

Code Our Bot Set up

Mr. Poole
Python

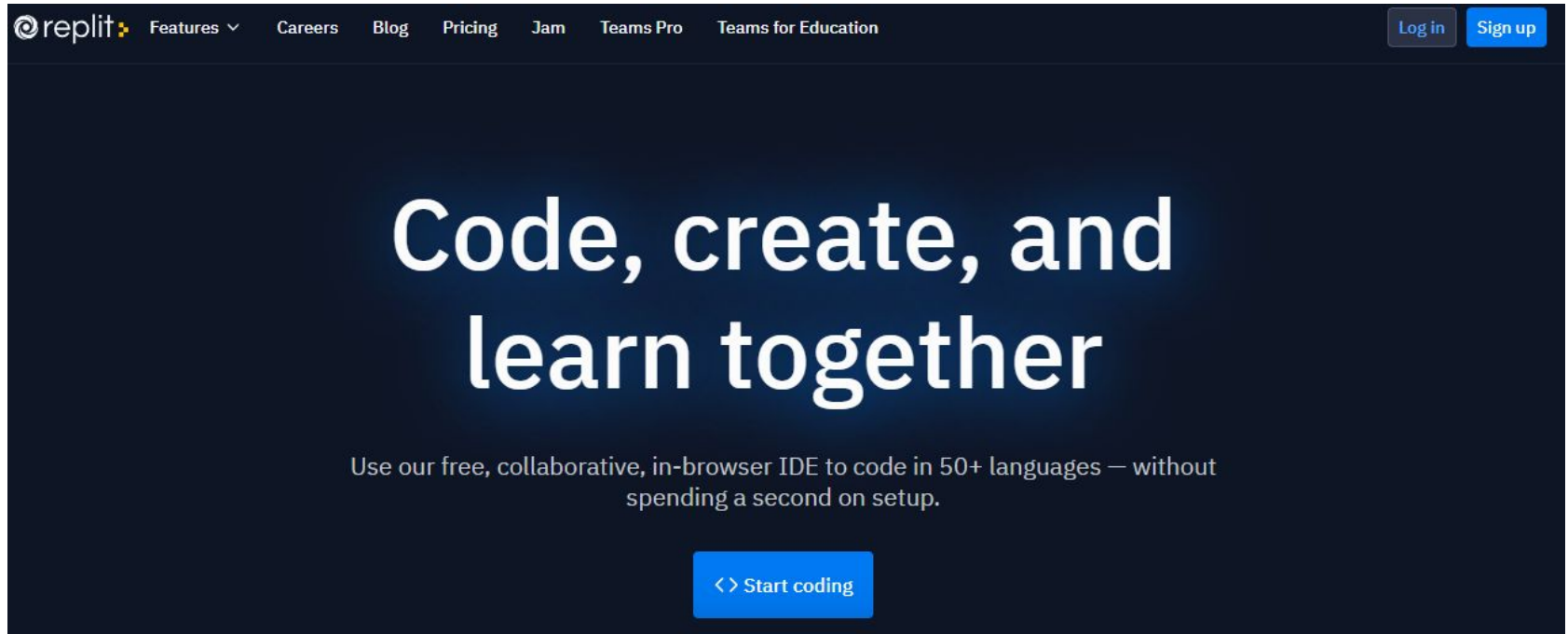
We're going to host our Bot on **Repl.it!**

Bots are only online while their code is running.

Repl.it will allow us to write our code and
run our code continuously forever!

