Used as a space to talk about progress on games and new games people should try.
Text	Art	Used to share and display artwork and have artistic competitions.
Text	Study Support	Used as a space to ask for help with schoolwork or help with revision.
Text	Music	Used as a space for music recommendations and interacting with the music bot Hydra to play music in the voice channels.
Text	Tech Support	Used as space to ask about any issues regarding the server.
Text	Youth Workers	Used as a space where only youth workers can send messages to brainstorm on ideas for the young people.
Voice	Gaming	Used as a space where people can share their gameplay and watch others play games.
Voice	Music Listening	Used as a space to listen to music through the Hydra bot in the channel.
Voice	Movie Watching	Used as a space to have watch parties for movies and tv shows.

Table 2 – Channel Descriptions
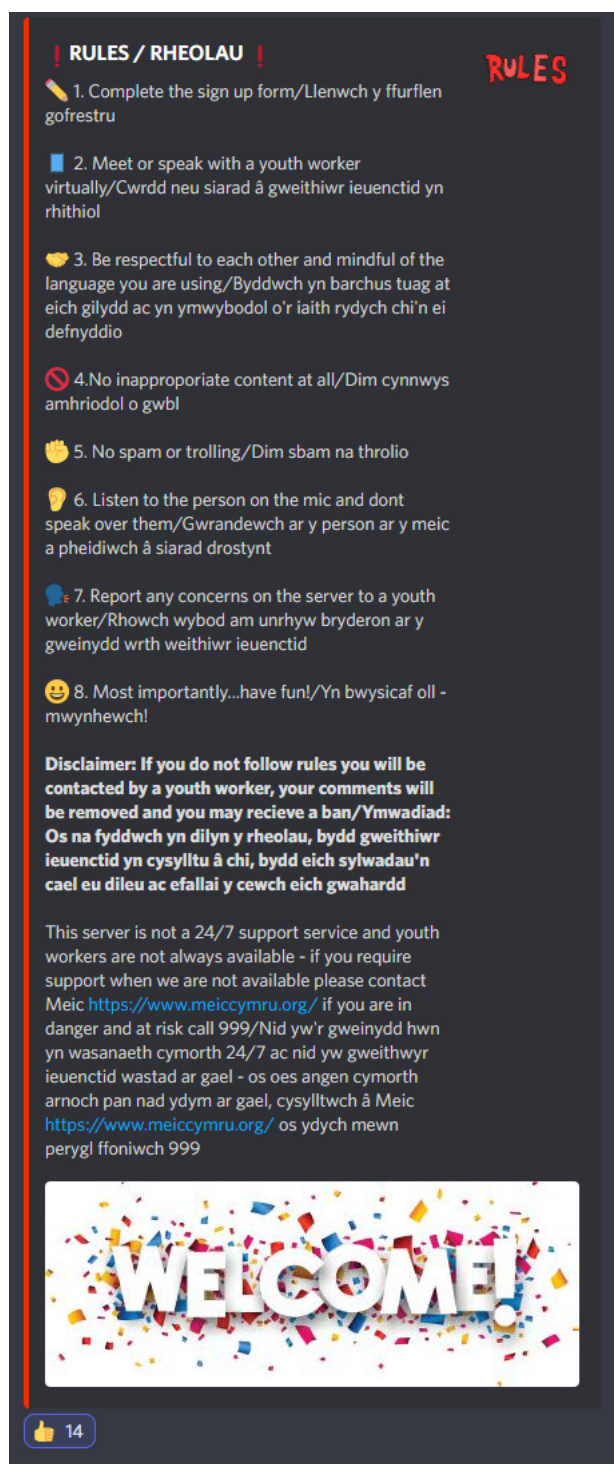
4.2 Feature – Rules

Figure 7 – Rules

Rules are a vital part of a server's image. The same way you must accept terms and conditions when using an app or visiting a website is the same image a server wants to give off. There are multiple ways to build a rules page. The easiest is using Discord's built-in membership screening function. This way is only available if you chose to build a server as a 'community' server which I chose not to do. However, the community server offers some different benefits to the normal server building, such as access to server analytics and insights and Discovery, which allows more people to find the server. Unfortunately, this is only available when your server hits 500 members, which is a number, we are long away off due to this being a new online platform for CYS. I opted away from this aspect due to the complexity it might create for me. As it was my first time creating a server, and us being nowhere near that number. The community aspect also adds an extra layer of security from spammers as you need a verified email account to join. However, I felt this would not be an issue a server of our scale would face because we kept our server private and invite-only. The email verification could affect the server negatively and act as a deterrent for newer members of Discord willing to try out our server, which might not want to verify an account just yet. To set up a rule page, I built a normal text channel and made it the first channel seen on the server in bold and red exclamations called rules that would be the only channel available to members who are yet to accept them. I then used an integration built into a moderation bot I used called MEE6 called reaction roles that allowed both images and text to be used to create the actual rules for the channel. I chose to use MEE6 because MEE6 uses a dashboard system through an internet browser that automatically updates into the server. This allowed it to be separated from directly changing other aspects in the server's Discord application, allowing it to be more ordered from my point of view. Additionally, the dashboard for MEE6 is very user-friendly. It allowed for a simple explanation to the youth workers on how to make changes for the future or if I am unavailable. Lastly, when a new person joins the server, they are given a 'Pending Member' role that only allows them to see the rules channel. MEE6 will automatically

