

# Course Overview



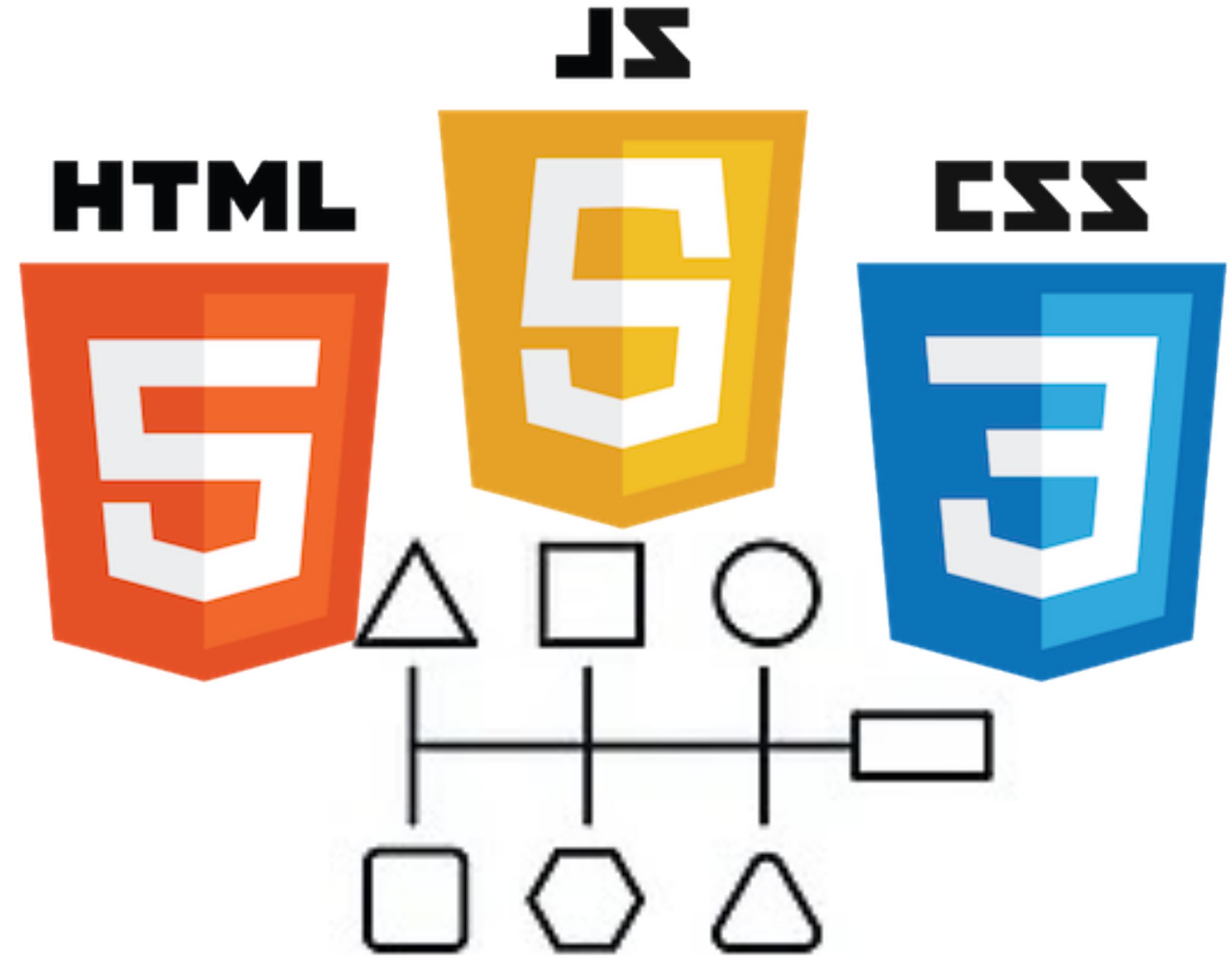
Full Stack Development 1

# Agenda

- Prerequisites
- Module Overview / Calendar
- Assessment Schedule
- Anatomy of a Topic
- References

# Perquisites

- Foundation level skills in:
  - **HTML:** Ability to effectively structure the html content of a small to medium static site, including some understanding of the use of templates
  - **CSS:** Understand the fundamentals of CSS, and be able to realise simple layouts and designs. Be comfortably using a CSS framework



- **Programming:** Intermediate level programming programming ability in Javascript or any C like language (Java, C#, Go etc)