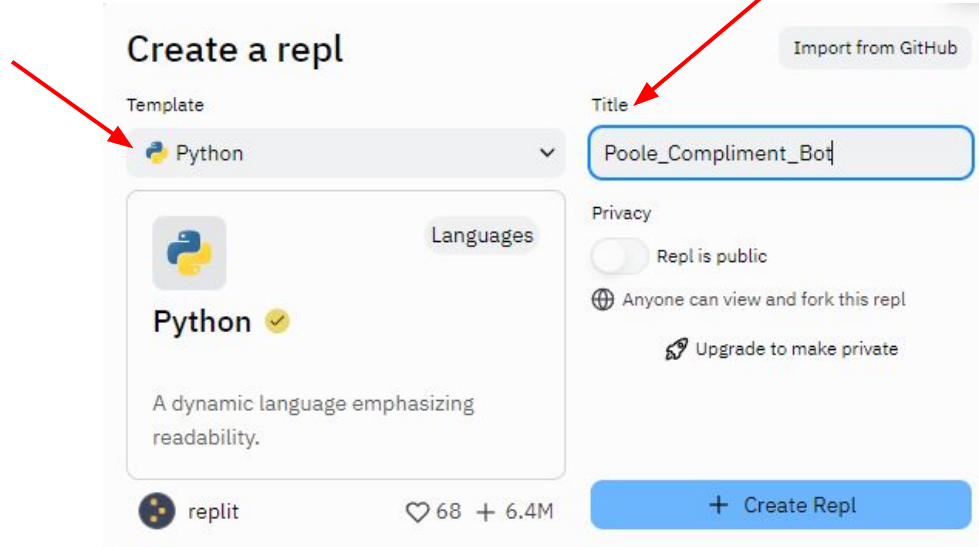
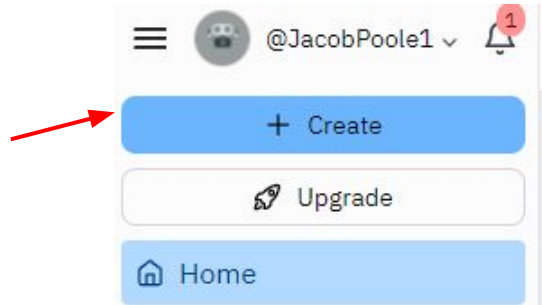
Go to <https://replit.com/>

Go ahead and Log in or Sign up for an account. **I suggest personal email.**



Create a new repl (or repository)

Select “Python” and
write your bot name into the title

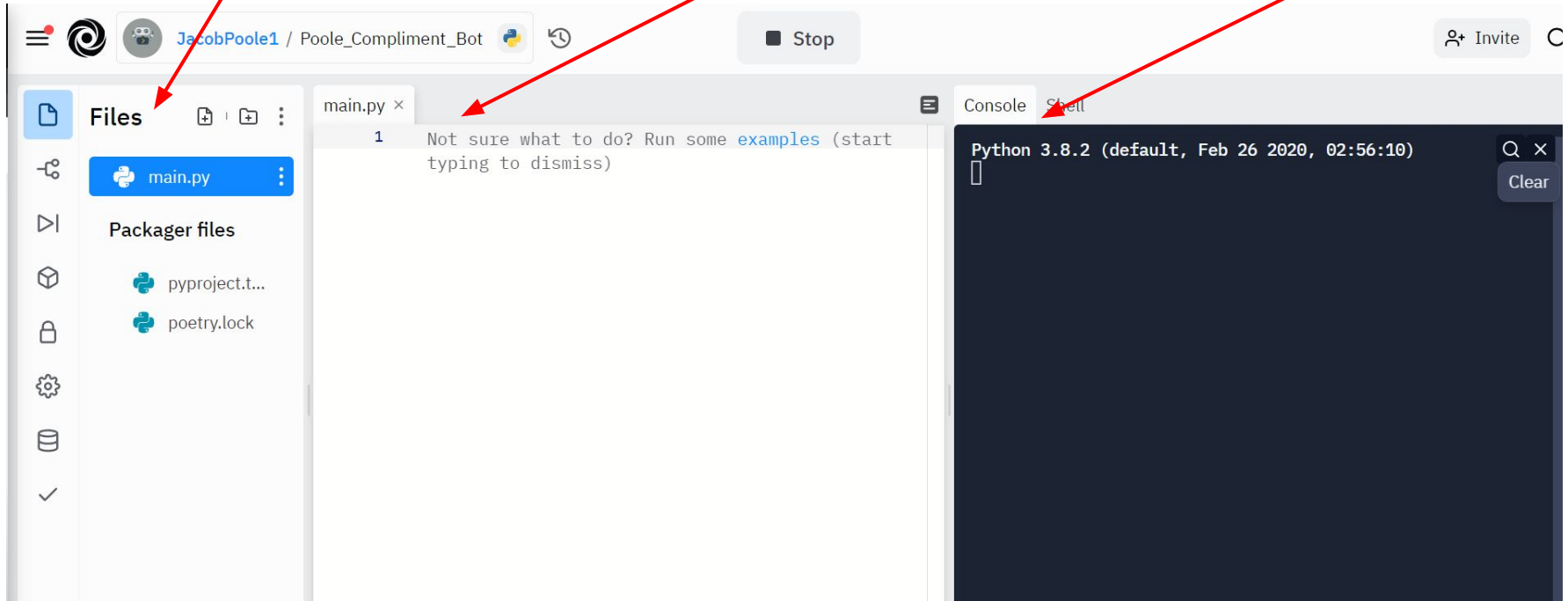


Repl layout: It's the same as Cloud9!

Files go here!

Edit code here!

