

# Intro to APIs: Hackpack

September 13, 2021 / 9:00 PM - 10:00 PM ET

## Description

In this workshop, we will build a Book Collection API in Python using Flask. The goal is to create a backend you repurpose for any client application, including your submission for Hack the North.

Our development environment will be [Replit](#), and we will use SQLite as a database. The workshop will also cover how to connect to externally hosted databases like CockroachDB.

Beginners are welcome!

## Learning Outcomes

- how to create an backend for a client application
- networking protocol basics (HTTP)
- working with JSON data
- exchanging data between an application and an API
- interacting with a database that stores application data
- ORMs
- basic Python, Flask, and SQL

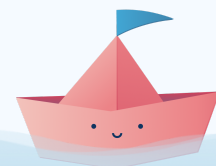
## Prerequisite Knowledge

- basic programming skills (functions, variables, if statements, dictionaries, objects)

## Pre-Workshop Checklist

Before the workshop, please make sure you complete the following items:

- Please sign up for [Replit](#)
- (optional) Introduce yourself to the workshop material [here](#)



## Timeline (1 hour)

Time	Module	Description
10 min	Introduction and API Protocols	Learning the necessary protocols and terminology needed to build APIs.
5 min	Setting Up an API	Setting up Replit to host APIs, and importing source code for this workshop.
20 min	Implementing Endpoints	Implementing various functions in the API (creating routes, reading/writing JSON data, sending requests).
5 min	Setting Up a Database	Setting up a database with book data and interacting with it via a CLI.
20 min	Connecting an API to a Database	Learning to interact with a SQL database in Python, and updating all API endpoints to use the database.

## Workshop Lead Contact

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## **Additional Resources**

### **Hack the North Resources**

#### [Hack the North 2021 Event Schedule](#)

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