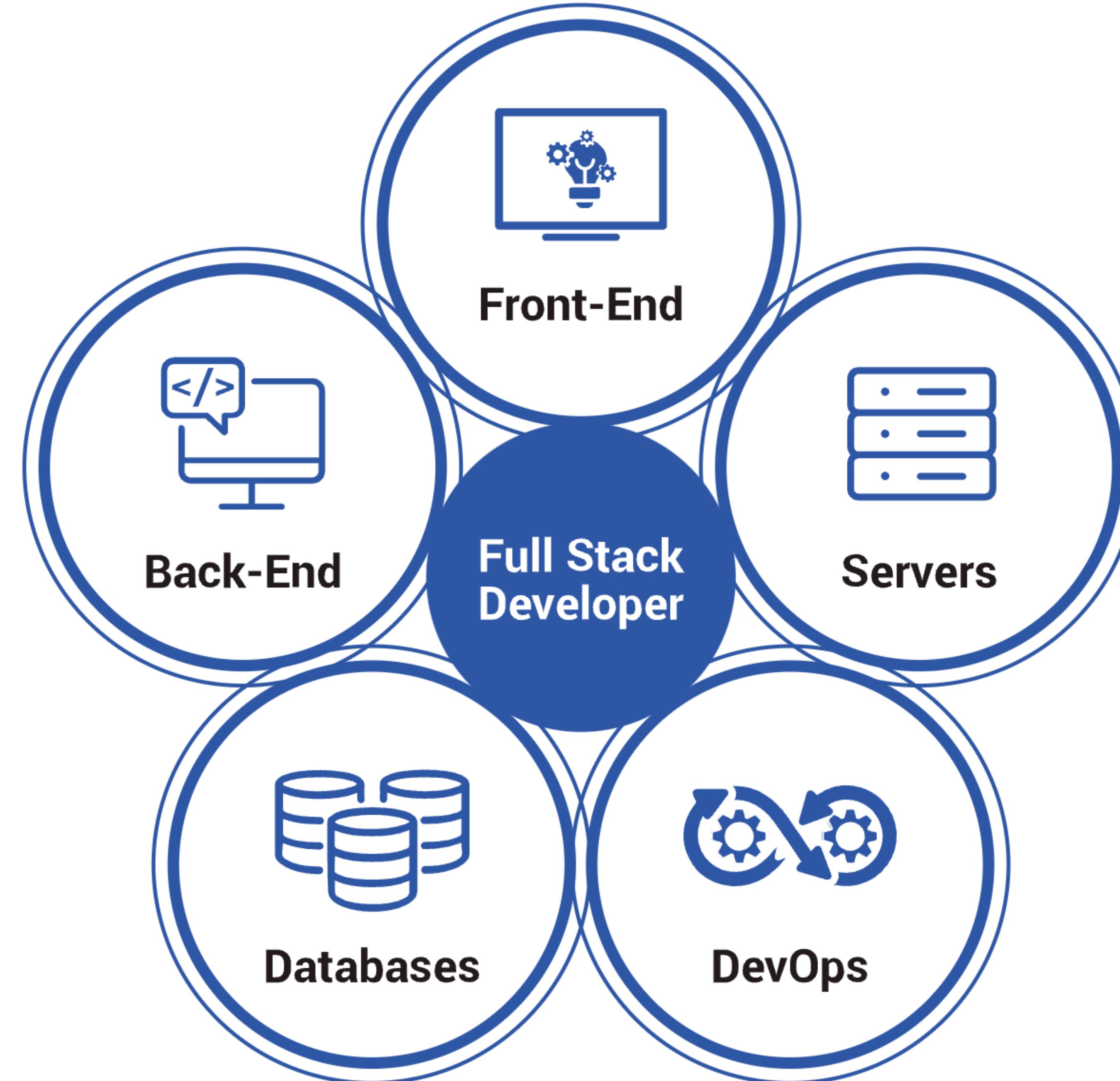
Back End Web  
Development

Test Driven  
Development

Application  
Programmer  
Interfaces

Front End Web  
Development

Full Stack



Core  
Concepts

# Back End Web Development

Test Driven Development

Application Programmer Interfaces

Front End Web Development

Full Stack

Core  
Concepts

The image shows a horizontal row of five cards, each representing a different component of a back-end web development stack. From left to right:

- 01: Node**: Features the Node.js logo (a green hexagon with 'node' and 'js' in black) and the text "The fundamentals of Node. A first Node application."
- 02: Hapi.js**: Features the Hapi.js logo (a grey alien head with antennae) and the text "The Hapi application Framework".
- 03: Joi**: Features the Joi logo (a paintbrush with white paint) and the text "Validation with Joi".
- 05: Models**: Features a blue folder icon containing three blue cubes and the text "Incorporate Mongo Models".

