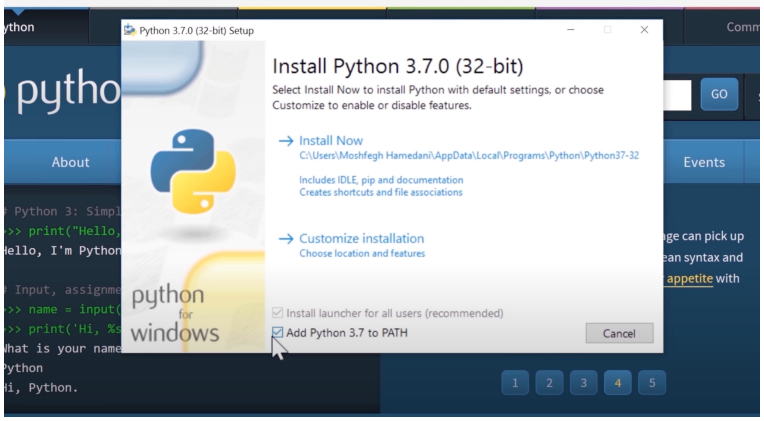
Setting Up Your Environment

Installing Python

1. Visit https://www.python.org/
2. MAC OS Users: Hit Downloads
3. Windows Users: make sure to select the checkbox titled “Add Python 3.7 to PATH” shown below:



Complete the rest of the installation steps once downloaded

Installing PyCharm

Download the Community version onto your laptop
https://www.jetbrains.com/pycharm/download/#section=mac

Pip Installations

Downloading Pip: run these commands in your terminal one after another

1. `curl https://bootstrap.pypa.io/get-pip.py -o get-pip.py`
2. `python3 get-pip.py`

Verifying You Have Pip

```
pip3 --version OR pip --version
```

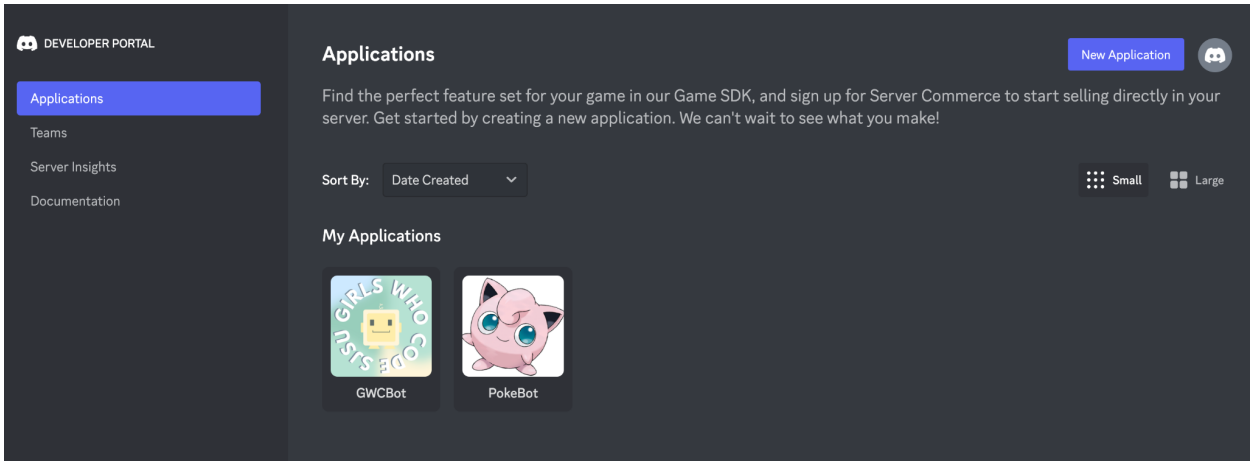
Install discord package

```
pip install discord
```