give a 'Pending Member' the role 'Member' when they choose to accept the rules by using the thumbs up icon I chose to be presented to the user. If the user chooses to unclick the thumbs up icon at a later date, their role is taken back from them, and they will be returned to a 'Pending Member" role.

4.3 Feature – Ranks and Permissions

Figure 8 – Roles

Discord has a unique feature compared to mainstream social media apps such as WhatsApp, Instagram, Snapchat, etc. This ability is to create a ranking system for members with different permissions that range from actions they can and cannot do or things they can and cannot view. There are eight different ranks in the server that differ in the hierarchy of ranking and permissions. The hierarchy and ranks of roles starting from the highest available role are Youth Worker (Admin), Tech Support, Youth Worker, Youth Moderator, Member, Guest, Bots, and Pending Member, as shown in figure 8. Below, I will specify each role's major permissions, outlining why the permission was given in the form of a User Story.

Youth Worker Admin – This role is at the top of the server, and I made sure every single permission available was given to this role. As a Youth Worker Admin:

- I need to be able to view all channels to monitor the content of every channel on the server to make sure they abide by the server rules.
- I need to be able to send messages to communicate with the other users on the server.
- I need to be able to use video and voice calls to communicate with the other users on the server.
- I need to be able to manage all the channels, whether that is creating, editing or deleting channels. When recommendations are given or channels for new purposes need to be made, deleted or edited, they can be done to increase server engagement. Additionally, channels can be changed into a read-only state during the weekend when all youth workers are out of hours.
- I need to be able to manage roles in the server, whether this is creating, deleting or editing the roles. Being at the top of the server, I can edit any role in the server to give them permission to a channel that might not be viewable in their role or create a new role for a new purpose as the channel grows.
- I need to be able to view the audit log to make sure that any changes being made to the server I am aware of and I know who the person making the changes is.

- I need to add new members by creating a private invite link to keep the server private from unwanted users and spammers from joining.
- I need to be able to add moderate members, whether that this kicking, banning, timing out, muting or deafening members, to keep the server a healthy and safe environment for everyone and make sure the rules of the server are adhered to.

Tech Support – This role has all the same permissions as the Youth Worker Admin and was created for me to take care of any problems the server might have had when the young people started being invited on.

Youth Worker – This role differs slightly from the Youth Worker (Admin) role. The main difference is the 'admin' youth worker role is only for those who interact with the server daily, as they were part of the initial push for the digital platform to extend the reach for the young people. This role is meant for all youth workers who want to come onto the server for interactions or specific activities. The permission I granted for this role is much simpler as they can view channels, manage channels, send messages, and interact through voice and voice chat.

Youth Moderator – This role is just below the Youth Worker role and was created to offer a chance for young people who were the original set of members to join the server. This role could extend to newer members down the line but essentially gave them a chance to interview to become a moderator of the server. They will act as intermediary staff force to make sure people adhere to the server's rules and keep a healthy environment. The permissions the CYS decided on were the basics, such as making sure they can view channels, sending messages, and video and voice calling. Additionally, they will also be able to add and remove bots from the server and act as testers for new bots that want to be on the server later. This is a perk they will have that even the Youth Workers will not.

Member – This role is the other significant actor role in the server. The members, referred to as the young people, make up the bulk of the server. Although their permissions are limited, their interactions and engagement with the server are the core foundation as to what makes this server successful or not. Therefore, any suggestions or changes they ask about would be extensively considered. Their permissions are basic and kept at being able to view channels, send messages and interact through voice and video calls.