# Back End Web Development

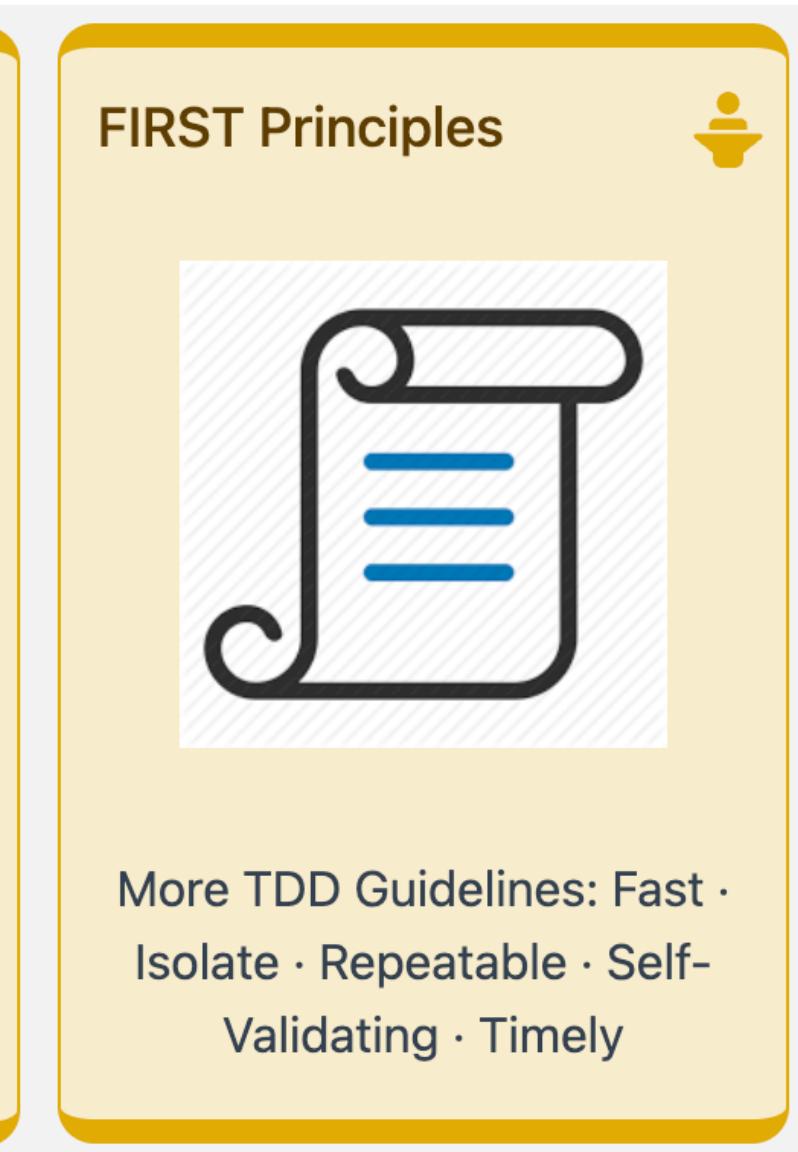
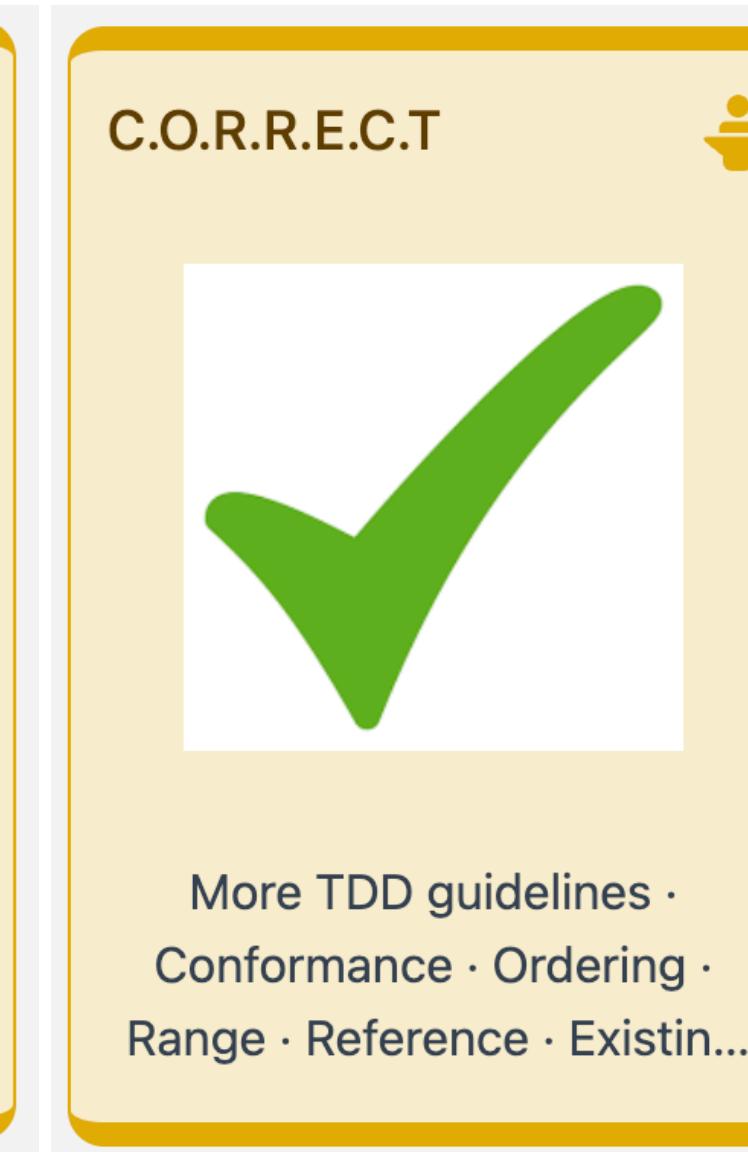
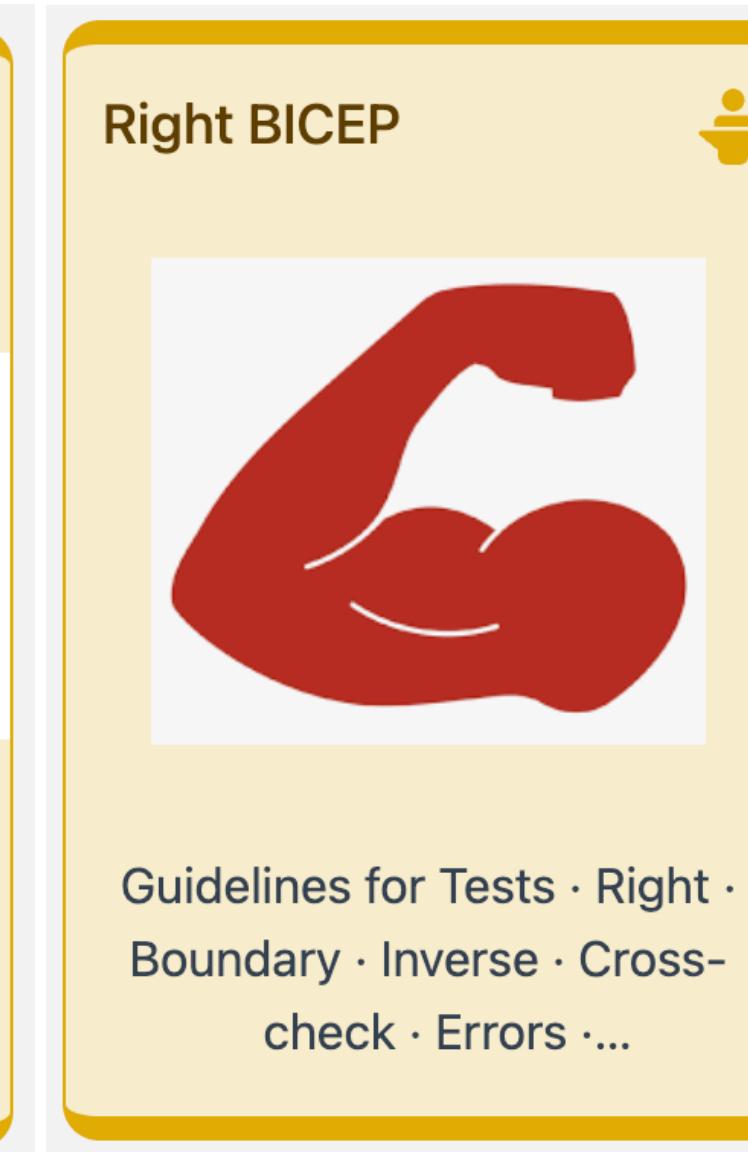