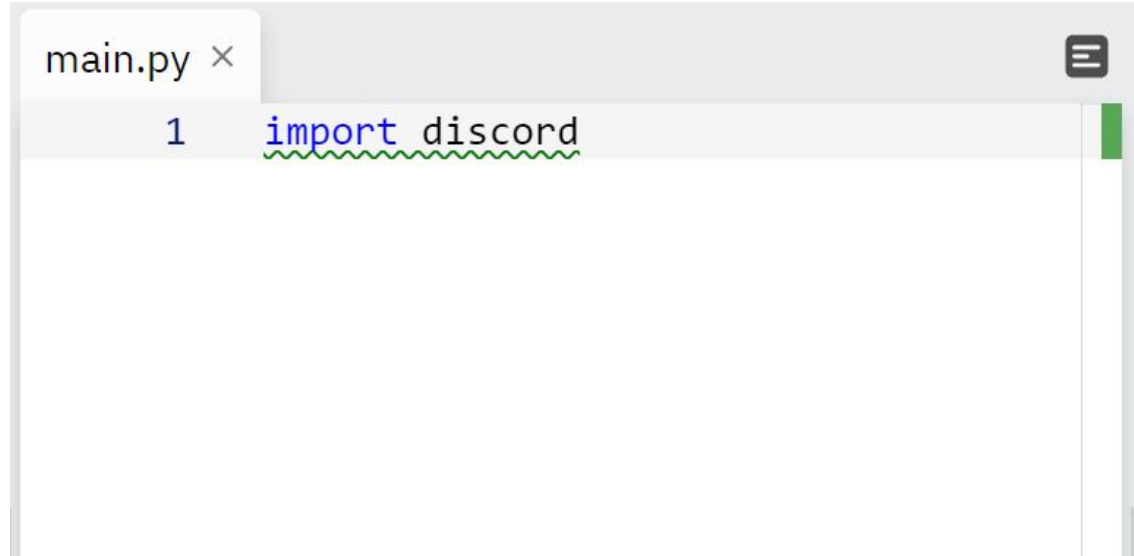
Run code here!



First let's import the Discord API

Type this line of code on the right, then click “Run”

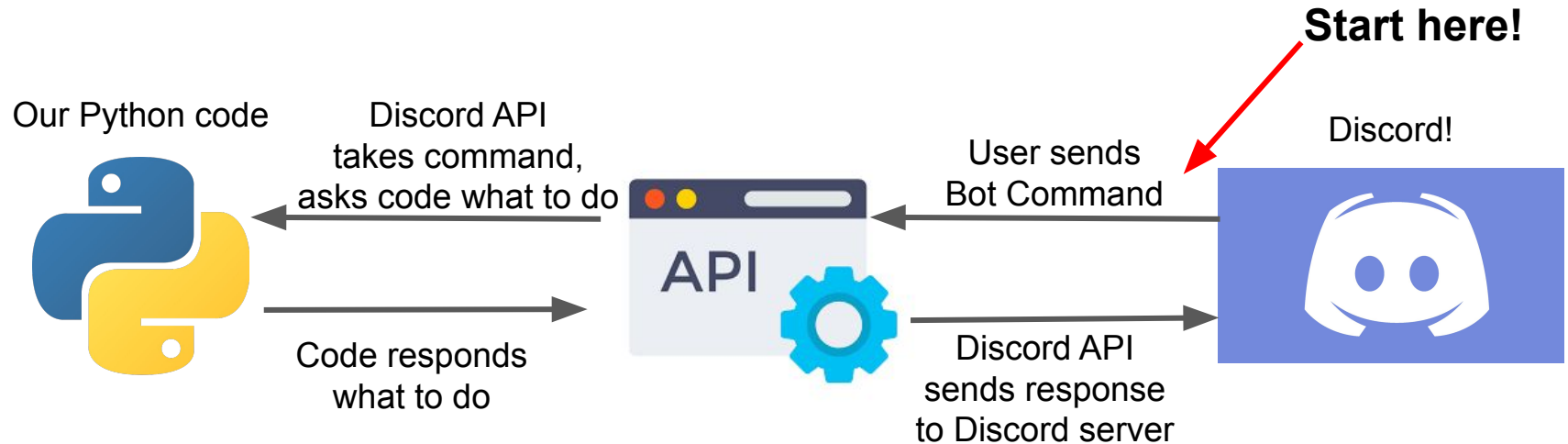
This automatically installs all dependencies necessary to use the Discord API!