Guest – This role I created after some suggestion from CYS on the possibility of having outside visitors join the server to give talks or advice on specific matters. I have created the role with permission to view only two channels, the general text channel and the general voice channel. I felt guests would not need to see what else goes on in other channels, therefore have been limited to this. They can also send text messages in this channel and use the voice and video function in the voice channel. I had felt it might be easier to create a 'dummy' Discord account where the details can be passed on to multiple guest speakers who need it on a particular day. This would prevent having multiple users from staying on the server for a prolonged period of time. I thought this would be best because nothing malicious can be done with the permissions I have given to the account. After the speaker has given their talk, an admin can remove the permissions of viewing the two channels rendering the account useless until permissions have been changed back agaom.

Bots – This role doesn't have any necessary permissions. This role was made to simply split all the bots in the server into one section for an ordered display. All bots have permissions you must give when you invite them to the server, which I will speak about in more detail later.

Pending Member – This role, as explained earlier, is the role given to you when you join the server. It is simply the placeholder from when you join and before you accept the server's rules. Its only permission is to be able to view the rules channel. As soon as the rules are accepted, you will be automatically changed by the moderation bot to a member role.

4.4 Feature – Bots

Discord bots are a vital component for any well-run Discord server. They are made by third parties and help perform a variety of tasks to help automate things in a server or increase activity. Some bots are AI-driven tools that make building communities that truly engage with the server more accessible. These bots range from simply adding a welcome message to new members to providing server analytics or adding games to be played on the server. Some bots are free for anyone to download with premium features you need to pay for or must be bought to use as a whole. There is no official Discord bot page from which to choose bots for your server, as their functions differ majorly. However, some sites are available that help brings traction to more commonly sought-after bots due to user reviews. However, these sites can be overwhelming to new users like me. The best way to find results on bots was a mixture of researching what I needed a bot to do first and then looking at either YouTube videos or other servers that had the bots active on their server. Many competitor bots do the same thing as each other, so choosing which you prefer for your purpose is also a task. Adding a bot to your server is quite a simple process. It is simply following a link given by the third party creating the bot, and a prompt will pop, as shown in Appendix A, will ask which server you want to add the bot to and to authorise the permissions you want to give the bot for it to perform its actions. This section will outline the bots I have currently implemented on the server, their functions and why I chose them.

MEE6 – MEE6 is a Discord bot featuring moderation tools and levelling. It has many functions that allow server moderation, starting from welcome messages, and custom commands to music and statistics. This bot is used in over 15million servers, and its primary purpose is for the moderation ability it offers. However, other bots offer these same functions, such as Dyno and Arcane. Firstly, I had been on different servers which used MEE6 and had known how easy it was to use it, so naturally, I was more biased towards it. MEE6 bots' usage numbers far outweigh Dyno's by almost 3x due to bot uptime. Bots can go down for various reasons, whether that might be an issue with the hosting server or a fault. MEE6 is a bot with incredibly high uptime, so it seemed to be a reliable choice to use rather than Dyno, which has had multiple issues in the past. MEE6 also has the aspect of server levelling, a hugely beneficial function in comparison to the other two bots. The server levelling acts almost as a reward for users for interacting with the server (messaging and or time spent in voice channels), as the more they do, the higher their level in the server. At this point in time, we do not have benefits and rewards for higher levels, but CYS are currently outlining what these benefits would be to encourage more engagement on the server. There are also other features such as reaction roles and built-in basic statistics for counting the number of bots, channels and members in the server at all times. The profanity filter was the last key feature that helped moderate the server that I found helpful. What set apart MEE6 from the counterparts I found was that MEE6 let you choose the words

to filter yourself by uploading a list of words. I had an issue with another profanity bot where, if the word 'side' was in the banned words, it would automatically flag any word with 'side' inside it, such as 'consider'. This caused words not in the banned list to be flagged continuously.

Hydra – Hydra is quite a simple bot in that it really is only used for one function: listening to music. Having music on our server was a requirement and heavily requested by the young people. Finding a bot to do that was a must. There were a lot of different bots that play music, but I chose it because Hydra was one of the only free bots available that supported the widest range of music streaming platforms. This included Spotify, YouTube, Twitch, Deezer and many others. The bot also can play music straight from a URL copied from a web browser. Hydra also has a unique feature that can tie the bot to one channel, explicitly making creating queues of songs easier to request and observe.

PingCord – PingCord is a bot that is designed to notify your server from a variety of sources. These sources cover the majority of the social media apps, ranging from Tiktok, YouTube, Instagram, Reddit, Facebook, Twitter and many others. This bot was not essential for the server but allowed for greater accessibility to all of CYS's online platforms in one space. The beauty of the bot stems from whenever a new video on CYS's YouTube page or a new post is made on Twitter on Instagram. Within a maximum of two minutes, a notification that often comes with a preview of a post is shared onto the desired channel on the server. This allowed all CYS's social media presence to be displayed in one place, rather than having the young people constantly search the different online platforms. I could have used MEE6 to do this same function, although I was capped at linking more than two different online platforms there without paying for the premium version. PingCord allowed me to link more (I only linked it to three platforms, so it could possibly have allowed more) online platforms than MEE6.