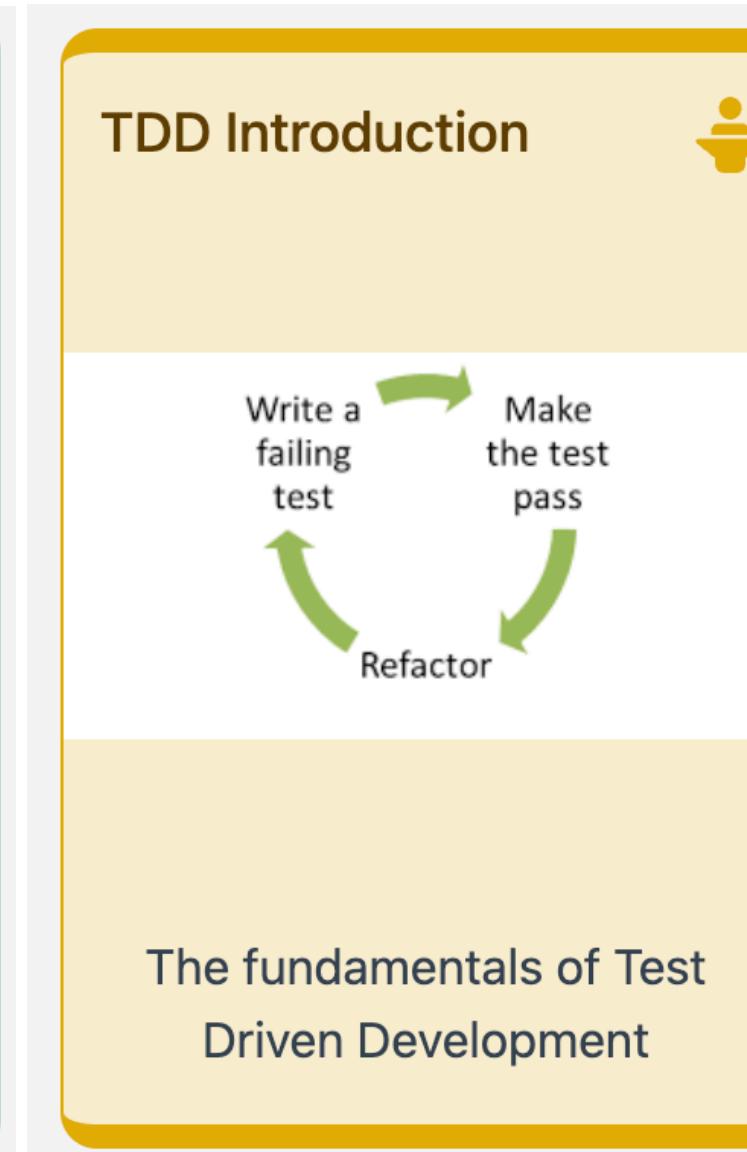
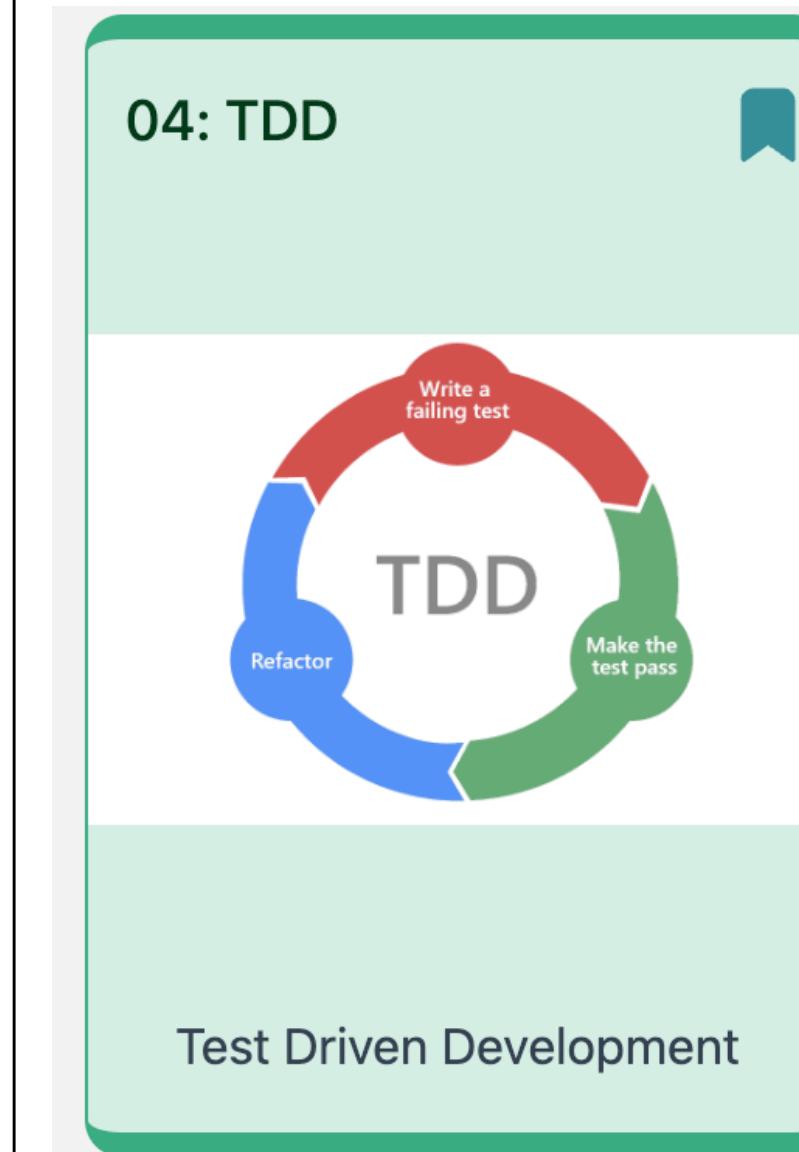
## **Test Driven Development**