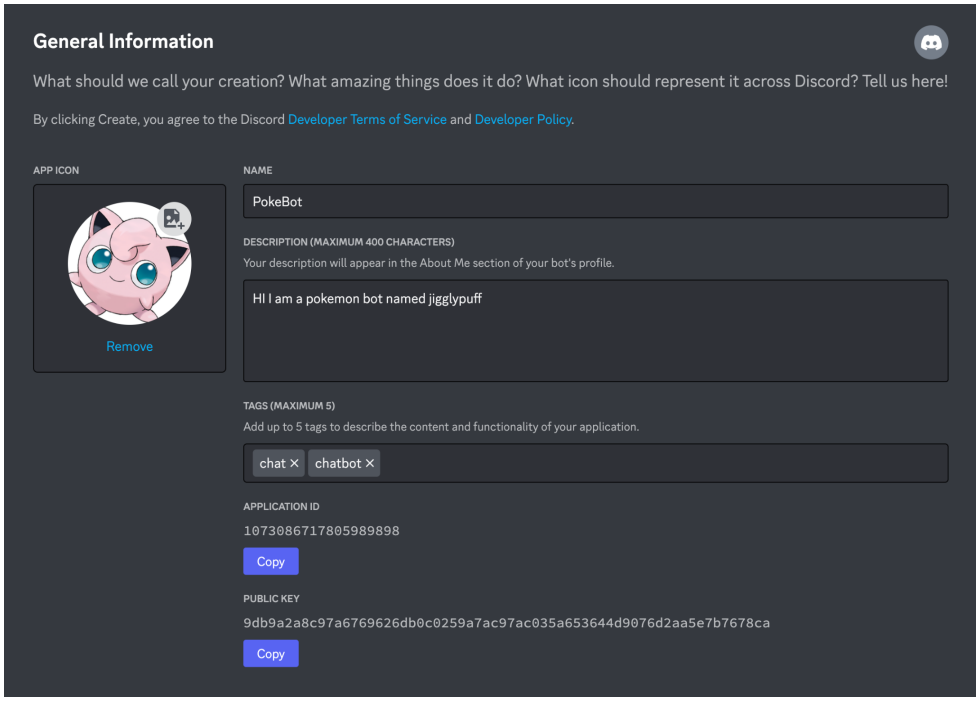
Configuring Discord Settings

Make sure you are logged into your discord user on a web browser & have the discord app on your desktop

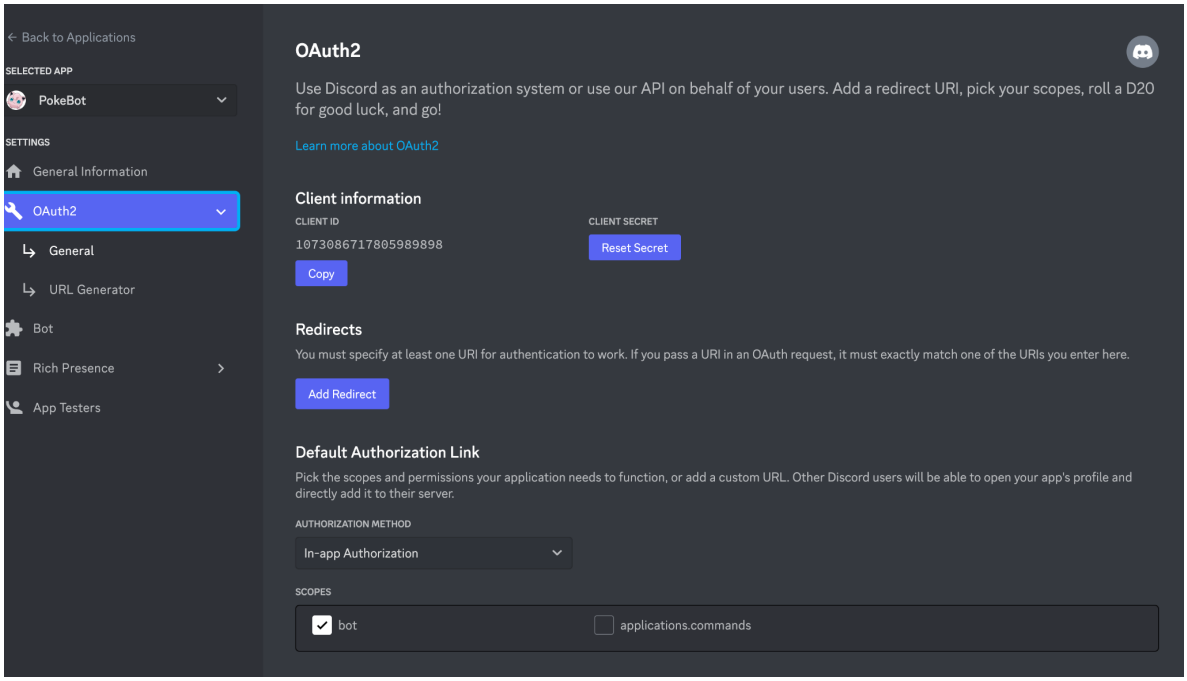
1. Go to: https://discord.com/developers/applications
2. Click New Application