A screenshot of a code editor window. The title bar at the top shows 'main.py' with a close button. The editor area contains a single line of code: '1 import discord'. The word 'import' is blue, and 'discord' is black. A green wavy underline is visible under the word 'discord'. On the right side of the editor, there is a vertical green bar and a small menu icon in the top right corner.

What is an API?

API is the acronym for **Application Programming Interface**, which is a software intermediary that **allows two applications to talk to each other**.

In this case, we're letting our Python code talk to Discord!



Full Discord API Documentation

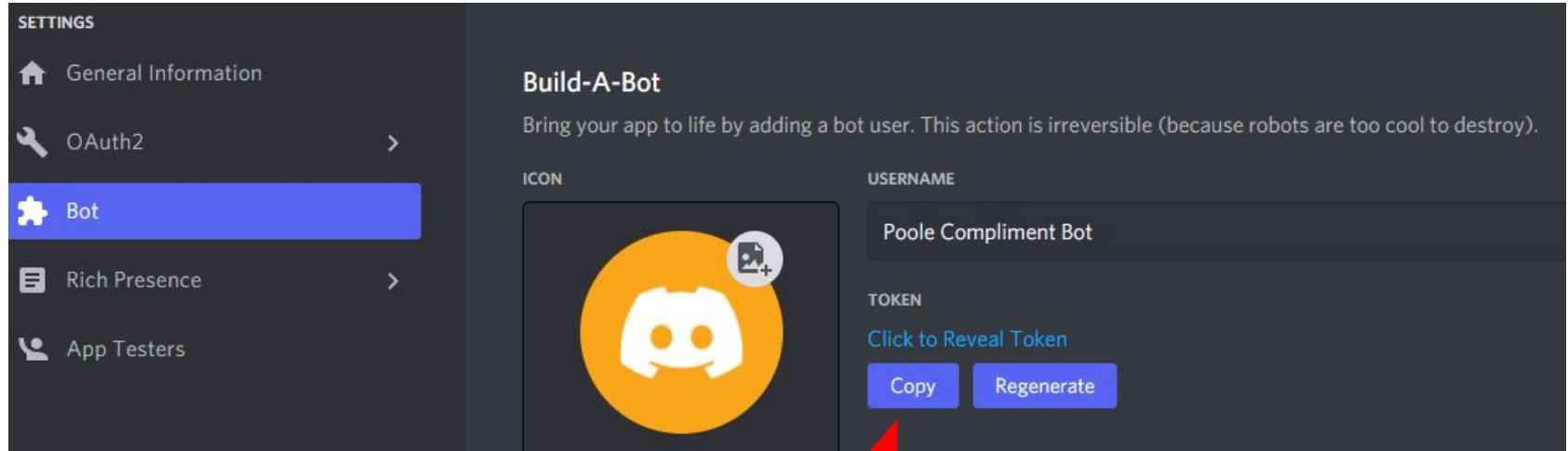
Everything you need to know about Discords API can be found [here](#).

You don't need to read it at all, it's for reference if you're curious.

I'll provide what you will need to know in the slides below.

Remember that token we generated? Let's use it!

Again, under “Bot”, we can “Copy” our “Token”

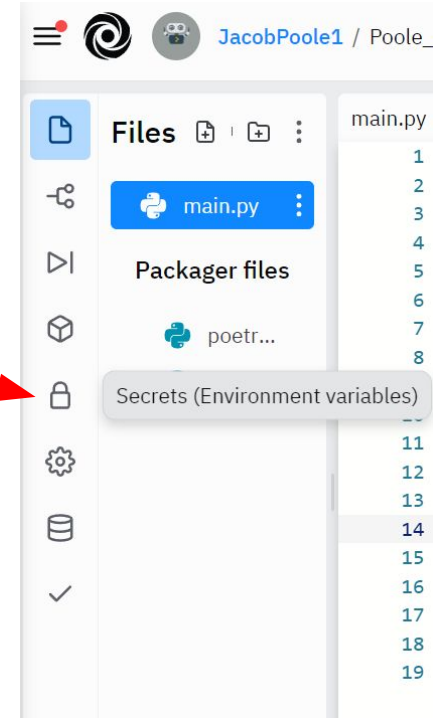


On Repl, we need to add a “Secret Environment”

This token should stay a secret from all public users!

Our repo is built public, this will keep our token secure.

Click on “Secrets (Environment Variables)”



Create your Key

Name your key “TOKEN”

Paste your token into value

Click “Add new secret”

Secrets

System environment variables

key

TOKEN

value

OTM1OTU3MzkzNjg1MAwdwasDQ5.YfGMPw.Yzw70ui9bLBm8fvcilD
WZINbKY0

[Add new secret](#)

Import your token

Scrolling down will help you find how to use your token!

