

Discord Bots: APIs, Design and Deployment

Description

This workshop introduces hackers to all steps of the Discord bot creation process. We will start with what bots are and why one should care, and then delve into how to instantiate the bot, how to code the bot and finally how to deploy the bot. The workshop will also touch on APIs and how they are used in the context of Discord bots.

Learning Outcomes

After this workshop, you will understand:

- What Discord bots are and how they work
- How the skills in creating bots can be translated to other applications
- How to create a bot using the Discord Developer Portal
- How to handle events and commands using Discord.js
- How to communicate with and parse data from APIs
- The different ways we can deploy Discord bots

Prerequisite Knowledge

- An understanding of any programming language (Javascript preferred)
- Knowledge of what Discord is

Pre-Workshop Checklist

This workshop involves coding parts of the bot live. If you would like to follow along bring:

- A text editor or IDE
- An up to date install of node.js (v16.9.0+)
- A Discord account

You also need the driver code, download `index.js` from the bots GitHub:

<https://github.com/kenzoengineer/HTN2022-ArtBot/blob/main/index.js>

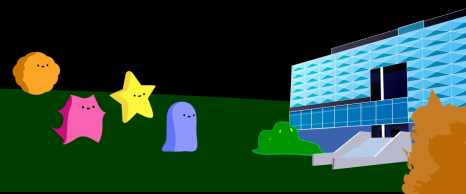
- Click raw → Right Click → Save as

or

- Click raw → Ctrl + S

Parts of the workshop will require copy pasting some long blocks of code from the repo. It is recommended to have the entire repo open and ready to refer to during the workshop.

Note that this workshop can be enjoyed to its fullest without following the live coding.



Technical Jargon and Definitions

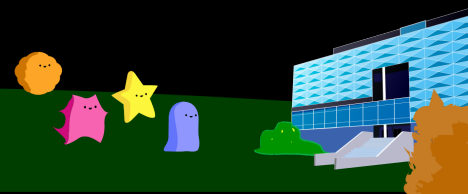
- **Discord Bot** - Robot users that allow you to automate tasks on your discord servers
- **Discord Developer Portal** - Central hub for managing your applications and reading documentation
- **API** - Software that lets two applications communicate with each other

Timeline (60 minutes)

Time	Module	Description
5 min	Introduction	What is a discord bot? Why should we care about learning Discord bots?
5 min	Creation	Creating the bot in the Discord Developer Portal
35 min	Design	Designing and coding the Discord bot
5 min	Deployment	Going over the different ways we can host Discord bots to run 24/7
10 min	Conclusion	Summary, final thoughts, and Q&A

Workshop Lead Contact

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Additional Resources

Hack the North Resources

[Hack the North 2022 Event Schedule](#)

Check this out to stay up-to-date on activities, workshops, and other key happenings this weekend.

Workshop-Specific Resources

[Bot Github Repository](#)

A Github Repository of the completed discord bot code. I will be referring to it if you want to clone this bot for yourself, remember to create a `config.json` containing a token

[Discord Developer Portal](#)

This is where you instantiate and manage the bot. The official Discord API documentation is also located here

[Discord.js Official Guide and Documentation](#)

This should be the first place you go to regarding creating discord bots using discord.js. It contains guides on how to create, set up, and do common things bots do (commands, embeds, buttons, reactions, etc.). Make sure to refer to the official documentation as it has all the specifications on what discord.js can do.

[AWS Official EC2 Documentation](#)

If you want to use EC2 to deploy your bot, be sure to refer to Amazon's official documentation for creating and accessing instances.

