

2025 Accelerator: Backend Track

Instructors:

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Objective:

For the next 8 weeks, we will be learning fundamental principles in backend development using JavaScript, Supabase, and Express. By the end of the course, you will be able to produce a backend application that can service a variety of front-end applications.

Expectations:

- Virtual Meetings
 - You must attend our **1-hour virtual meeting** every week on **Mondays 6-7 PM**. Attendance will be taken at the beginning of each meeting.
 - You are allowed to have **2 unexcused absences**. If you must miss more than 2 of our meetings, you will be removed from the program
 - If you *have any emergencies, please contact your mentors as soon as possible*.
 - If you know you will miss our meeting because of an exam, we expect notice of up to three business days. These will be counted as an excused absence. Show proof (Canvas Snippet, Email Announcement, etc.) of the exam in the email.
- Bonus Workshops
 - We will also have **bi-weekly bonus** workshops with extra content. These meetings will be 1-hour long in-person meetings.
 - You are required to attend **at least 2** of these workshops. We will have a sign-up form for these meetings at the start of the program.
 - These in-person workshops will take place either **Wednesdays at 6-7 PM** or **Fridays at 3:30-4:30 PM**. View specific dates in the table below.

- Participation
 - During a meeting, I may pose a question or ask you to work on your own for a bit. You are expected to engage and be an active member in our activities. If you have any concerns, please contact me separately.
- Homework:
 - There will be short weekly homework assignments to reinforce the material from the week's lecture. Each week you will choose **1 homework problem** to work on out of a set of 3 problems.
 - This will usually be in the form of writing function implementations or designing a small service for a real-world problem.
 - You will need to upload a **1-2 minute** video explaining and demonstrating your solution with your own test case(s) on *Padlet*.
 - Homework for the week will be sent out **Monday evening** after our virtual meeting, and it will be due **Sunday night** of the same week.
 - Correct solutions will be uploaded on the Accelerator Github for review.
- Homework Presentations
 - The only live presentations that will take place will be in the final week of the program where you will present a small mini project in groups.
 - The order of the presentations will be through voluntary basis or random selection.
- Weekly Feedback
 - You are expected to fill out the feedback form every week. It is anonymous and meant to make sure everyone is engaged and following along.
- Questions
 - You may DM messages to any assistant mentor during the meeting. We will pause multiple times to answer any questions that arise.
 - We will also stay back after the meeting for 5 minutes to answer questions as well.
 - We encourage you to pose questions regarding the course material and homework in our group chat. More often than not, others probably have the same questions.

Curriculum:

Week	Topic	Homework
0	Pre-lesson: <ul style="list-style-type: none">- Installing dependencies- Setting up JavaScript environment- Installing Node	Make sure your environment is fully set up for the first lesson.

	<ul style="list-style-type: none"> - Clone Accelerator Github 	
1 10/06/25	Basics in JavaScript: <ul style="list-style-type: none"> - Variables, Data types, Loops, Conditionals, Operators, Arrays, Objects - Simple leetcode easy type problems 	Padlet Assignment
1.5 Bonus Workshop 1 10/08/25	Regex <ul style="list-style-type: none"> - Regex & applications in web scraping - Data Preprocessing 	N/A
2 10/13/25	JavaScript (cont.), NPM and Intro to Express <ul style="list-style-type: none"> - Asynchronous calls in JS <ul style="list-style-type: none"> - Promises - Express setup 	Padlet Assignment
3 10/20/25	Learning Express - Simple API Demo <ul style="list-style-type: none"> - API Concepts (REST) - GET, POST, PUT, DELETE requests 	Padlet Assignment
3.5 Bonus Workshop 2 10/24/25	Postman Workshop <ul style="list-style-type: none"> - Using backend tools to test your API - Getting familiar with OpenAPI standard 	N/A
4 10/27/25	Learning Supabase - Querying a DB <ul style="list-style-type: none"> - Database Fundamentals (e.g., CRUD, ACID) - NoSQL vs SQL - RDBMS 	Padlet Assignment
5 11/03/25	Creating a backend with a database <ul style="list-style-type: none"> - Supabase Dashboard - Implementing CRUD - Foreign Keys & Entity Relationships 	Padlet Assignment
5.5 Bonus	Database Security <ul style="list-style-type: none"> - RLS - Access Control 	N/A

Workshop 3 11/05/25	<ul style="list-style-type: none">- Anon & Service Role Keys- Handling Sensitive Data	
6 11/10/25	Setting up user logins - Supabase <ul style="list-style-type: none">- High level discussion on tokens- Supabase Authentication Flow	Padlet Assignment
7 11/17/25	Final Project in Groups <ul style="list-style-type: none">- Work on a project idea using Express and Node.js	Final Project
7.5 Bonus Workshop 4 11/21/25	CI/CD <ul style="list-style-type: none">- CI with Github Actions- Containerization & Orchestration (Docker, Kubernetes)	Final Project
8 11/24/25	Final Project Presentation & Wrap Up	

Thank you for joining us this semester! 🚀