Application Programmer Interfaces

# Front End Web Development

Full Stack

Core  
Concepts



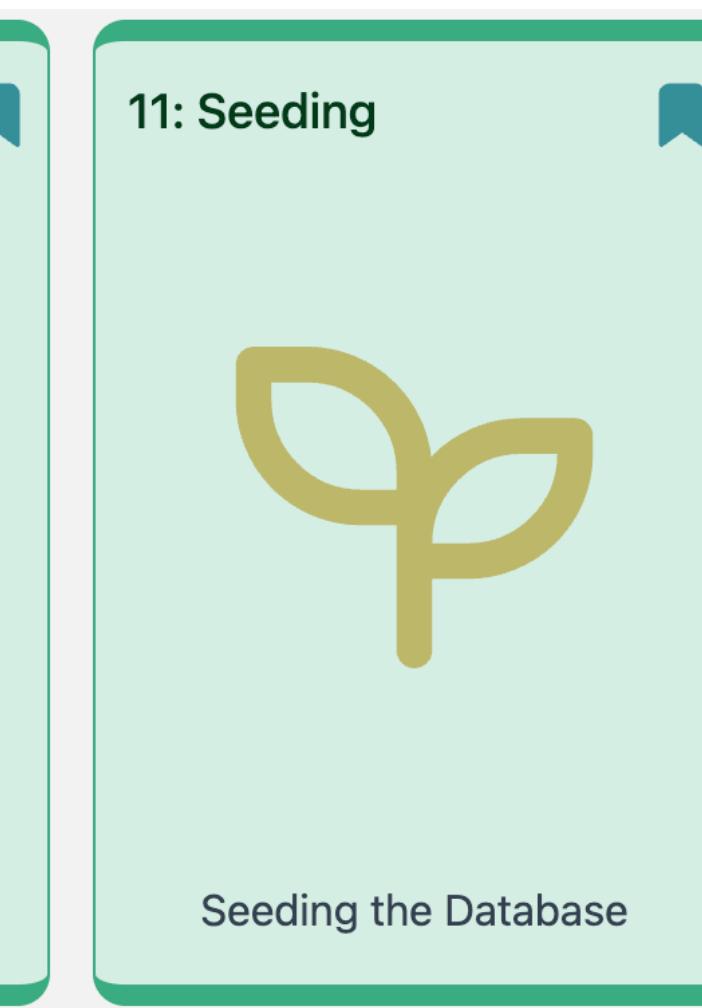
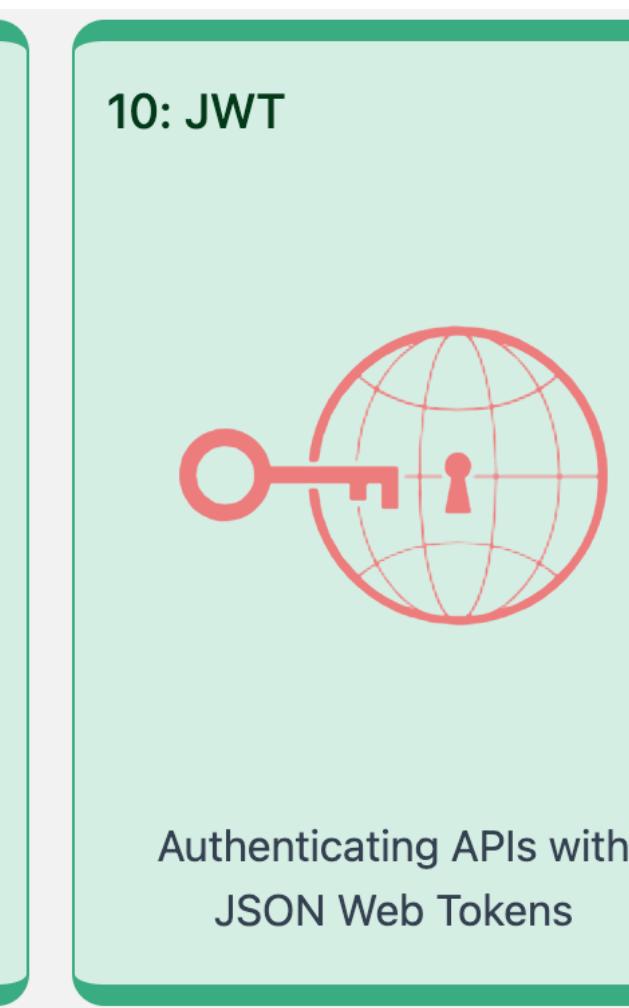
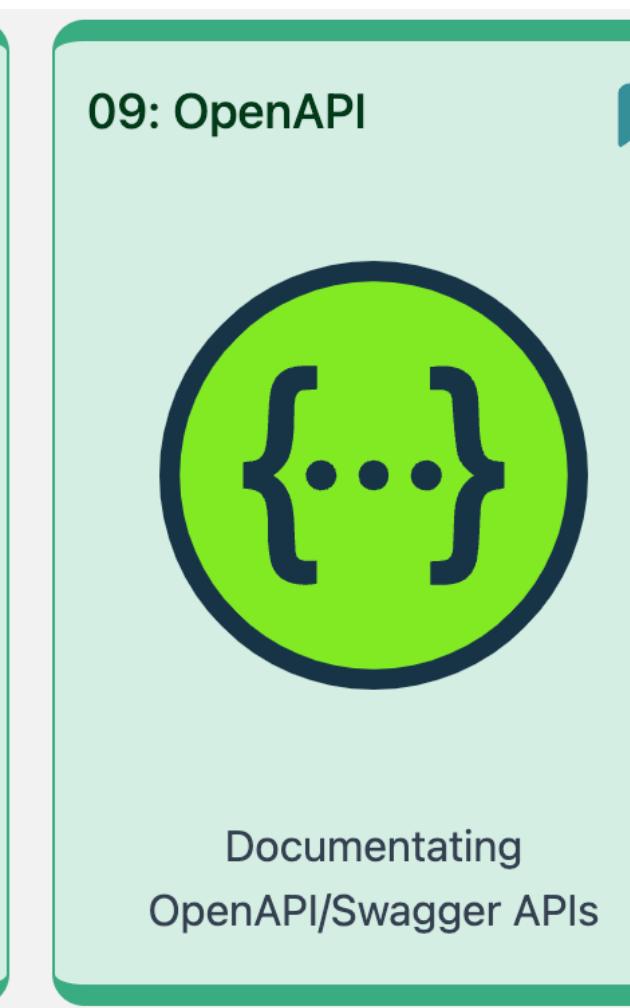
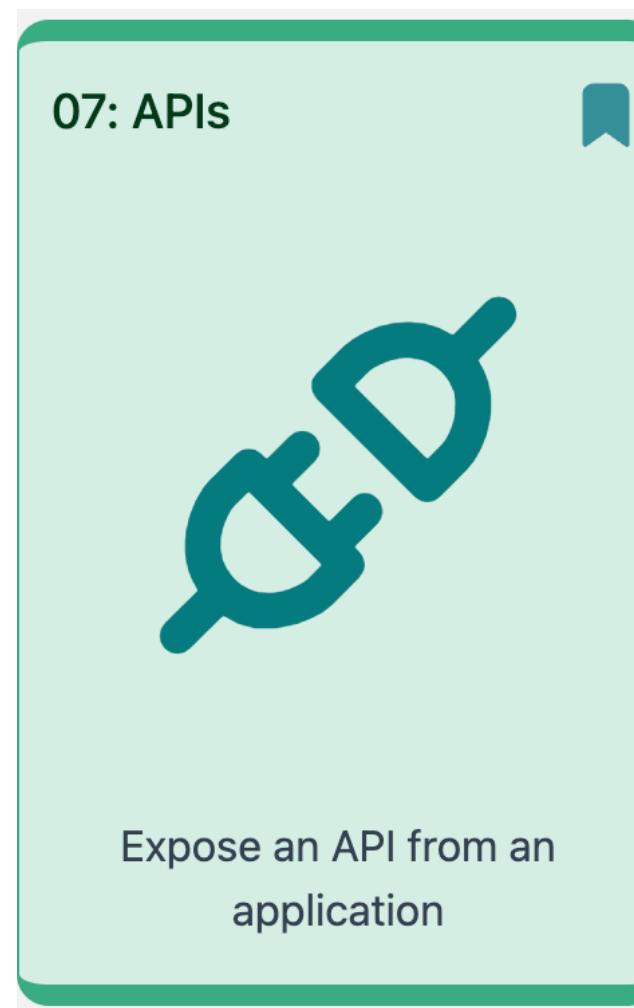
Back End Web  
Development

Test Driven  
Development

## **Application Programmer Interfaces**

Front End Web  
Development

Full Stack



Core  
Concepts

Back End Web  
Development

Test Driven  
Development

Application  
Programmer  
Interfaces

**Front End Web  
Development**

Full Stack

The image shows a horizontal row of seven cards, each representing a lesson in the Svelte framework. Each card has a green header with a bookmark icon, a large central icon, and a brief description below it.

