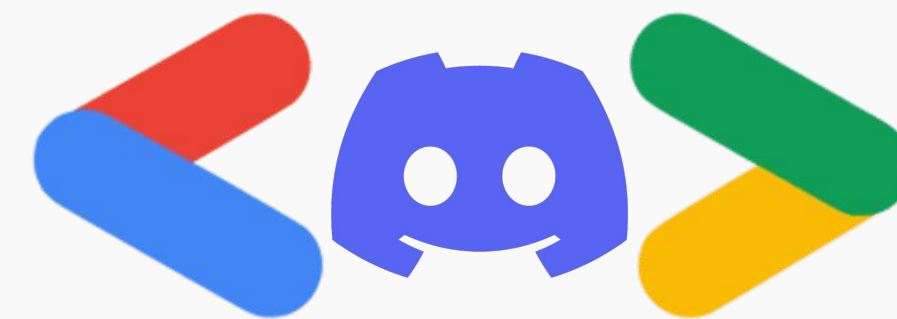


Discord.js Workshop

Make your own Discord bot

Ido Ben Haim

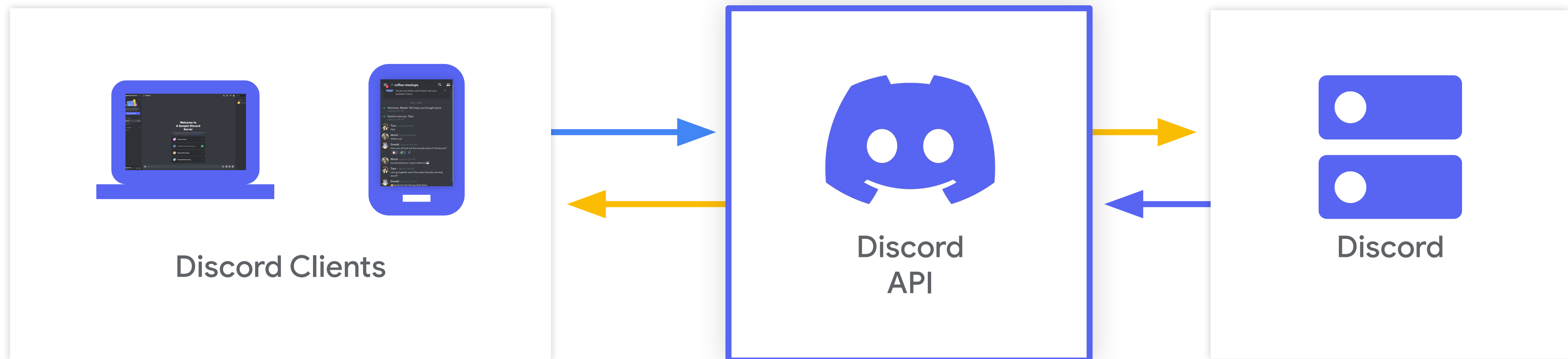


```
filterByOrg = filterByOrg ? study.lead_organization === filterByOrg : true  
filterByStatus = filterByStatus ? study.status === filterByStatus : true  
studies = studies.filter(study => filterByOrg && filterByStatus && !filterByMatchStatus) }
```

```
function filterStudies({ studies, filterByOrg, filterByStatus, filterByMatchStatus }) {  
  return studies.filter(study => filterByOrg && filterByStatus && !filterByMatchStatus)
```

The Discord API

- Reminder that a REST API is a way to communicate between a client and a server
- Rest APIs lets the user issue requests via API endpoints
- Discord uses a REST API to host communication between the client (you) and their servers



The Discord API

- Discord's API uses the [JSON format](#)
- Discord authenticates users using tokens stored in the request headers
- Look at the [Discord Documentation](#) or more information about the REST API

List Guild Emojis

GET /guilds/{guild.id}/emojis

Returns a list of **emoji** objects for the given guild.

Get Guild Emoji

GET /guilds/{guild.id}/emojis/{emoji.id}

Returns an **emoji** object for the given guild and emoji IDs.