Pokétwo – Pokétwo is a bot that tries to bring the Pokémon experience to Discord. It is not the same as playing the Pokémon game we know and love but offers a more basic version linked with Discord's application. The more interaction is on the server. The more Pokémon are 'spawned' and can be caught by the users. The users have the same goal to catch all the Pokémon in the Pokédex as the usual Nintendo game or can choose to battle against friends in the server in a text-based format. I was not aware of this bot until much later in the server building process, and it was a heavily requested bot by the young people.

Pronoun Picker – Pronoun Picker is a bot that is as simple as it sounds. This bot was created by Discord itself, so its uptime is sure to be reliable. This bot was added due to a popular request by the young people for pronoun inclusivity. Multiple members identify themselves with different pronouns, and therefore, having this bot was a must. This bot has the most common pronouns available as a selection and an option to type and create your pronoun yourself. When chosen, a pronoun can be attached to your profile on the server. This allows people to know how to address each other.

QOTD Bot – Question of the day bot is another simple yet effective bot. Doing the beginning process of creating the server, I had previously seen that conversations were often sparked by youth workers themselves and never the young people. I found and chose to add this bot to change that. I set up this bot to ask a random PG question every day at approximately 12:30 pm. It could be as simple as "what is your favourite junk food" or "if you could know the absolute and total truth to one question, what question would you ask?". I created a channel specifically as a place for interactions with this bot to be had. As a result, the channel is one of the most

engaging channels. It also gives a chance for young people in the channel to speak up and be the conversation starters.

Simple Poll – Simple Poll is a bot that allows you to create polls easily and answer by using emojis to pick from the multiple-choice. This bot was a requirement for the server as CYS found that when asking young people for activities to do, people often did not want to be the first to reply or were shy to respond. It could take quite a while, rather than having multiple answers from different people and counting them. Albeit the server is relatively small as of now, however, it would later become hectic and tiresome to continuously count input by members at the speed it is growing. The bot works like any usual polling or voting system, making it easier for the youth worker when it comes to results. Additionally, if the topic is sensitive, the poll can be anonymous to all young people, allowing only the youth worker to see the results.

Statbot – Statbot is a statistics and analytics bot for Discord servers. It is known as the largest statistics bot that tracks the most type of stats. Having some sort of analytics for the server was a major requirement as it's the best way to measure engagement through activity in channels, messages sent per person etc. What set Statbot out from the competitors I could find was the depth of the analytics, especially from a free bot. Many bots only had basic analytics that would show the number of members or bots in a server but nothing on a deeper level. Statbot was a revelation as not many bots with these features are free of charge on Discord. Statbot offers in-depth analytics that shows the message count of all time for each member on the server, the message count of each channel, the voice activity in each voice channel and time spent by each user in a channel. These stats are shown as raw data, converted into both pie and graph charts and can be exported as CSV files. The only limitation to this bot is that each only tracks these counts by day. If the premium features are bought for this bot, deeper dives can be given, and hourly statistics can be provided.

5.0 Evaluation

In this section, I will talk about to what extent I achieved my goals, the reasons for why and if I did not achieve a goal and how I tested to make sure the server was adequate for the CYS team. Additionally, I will also speak about the strengths and weaknesses the server might have.