- 12: Deployment** (Icon: Cloud with arrow): Deploying to Glitch, Render & Cloud Atlas
- 13: DOM** (Icon: Document tree): The Document Object Model
- 14: Svelte Introduction** (Icon: Large orange Svelte logo): First contact with the Svelte Framework
- 15: Svelte Components** (Icon: Component diagram): Introducing the Svelte Component Model
- 17: Donation Applications** (Icon: Computer monitor with gears): Overview of Donation Applications - Hapi & Svelte
- 18: TypeScript** (Icon: TypeScript logo): TypeScript Hapi Applications
- 19: SvelteKit Routing** (Icon: Route sign): Application Routing in SvelteKit

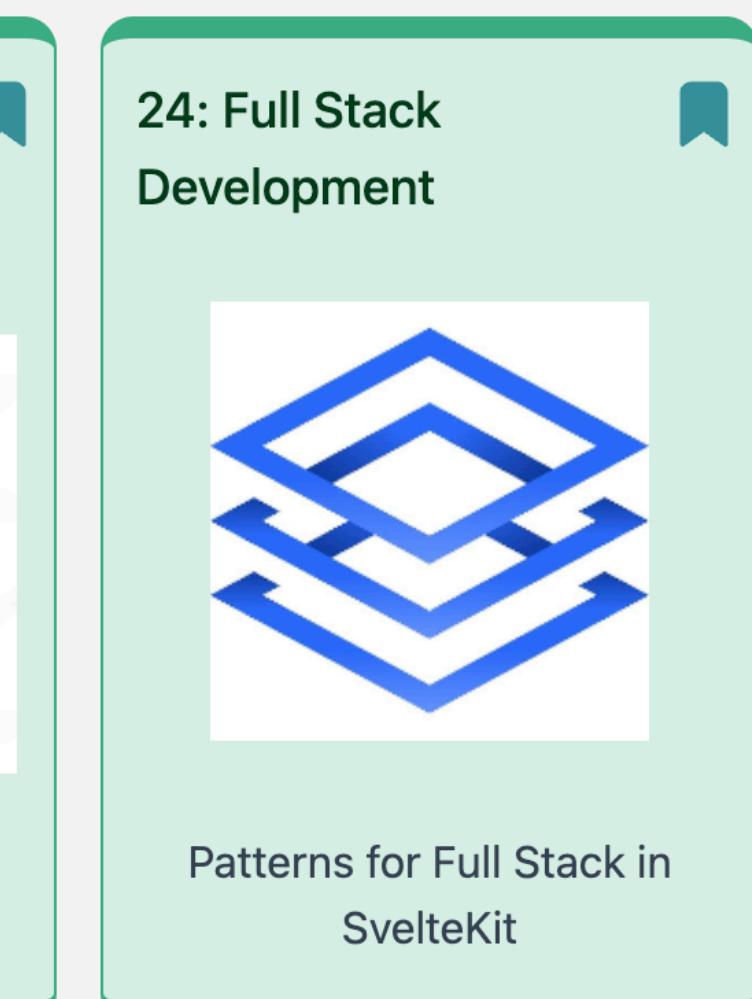
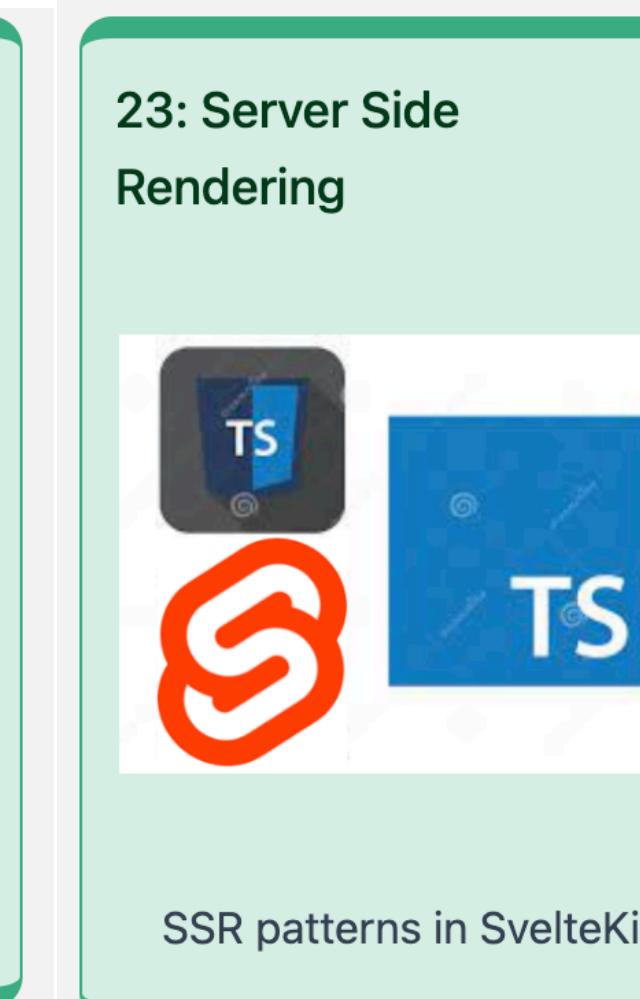
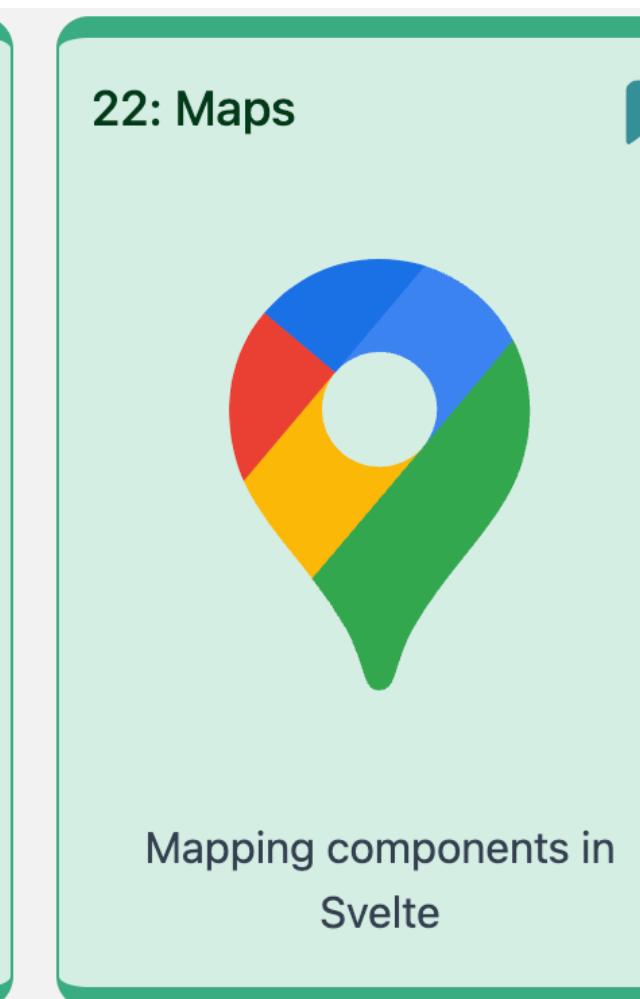
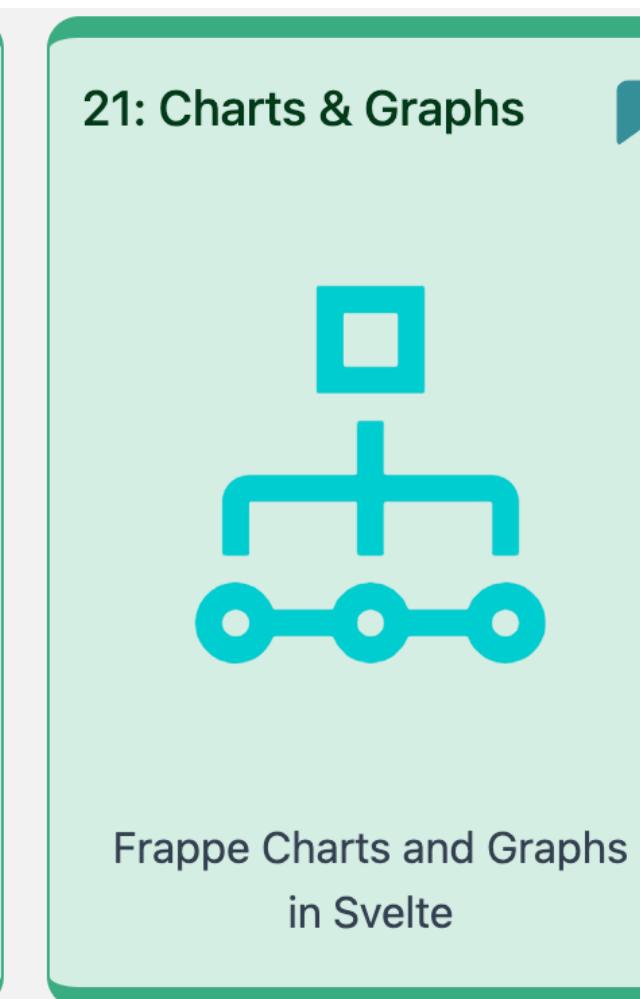
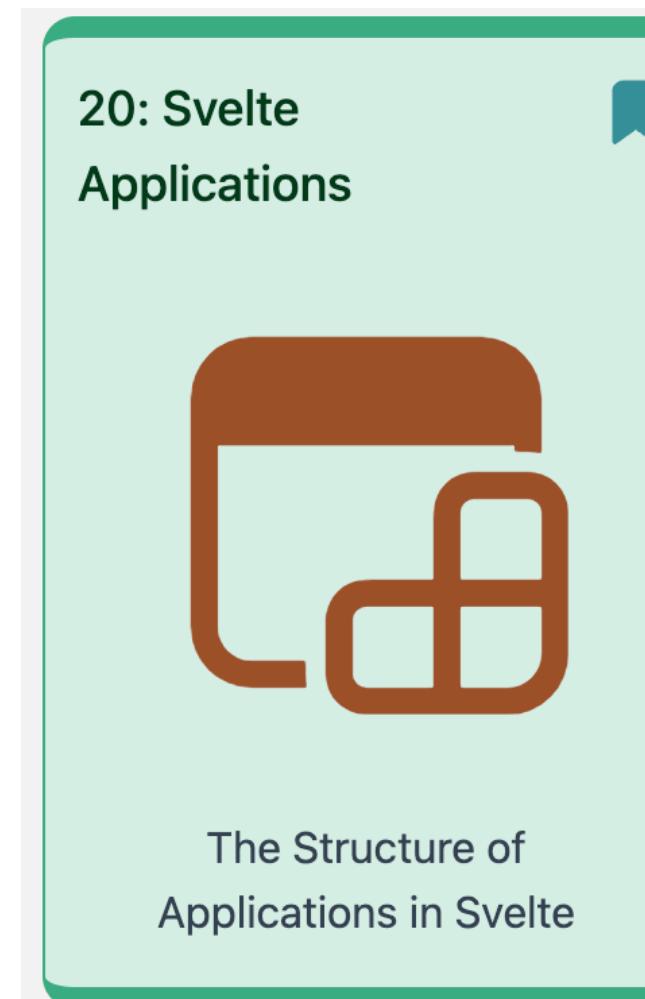
Back End Web  
Development