Create Guild Emoji

POST /guilds/{guild.id}/emojis

Create a new emoji for the guild. Requires the `MANAGE_EMOJIS_AND_STICKERS` permission. Returns the new **emoji** object on success. Fires a **Guild Emojis Update** Gateway event.

⚠️ Emojis and animated emojis have a maximum file size of 256kb. Attempting to upload an emoji larger than this limit will fail and return 400 Bad Request and an error message, but not a **JSON status code**.

ℹ️ This endpoint supports the `X-Audit-Log-Reason` header.

Snowflakes



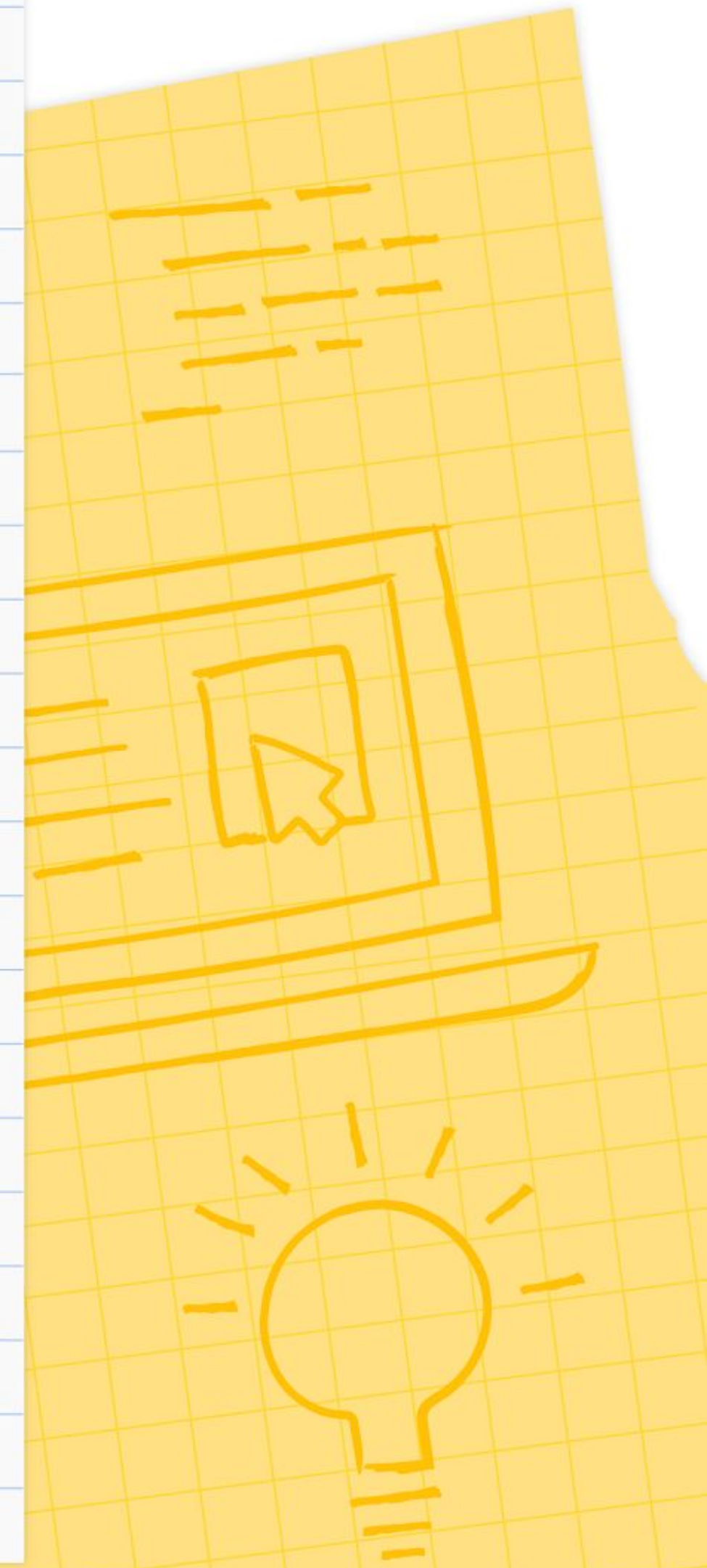
- Snowflakes are unique IDs generated based on the current time
- Snowflakes are a way to identify anything in discord
- Can be used to identify users, channels, emojis, servers and anything else you can think of