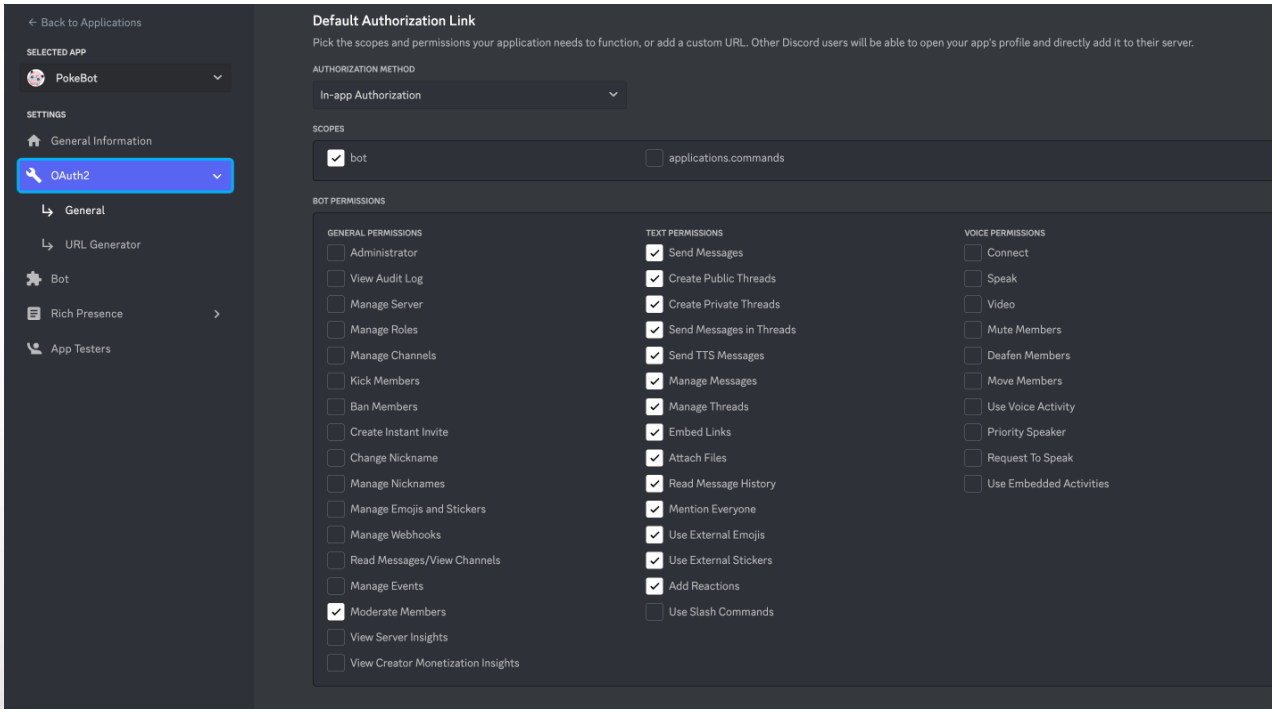
3. Give your bot general info
    a. Name, Description
    b. Tags: chat, chatbot