5.1 Testing

As I spoke about earlier, the server contained many different types of roles, but the two main roles were the Youth Worker Admin and the Member roles. I refer to the Youth Worker Admin role as just "admin" for this section. The need for proper testing of these was crucial as they were the core fundamentals for the server to run smoothly. All roles were tested to ensure the quality of the server was according to the standard expected from CYS. In this case, I will only display test cases concerning the two main roles to avoid unnecessary repetition of the server functions. When testing the sever, it was at first difficult for me to do so. This was because of the hierarchy ranking system prebuilt into Discord. No matter what role I gave myself because I was the 'server creator', I automatically had all the permissions and could not view from the perspective of solely a lower-ranking role. I had initially thought of transferring server ownership to another person so I could see the other roles' perspectives, I.e., what permissions they could or could not do. However, if there were problems with a previously set permission, I would require another person to repeatedly give me a higher-ranking role and repeat the process, making it tedious. I then decided to create a dummy Discord account and add it to the server to test each role specifically, which worked at first but sometimes became confusing doing it on one system. Later I found a way to resolve this issue, and it saved me a lot of time when testing each requirement. Discord has a feature that lets you view the perspective of another role on your usual account, as shown in figure 8. This process saved me an enormous amount of time as it meant that I could be given the exact point of view of another role without the need or hassle of changing accounts.
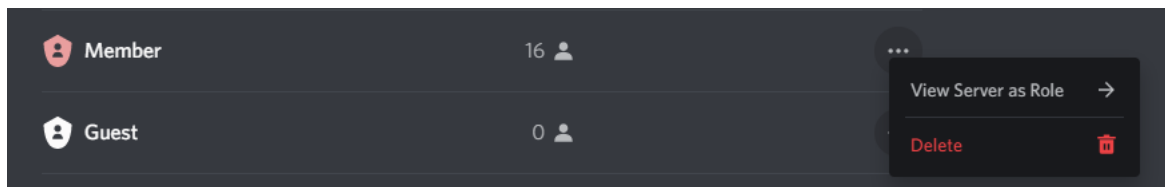

Figure 9 – Viewing Server as Role

5.2 Test Cases

For this section, I will provide an example of a singular test case in full and the rest in a shorthand version.

Test Case ID: TC1				Test Designed by: Adekoyejo
Test Priority (Low/Medium/High): High				Test Executed by: Adekoyejo
Test Title: Verify an invitation link can be created.				
Description: Testing that an invitation link can only be created for new users by admin.				
Pre-conditions: User has the role Youth Worker Admin.				
Dependencies: None				
Step	Test Steps	Expected Result	Actual Result	Status (Pass/Fail)
1	Navigate to invite person function	A link is generated that can be shared	A link is generated that can be copied to the clipboard	Pass
2	Copy link generated			

Test ID	Description	Priority	Pass/Fail
TC1	Testing that an invitation link can be created for new users by admin	High	Pass
TC2	Testing that other non-admin roles can't create an invitation link	High	Pass
TC3	Testing all channels are viewable by admin	High	Pass
TC4	Testing admin and youth work-based channels and not viewable by other roles	High	Pass
TC5	Testing channels can be created, edited and deleted by admin	High	Pass
TC6	Testing channels can't be created, edited and deleted by non-admin roles	High	Pass
TC7	Testing roles can be created and deleted by admin	High	Pass
TC8	Testing roles can't be created and deleted by non-admin roles	High	Pass
TC9	Testing permissions can be changed by admin	High	Pass

TC10	Testing permissions can't be changed by non admin roles	High	Pass
TC11	Testing changes on the server can be viewed by only admin	High	Pass
TC12	Testing that bots can be added and deleted by admin	High	Pass
TC13	Testing that bots can be added by a youth moderator	High	Pass
TC14	Testing that members can be moderated by admin	High	Pass
TC15	Testing all roles can send messages	High	Pass
TC16	Testing all roles can use the voice and video function	High	Pass
TC17	Testing all roles can interact with bots	High	Pass
TC18	Testing rules must be accepted before server access is permitted	High	Pass

Table 3 – Test Cases

5.3 Upskilling and Aesthetics

Outside of the server's functionality regarding what CYS wants, some parameters make a project like this successful. Things such as aesthetics and how straightforward navigation around the server are just as vital as the functionalities. In my case, Discord being a well-known, widely used application, navigation through my server came naturally to most users, especially young people. The most significant barrier to this was with the youth workers, as they had to get used to an online platform alien to them. To combat this, I created a 'How-to' channel where I put short subtitled videos to show how to perform basic actions on the server. This could be how to send a message or how to change permissions for a role. Aesthetics was another significant component as people prefer things to be clear, concise and easy on the eye. I spoke about this earlier in the channels section of the report. In addition, having a lower number of channels and keeping them short and to the point allows users to see and understand the purpose of each channel much quicker. Having unnecessary channels to siphon through would create confusion, making it tiresome for users. The layout was also an essential aspect of the designing process, keeping channels in smaller categories for ease of access. For example, a channel related to a bot would be kept in a subsection titled 'bot activities'. Lastly, having text channels at the top of the server and voice channels near the bottom is common practice for servers as the text chat functions are used far more often than voice.