Snowflakes



- To get the Snowflake of something in user you need to enable developer options on your client
- Do this by clicking **Settings -> Advanced -> Developer Mode**
- Congrats! You are now a developer :)



Snowflakes ❄️



- To get the Snowflake of anything on Discord Right click it and press "Copy ID"

G(reaDing week)(wor... ▾

- # 🍷 | career-cafe
- # 🦊 | community-proj
- 🔒 ask-us-anything 2
- 📡 Workshops
- 🖥️ OPE
- 📺 os
- # 📄 re:
- # 📄 ge
- # 📄 au
- # 📄 po
- # 📄 co
- # 📄 dir
- # 📄 git
- 🔊 de

SIDE PL

++ 🐱

Mark As Read

Invite People

Copy Link

Open Chat

Hide Names

Mute Channel >

Notification Settings >
Only @mentions

Edit Channel

Duplicate Channel

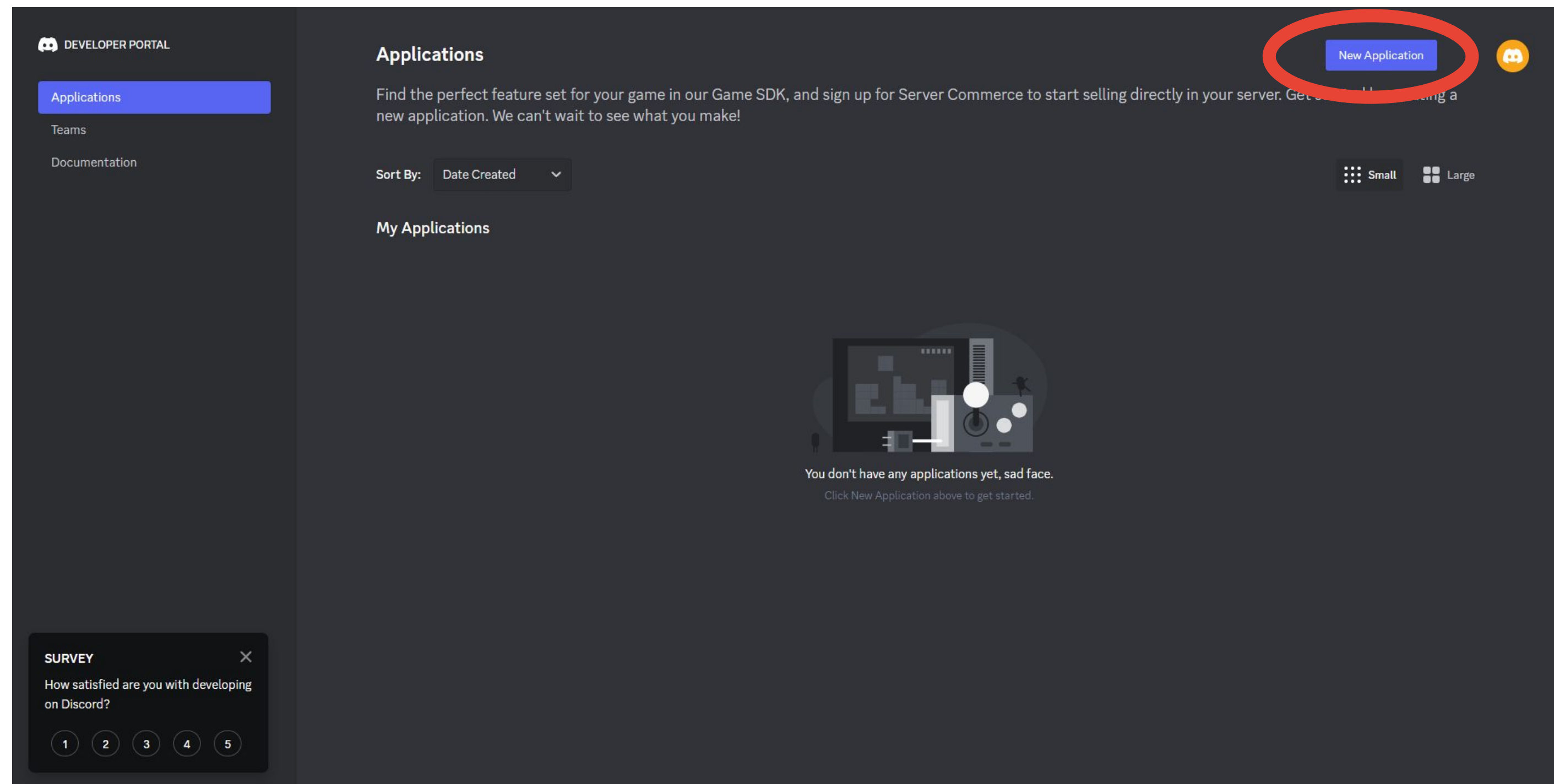
Delete Channel

Copy ID ID

📄 The G #7731

Creating a Discord App

- To access the Discord developer features, you need to create an application
- Go to <https://discord.com/developers> and press "New Application"



Creating a Discord App

- Give it an appropriate name and accept the term of service

← Back to Applications

SELECTED APP
My First App

SETTINGS
General Information
OAuth2
Bot
Rich Presence
App Testers

General Information

What should we call your creation? What amazing things does it do? What icon should represent it across Discord? Tell us here!

By clicking Create, you agree to the Discord [Developer Terms of Service](#) and [Developer Policy](#).

APP ICON
MFA
Size: 1024x1024

NAME
My First App

DESCRIPTION (MAXIMUM 400 CHARACTERS)
Your description will appear in the About Me section of your bot's profile.

TAGS (MAXIMUM 5)
Add up to 5 tags to describe the content and functionality of your application.

APPLICATION ID
1078180304616968252
Copy

PUBLIC KEY
adccdc413b4ceb77a17e4739b453baae4dfe5bbf4ea7bf7b4d3d97f8398302d8
Copy

INTERACTIONS ENDPOINT URL
You can optionally configure an interactions endpoint to receive interactions via HTTP POSTs rather than over Gateway with a bot user.
`https://nice-example.local/api/interactions`

LINKED ROLES VERIFICATION URL

SURVEY
How satisfied are you with developing on Discord?
1 2 3 4 5

CREATE AN APPLICATION

Are you a game dev? We may already have your app in our database. Reach out to our [Dev Support](#) for more info and to claim your game!