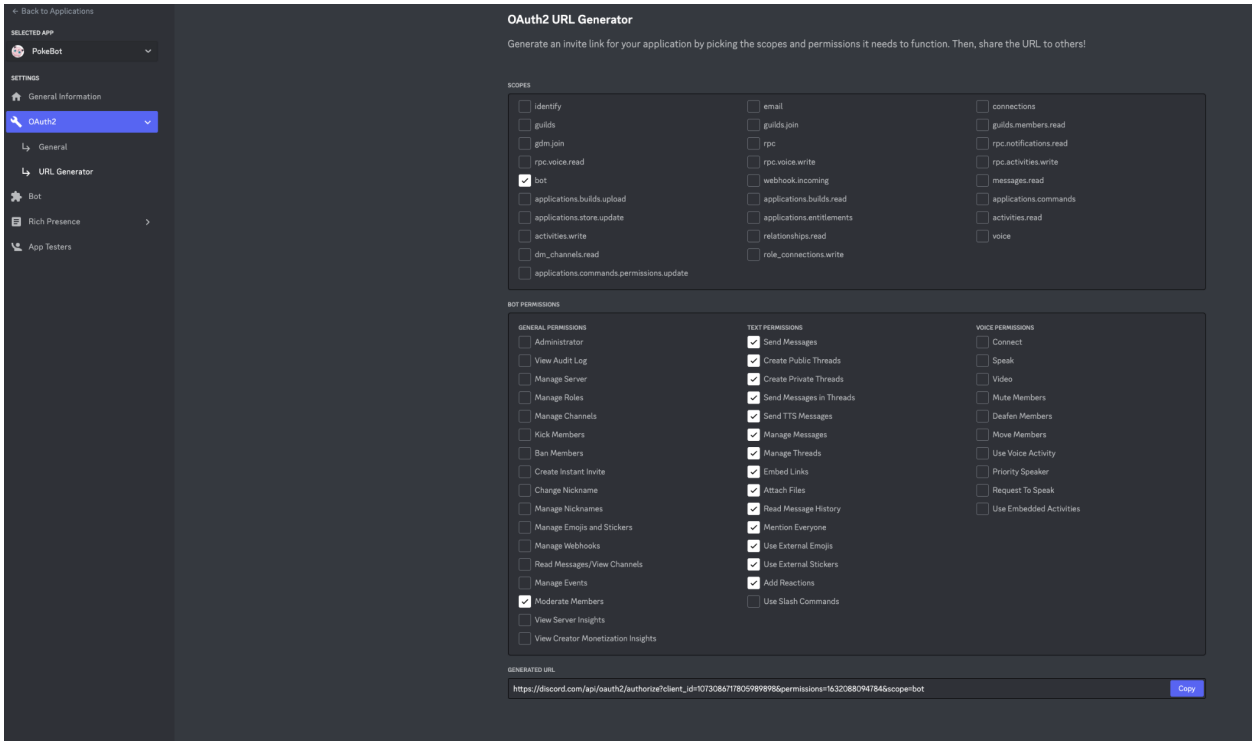
4. Navigate to OAuth2



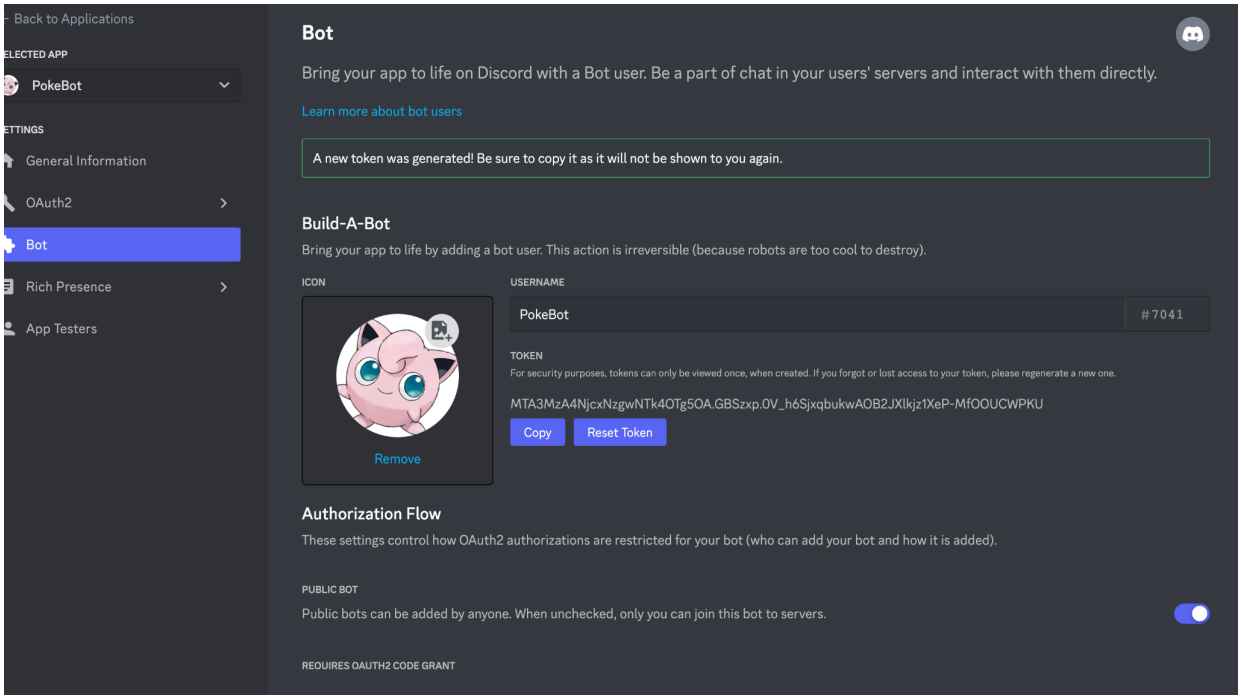
5. Configure settings in OAuth2
    a. Authorization Method: In-app Authorization
    b. Scopes: bot
    c. Bot Permissions {check everything in the screenshot below}