5.4 Unsolved Problems

Overall, throughout the project, I felt the needs of the server were constantly being adapted. Many changes and challenges emerged as the project went on, and I felt as though most of the issues or requests that arose, I managed to develop an answer. However, there were also times when I could not produce a solution. A note made earlier in this project's survey was that female young people were less engaged, and it was commonly noticed from the survey consultations. A higher majority of them also seemed unaware of what Discord was, and CYS wanted to address this. Significantly more males than females use Discord worldwide, which majorly impacted female engagement for this platform. Therefore, I felt that the best solution would be exploring a different online platform to reach more female young people. There was also interest in having an anonymous bot for speaking to youth workers in confidence. The anonymous bot would have

been the perfect way for young people to speak to youth workers about personal issues without revealing themselves. However, anonymity is a sensitive subject because of the risks that come with the positives it brings. The issue here was the fear that a young member of the server could send messages to other members without being able to be traced. This sparked a massive conflict of interest with this bot. The client chose to scrap it as the issues it may bring would far outweigh the benefits. In the end, no concrete solution was found. We accepted that the young people would be confident to speak to a youth worker they felt comfortable with if a problematic situation ever emerged.

5.5 Satisfaction

Outside of building the server to encapsulate the ideas of the young people. Making sure I received feedback from my contact at CYS throughout the creation process was vital. Occasionally, young people suggested ideas that initially seemed like good ideas, but later, the client decided against them. This could have been for social reasons, i.e., the impact on the environment it would create or simply because they did not like it. This showed how, although the server was for the young people. The client had rules and regulations to apply to that must be fulfilled. An example was a truth or dare bot. The truth or dare bot was highly anticipated, but later the client decided against it due to the uncertainties of the question. This was because the bot was made by a third party who created the questions. When it was on the server, the bot was set at PG rating to avoid inappropriate dares or truth questions to be asked. However, even with the set rating, some dares from the bot were slightly unfavoured by the client, so they decided to go without it. Receiving continuous feedback on new additions to the server, like on this bot and discussing further action, allowed me to test and try new and different things. It also meant that instead of producing massive changes with the risk of having to remove or change it all, progress was never halted but just altered for another solution. Additionally, I felt as though, given the time constraints and the prior experience I had, my client and the young people were happy with the results of the server.

6.0 Future Work

As with any project, there is always room for improvement, and there is no exception with this project. Some time constraints did not allow me to implement some aspects that I had spoken about with the CYS team, but naturally, the youth workers could implement some of the improvements later. There are some points I would like to focus on that I will speak about in this section. Additionally, a massive benefit for the server would be taking the survey we used and interacting with a larger group of students. This is for several reasons, but the primary reason is that the more people we reach, the more ideas and suggestions the server will have.

The first room for improvement would be paying for premium features on some bots. The Statbot is a perfect example of where to start. At the minute, the Statbot does provide analytics for the server. However, we can only see two time periods. The first is from the day the bot joined the server, and the second is the last 14 days. While this offers some range, the premium feature lets you choose the period anywhere between the current date and the first day the bot was added to the server. This would be hugely beneficial for the CYS team to measure engagement over specific time periods to see the cause of an increase or decrease. The price for premium features on each bot will vary, but having the premium aspects of some bots in the server will help interaction and moderation throughout the server. An alternative solution to

paying for bots that could have been possible with extended working time is creating a bot myself. Creating a bot myself could almost be another project, depending on the bot's functionality. However, with a good sense of programming skills and experience, it would save money and provide features to our server that other servers would not have access to as it would be kept private by myself. Self-made bots would be hugely beneficial as long as it is compatible with the Discord API, a game, a moderation tool or something to spark interaction could be created. The only actual fee that would incur from this would be the cost of hosting the bot. The last addition for an improvement would be another financial investment called server boosting Discord offers. Discord lets you pay for server boosts that benefit the boosted server. These boosts allow for various assets such as server custom emojis, an increase in audio quality, 60fps streaming on the server, larger upload limit sizes and many other perks.

7.0 Conclusion

The project's main aim can be divided in two – firstly, to create a product that could be used by the young people that engage with CYS for increased engagement. The second aim was to ensure the creation of the application based on the ideas and suggestions of the young people. The young people needed to feel involved with the process, and their feedback on ideas added and implemented on the server was critical. Overall, I felt both aims were achieved through the surveys and constantly reaching out and interacting with the young people. Their input throughout the process has proven beneficial in terms of the high engagement the server has received so far. Equally I felt the second aim was met as most of the requirements I set out at the start of the journey were satisfied to a high standard. This resulted in my client being happy with the overall project results. The client, in particular, praised the fact that I was keen to engage with the young people right from the start and kept in close contact with them throughout the project. The client was so happy with the server that they offered me a part-time role where I would help with the moderation and upkeep of the server and the upskilling of youth workers and interaction with the young people. From the research and implementation I did, I learnt a lot about how Discord works, the way it can be used for more than just interactions with friends and about youth organisations all across the UK. This real-world experience allowed me to implement my technical skills and understand the procedures and human elements that encompass interactive platform development.