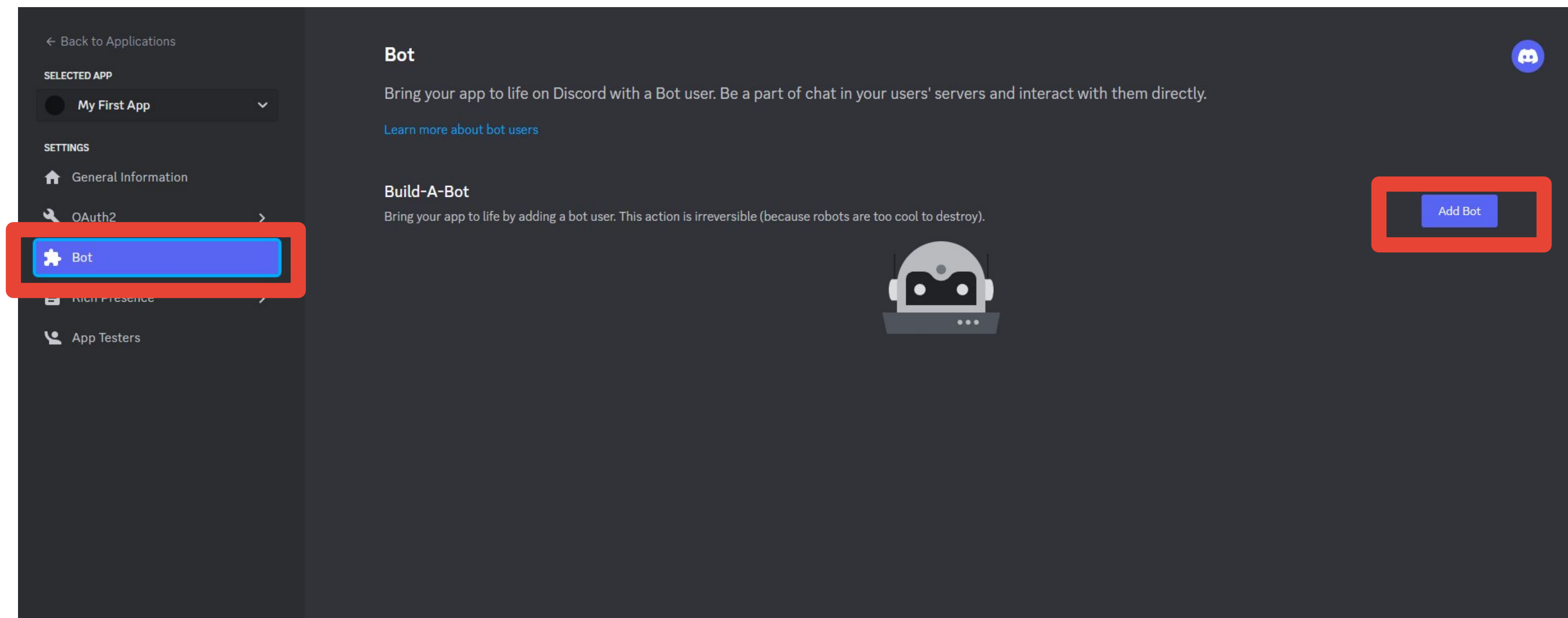
NAME *
My First App

By clicking Create, you agree to the Discord [Developer Terms of Service](#) and [Developer Policy](#).