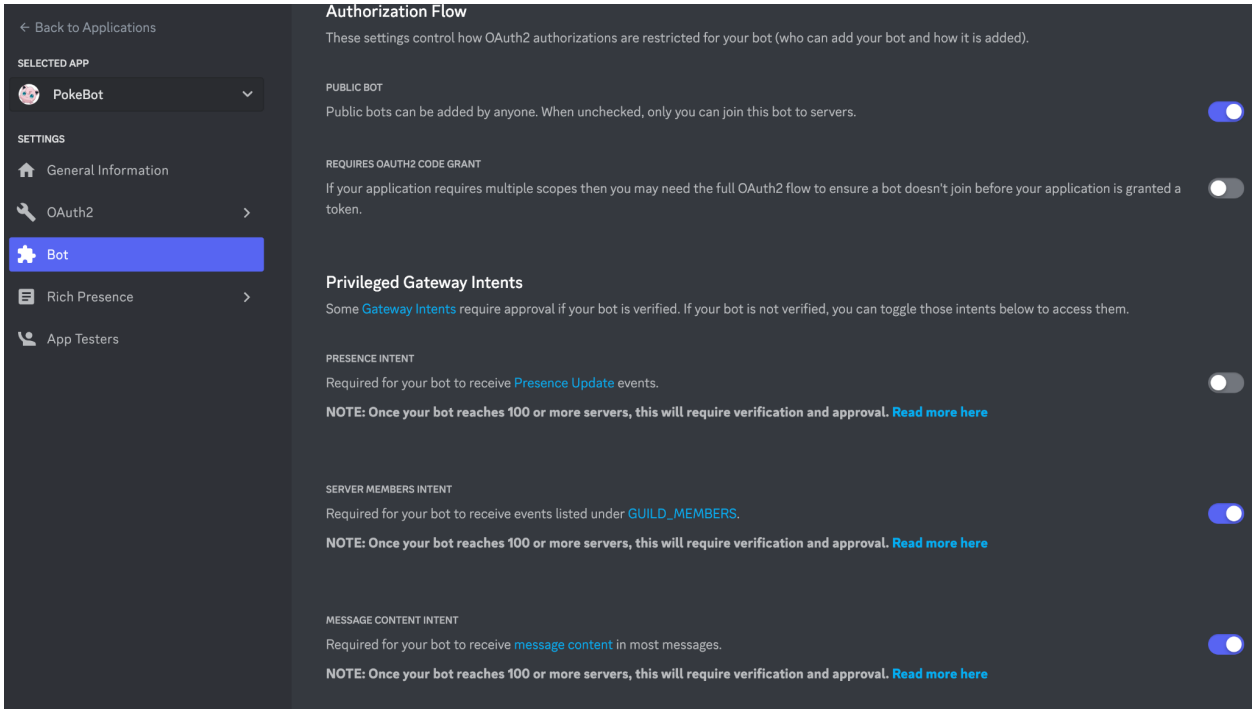
6. Navigate to URL Generator
    a. Repeat the process of selecting bot, and proper permissions
    b. COPY THE URL GENERATED AT THE BOTTOM OF THE SCREEN
    c. SAVE THE LINK SOMEWHERE SAFE!!! (Notes app, etc.)