8.0 Reflection

Some of the skills I learned over the few months of doing this project would benefit me in the future. Discord is an application used by so many people for different purposes. In my case, I was already a leisurely user of Discord with my friends and had been on smaller-scale servers. Some of the knowledge I have gained could be used to change and improve the servers I am currently in. In addition, due to the nature of the project being with a client rather than completing a project myself, it felt like completing a task for a business or stakeholder. This made the project invaluable for my career development as it felt like a real work experience. When I had problems, I could use my autonomy to solve issues, or if I felt uncertain about suggestions, I could interact directly with the client to come to a middle ground. I felt this particular aspect of the project made the entire project feel more engaging and rewarding. Rather than completing a project myself, the human-to-human contact allowed me to feel motivated. The project also gave me a chance to develop my communication skills with not only the client and my supervisor but also the young people. Being quite a shy individual, having to step out of
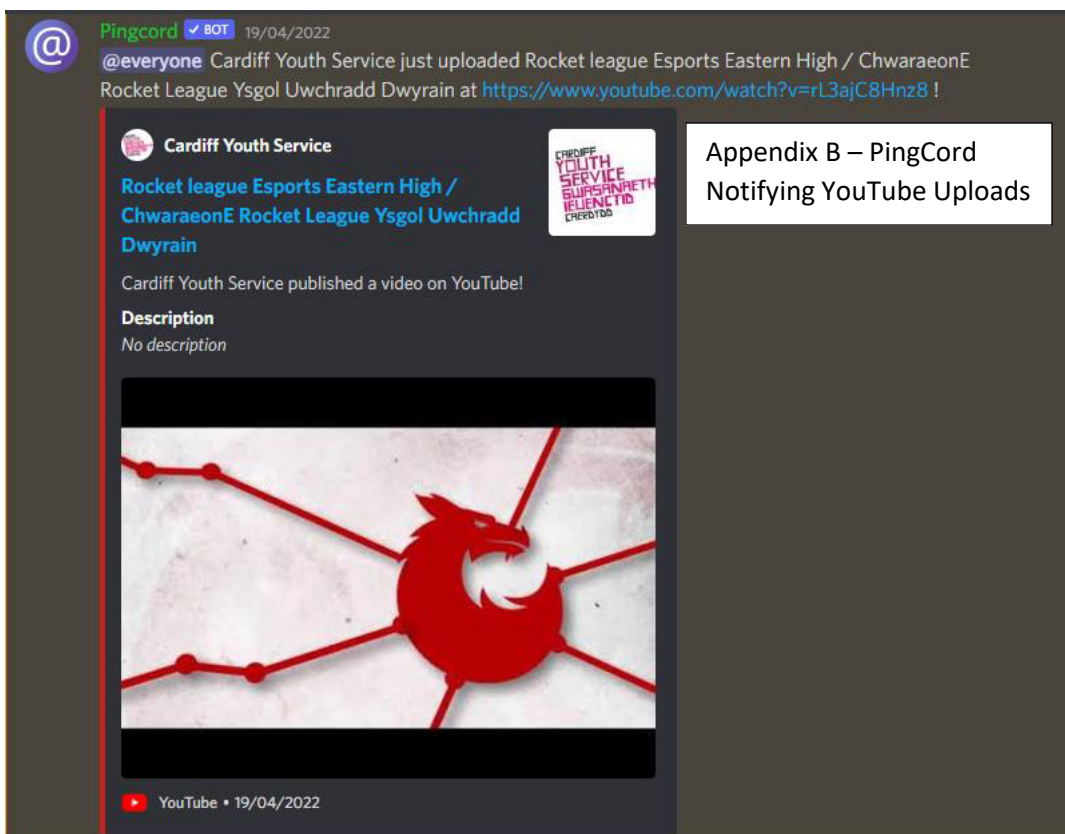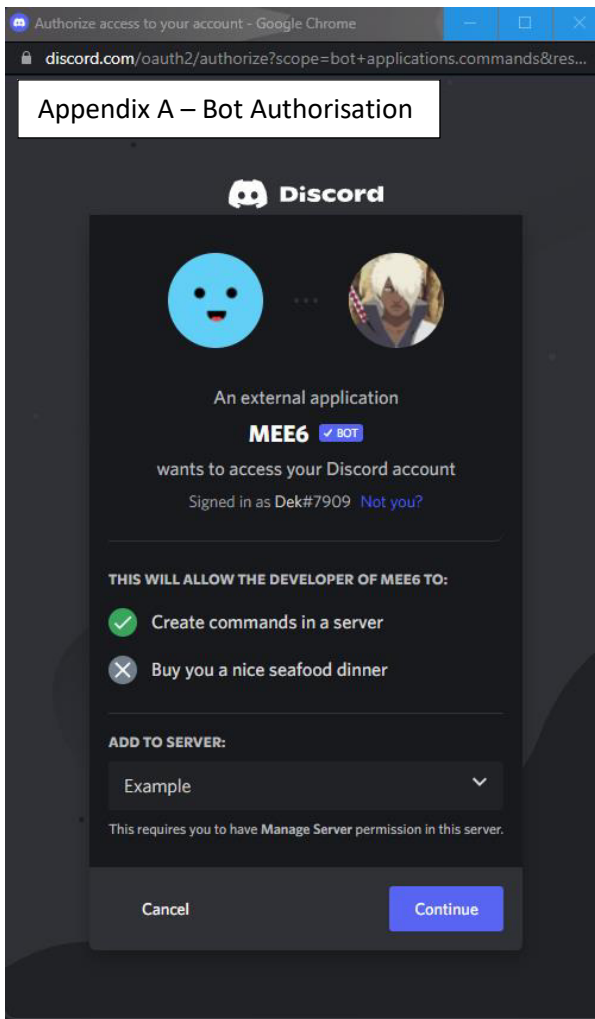
my comfort and be the main contributor in conversation was essential to gain feedback from the young people. It has already and will continue to benefit my communication in the future. Another main thing I gained from this project was my project management skills. Setting a work plan and time frame to accommodate software and tailoring it to the needs of a target audience was challenging but rewarding. It showed how important decisions I made altered the outcome and how necessary might attentiveness to detail needed to be.