Cancel Create

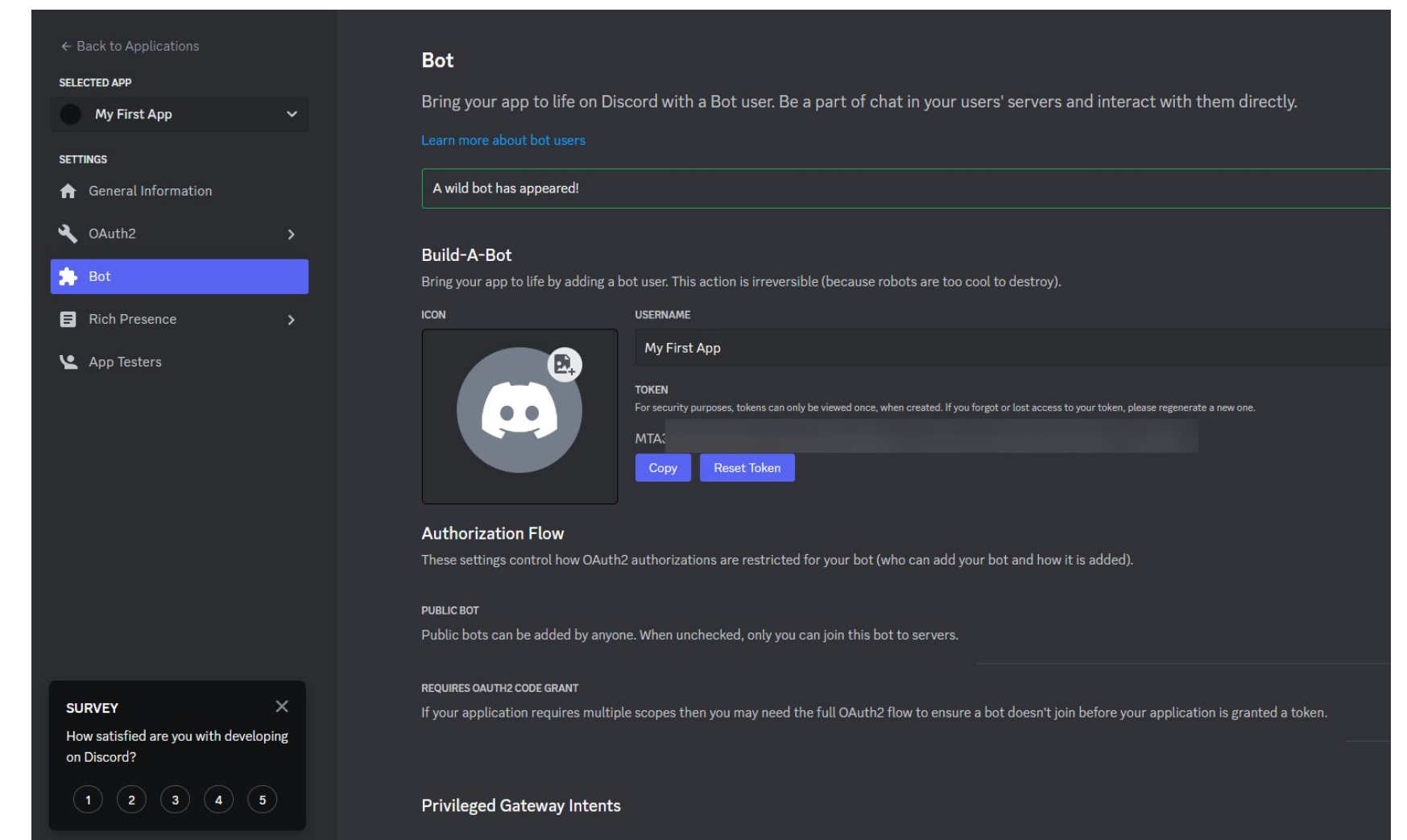
Creating a Discord App

- You can customize all of these options but we are going to focus on Discord bots in this workshop
- Click on the “Bot” tab and click “Add Bot”



Generate Your Token

- Tokens are the way Discord authenticates your bot
- Generate your token by clicking “View Token”
- Make you have your token safely stored as it can only be accessed once!
- **Do not ever share your token!** It will let everyone execute whatever code they want on your bot!



Access Message Content

- Under “Bot”, enable “Message content intent”

Privileged Gateway Intents
Some [Gateway Intents](#) require approval if your bot is verified. If your bot is not verified, you can toggle those intents below to access them.

PRESENCE INTENT
Required for your bot to receive [Presence Update](#) events.

NOTE: Once your bot reaches 100 or more servers, this will require verification and approval. [Read more here](#)

SERVER MEMBERS INTENT
Required for your bot to receive events listed under [GUILD_MEMBERS](#).