7. Navigate to Bot
    a. Generate your Token, **COPY your TOKEN & SAVE IT SOMEWHERE!**



ON THE SAME PAGE, WHEN YOU SCROLL, MAKE SURE ALL THESE SETTINGS ARE TURNED ON!! VERY VERY IMPORTANT FOR YOUR BOT TO PROPERLY WORK.



9. Paste the link your saved above onto a new browser
10. Authorize your bot to your discord, and any server you want it to (preferably an empty server you own)

Code!!

1. In PyCharm create a new project
2. Name your project: discordBot
3. Make a new python file: bot.py
4. In the terminal: pip install discord
    a. This will give us all the files needed to create the bot

Bot.py

Step 1: create a function to run your discord bot

```
def run_discord_bot():
```

Step 2: Create a variable for your token, and paste your token key in this variable (the token that you saved in your previous steps)

```
TOKEN = 'insert your token key you generated'
```

Step 3: Intent settings that we enabled earlier configured with the client

```
intents = discord.Intents.default()
intents.message_content = True
client = discord.Client(intents=intents)
```

Step 4:
@client.event is a decorator for our function on_ready()
async def expression is the way to define custom coroutines:

- It stops the function's execution at that point and works on other things until it comes back to that point and finishes off its work
- This allows for your program to be doing multiple things at the same time without using threads or complicated multiprocessing

```
    @client.event
    async def on_ready():
        print(f'{client.user} is now running!')
```

Step 5:
Splicing string in python: [start:end]
str(author)[:-5] // A discord username is always in format User#1234
await is another coroutine

```
    @client.event
    async def on_message(message):
        author = message.author
        author_name = str(author)[:-5]
        if message.content.lower() == 'hello':
            await message.channel.send(f'Hello {author_name}')
```

Step 6: adding more if conditions / functionality to your bot

```
        if message.content.lower() == 'roll':
            await message.channel.send(random.randint(1, 6))
```

Step 7: running your OATH Token client

```
client.run(TOKEN)
```

At the end, your bot.py file should look like this:

```
import discord
import random

def run_discord_bot():
    TOKEN = 'insert your token here '
    intents = discord.Intents.default()
    intents.message_content = True
    client = discord.Client(intents=intents)

    @client.event
    async def on_ready():
        print(f'{client.user} is now running!')

    @client.event
    async def on_message(message):
        author = message.author
```

```
        author_name = str(author)[:-5]

        if message.content.lower() == 'hello':
            await message.channel.send(f'Hello {author_name}')
        if message.content.lower() == 'roll':
            await message.channel.send(random.randint(1, 6))

    client.run(TOKEN)
```

Main.py

Step 1: import your bot.py file

```
import bot
```

Step 2: define your main function, and run your bot function:

- __main__ is the name of the environment where top-level code is run. “Top-level code” is the first user-specified Python module that starts running
    - It’s “top-level” because it **imports** all other modules that the program needs, such as **bot**. Sometimes “top-level code” is called an entry point to the application.

```
if __name__ == '__main__':
    bot.run_discord_bot()
```

At the end your main.py file should look like this:

```
import bot

if __name__ == '__main__':
    bot.run_discord_bot()
```