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Appendix A

Screenshots

Appendix A – Bot Authorisation

Appendix B – PingCord Notifying YouTube Uploads

Appendix C – Statbot Analytics
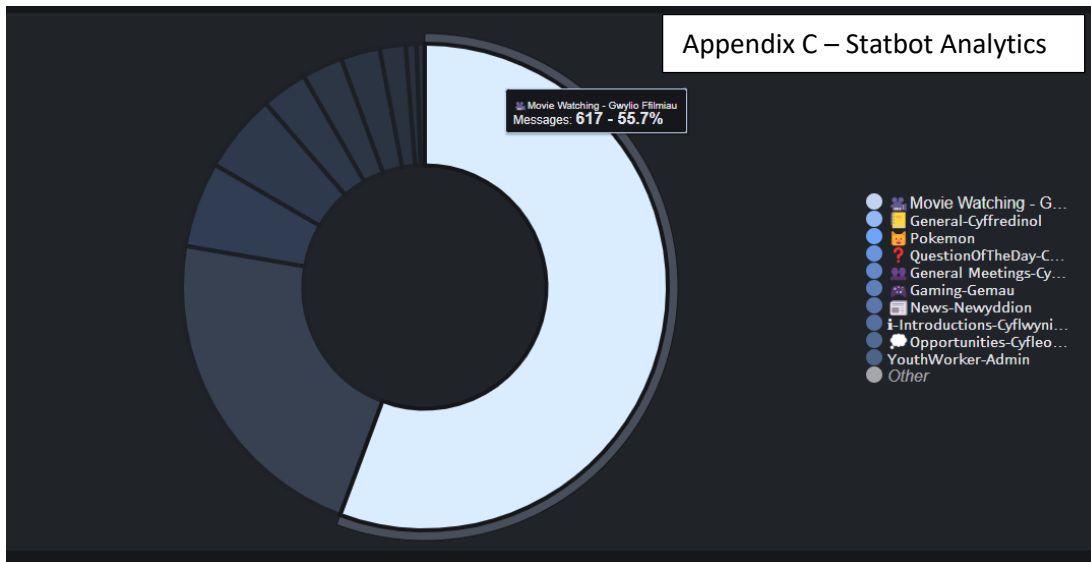
Appendix D – Pokétwo Bot Interaction Prompts

Appendix E – QOTD Bot Interaction Prompts

Appendix F – Pronoun Picker Prompts

👋 Hey there! What are your pronouns?

Use the buttons below to select what pronouns you'd like us to display for you.

Add this bot to your own server

They/Them She/Her He/Him

Any Ask Me Pick Multiple

Appendix G – Example of Simple Poll

Dek used /poll

Simple Poll ✓ BOT 12/02/2022

📊 Is the new server up to standard?

A Yes
B No
C Possibly
D We miss the old one!

A 7   B 1   C 1   D 2