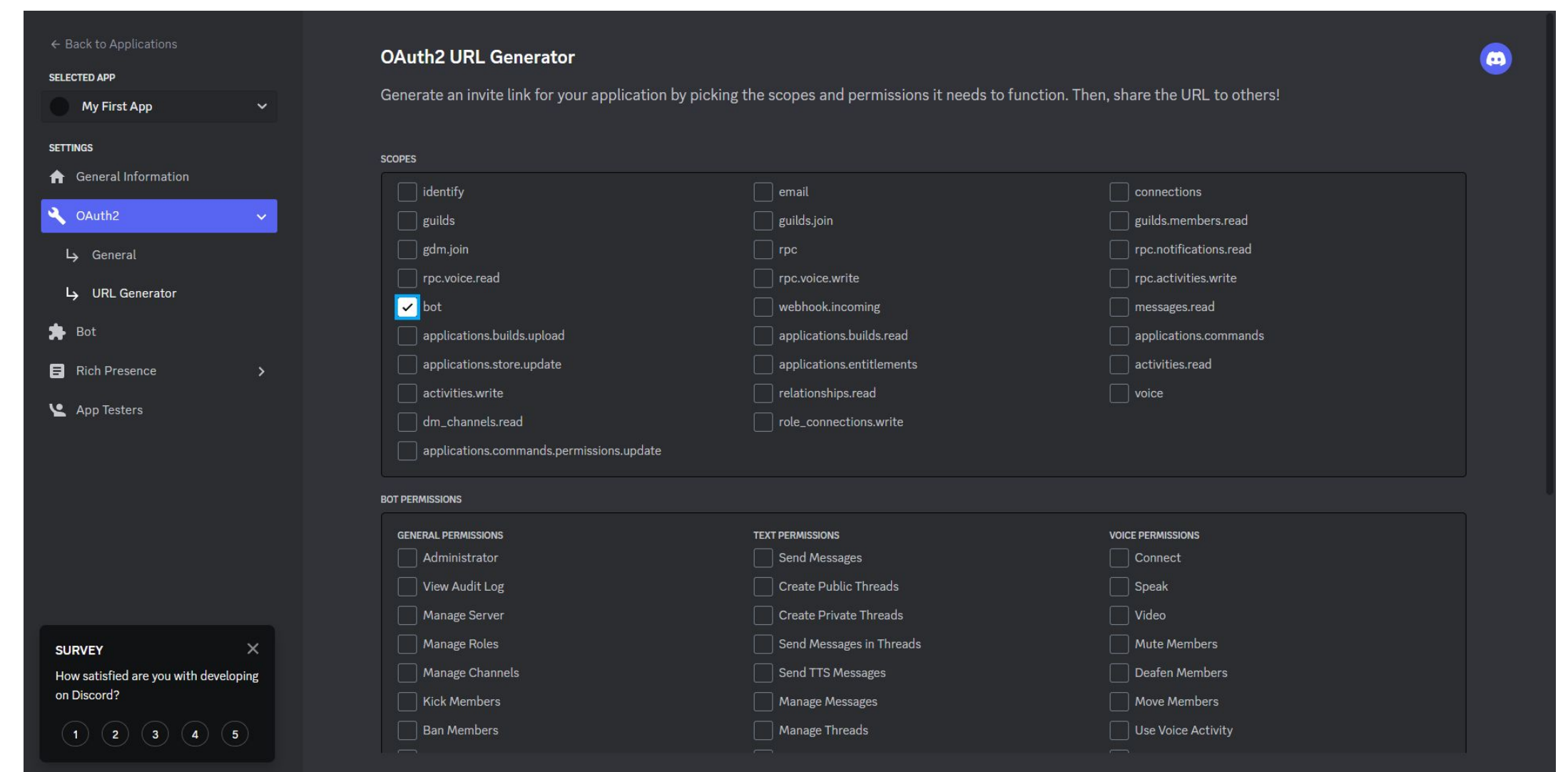
NOTE: Once your bot reaches 100 or more servers, this will require verification and approval. [Read more here](#)

MESSAGE CONTENT INTENT
Required for your bot to receive [message content](#) in most messages.

NOTE: Once your bot reaches 100 or more servers, this will require verification and approval. [Read more here](#)

Add Your Bot to the Server

- Go to OAuth2 -> URL Generator and select “Bot”
- Copy the URL and paste it in the browser
- Add the bot to your server



What is Discord.JS?

- Discord.JS is a Node.JS library that wraps the Discord API in pre-made functions for us
- All we need to do is call the appropriate functions instead of having to call the API from scratch and the library would perform the complicated API calls for us

DISCORD.JS

Setting up a Project

Step-by-step

- Open up VS code/Webstorm and open a new project
- In your terminal (VS Code terminal, Webstorm Terminal, command prompt) run the command `npm init` (make sure you have node and npm already installed) and set up a new project (default package.json is fine)
- Now run `npm install discord.js`

```
C:\Users\benha\Documents\projects\discord_workshop>npm install discord.js  
  
added 32 packages, and audited 33 packages in 6s
```

Extra Resources

Discord.js guild (most recommended): discordjs.guide

The official Discord.js documentation: discord.js.org

Discord documentation (not recommended for beginners): discord.com