Click on “Insert” for both your import os and your Token

Use secrets in the repl

To use secrets in Python

1. Add the imports

```
import os
```

Insert ->

2. Access the secret by key as an environment variable

TOKEN ▾

```
my_secret = os.environ['TOKEN']
```

Insert ->

Import your token

Now we've imported "os" in order to use our secret environment!

Your code should look like this:

main.py ×

```
1 import discord
2 import os
3 my_secret = os.environ['TOKEN']
4
```


If you haven't looked at lab 20 Methods yet,
I'd suggest to do so now.

Everything runs through Discord's "Client"

Below is how we can reference Discord's Client via the API.

```
import discord  
  
client = discord.Client()
```

Create a variable
named "client"



Reference our API



Find the Discord Client



Discord bots run off of **events**!

An event is a trigger. When some event happens, the bot will respond.

Example events:

- `on_message(message)` When anyone messages!
- `on_connect()` When anyone connects to the server!
- `on_disconnect()` When someone disconnects!
- `on_member_join()` When someone joins the server!

There are a bunch but these are example events that can happen!

Let's check the event **if our bot is ready!**

We first write

`@client.event`

This is saying,
at when an event comes
through the client, let's do
something!

main.py ×

```
1 import discord
2 import os
3 my_secret = os.environ['TOKEN']
4
5 client = discord.Client()
6
7 @client.event
```

Now our method for our event!

Write

```
async def on_ready() :
```

We **define** a method called “**on_ready()**” or when our bot is ready!

async basically means that this is ALWAYS happening or asynchronous.

main.py ×

```
1 import discord
2 import os
3 my_secret = os.environ['TOKEN']
4
5 client = discord.Client()
6
7 @client.event
8 async def on_ready():
```

Once ready, let's tell the user we're ready!

We can just print out that the bot has logged in and is ready!

OR

We can write our bots name!

Below uses the bots name.

```
main.py ×  
1  import discord  
2  import os  
3  my_secret = os.environ['TOKEN']  
4  
5  client = discord.Client()  
6  
7  @client.event  
8  async def on_ready():  
9      print('The bot has logged in')
```

Replace

```
9      print('We have logged in as {0.user}'.format(client))
```

Last step! Let's run it!

Last line of code

client.run(my_secret)

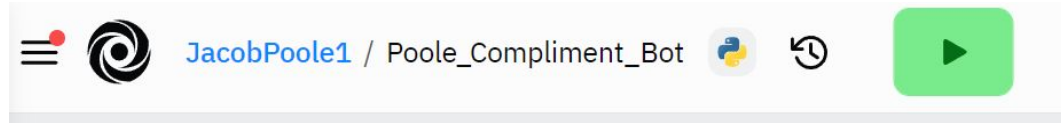
This runs our bot with
our token “my_secret”!

```
main.py ×
1  import discord
2  import os
3  my_secret = os.environ['TOKEN']
4
5  client = discord.Client()
6
7  @client.event
8  async def on_ready():
9      print('We have logged in as {0.user}'.format(client))
10
11  client.run(my_secret)
```

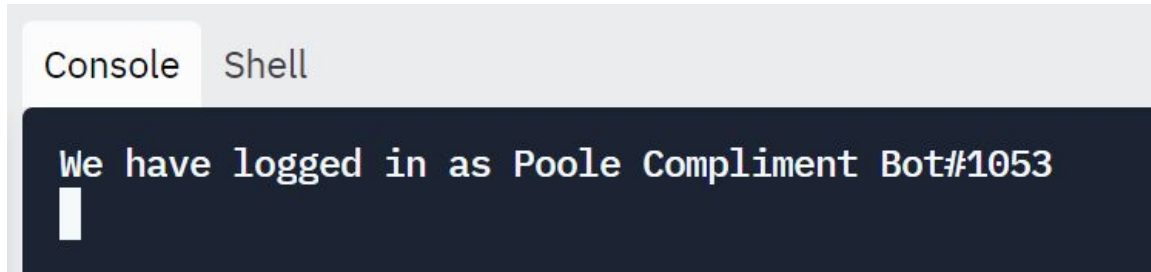
Run the bot.

Before you run your bot, you'll notice that your bot isn't online in Discord.

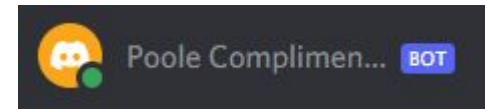
Click this run button!



Your console may print out the following!



Now your bot is online!



You've done it!
Your Discord bot **LIVESSS!!!**