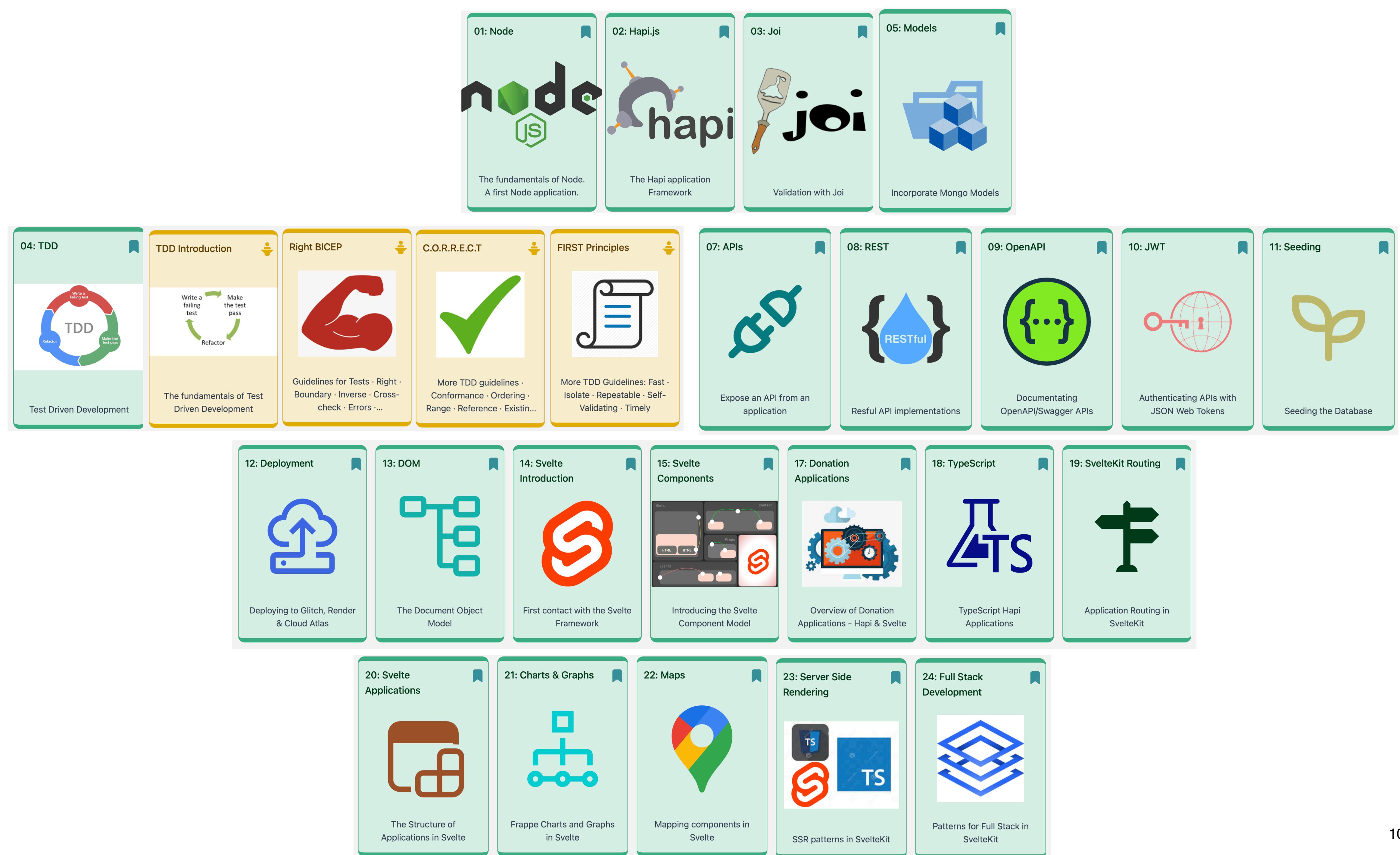
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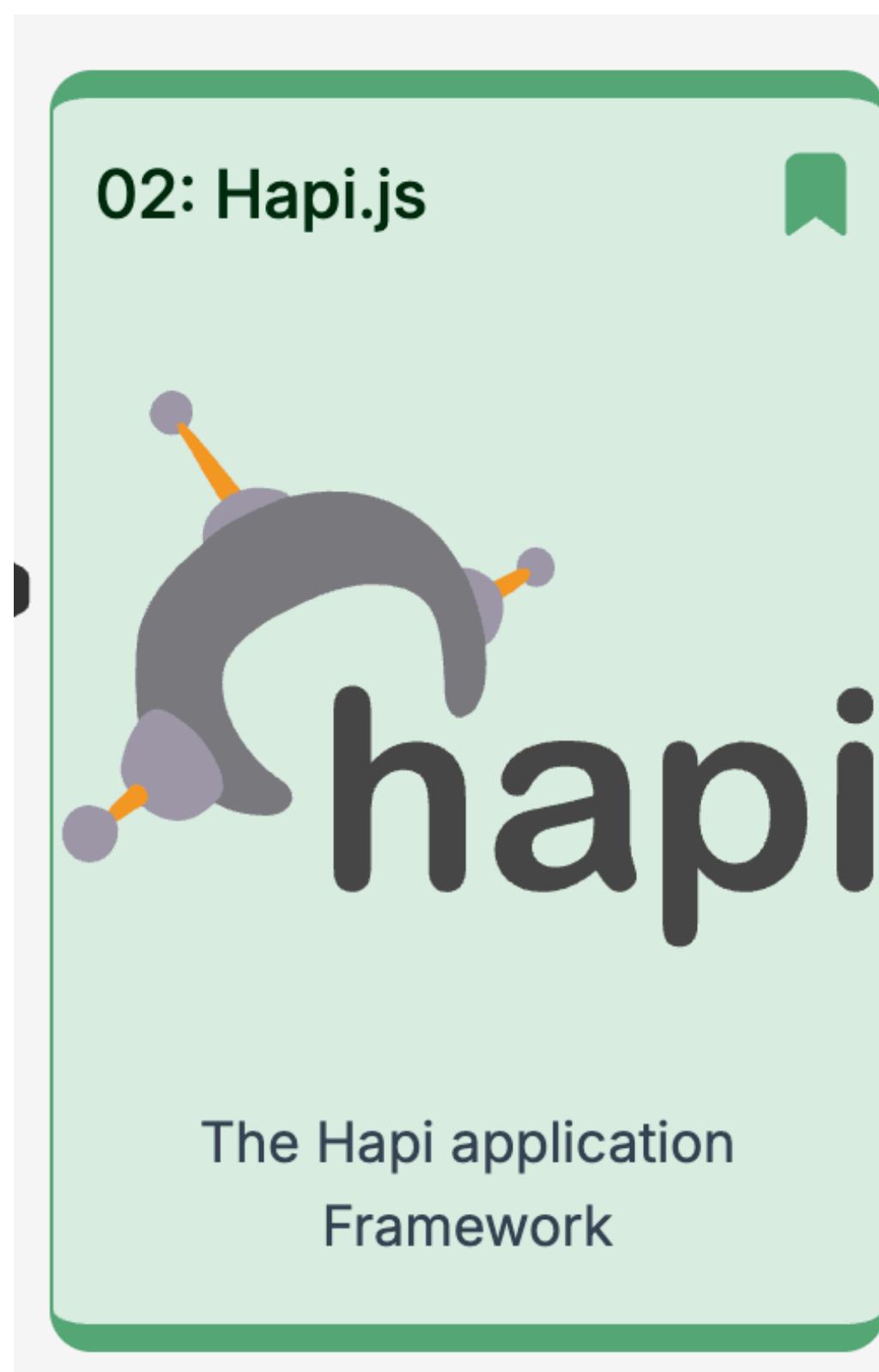
Front End Web  
Development

**Full Stack**

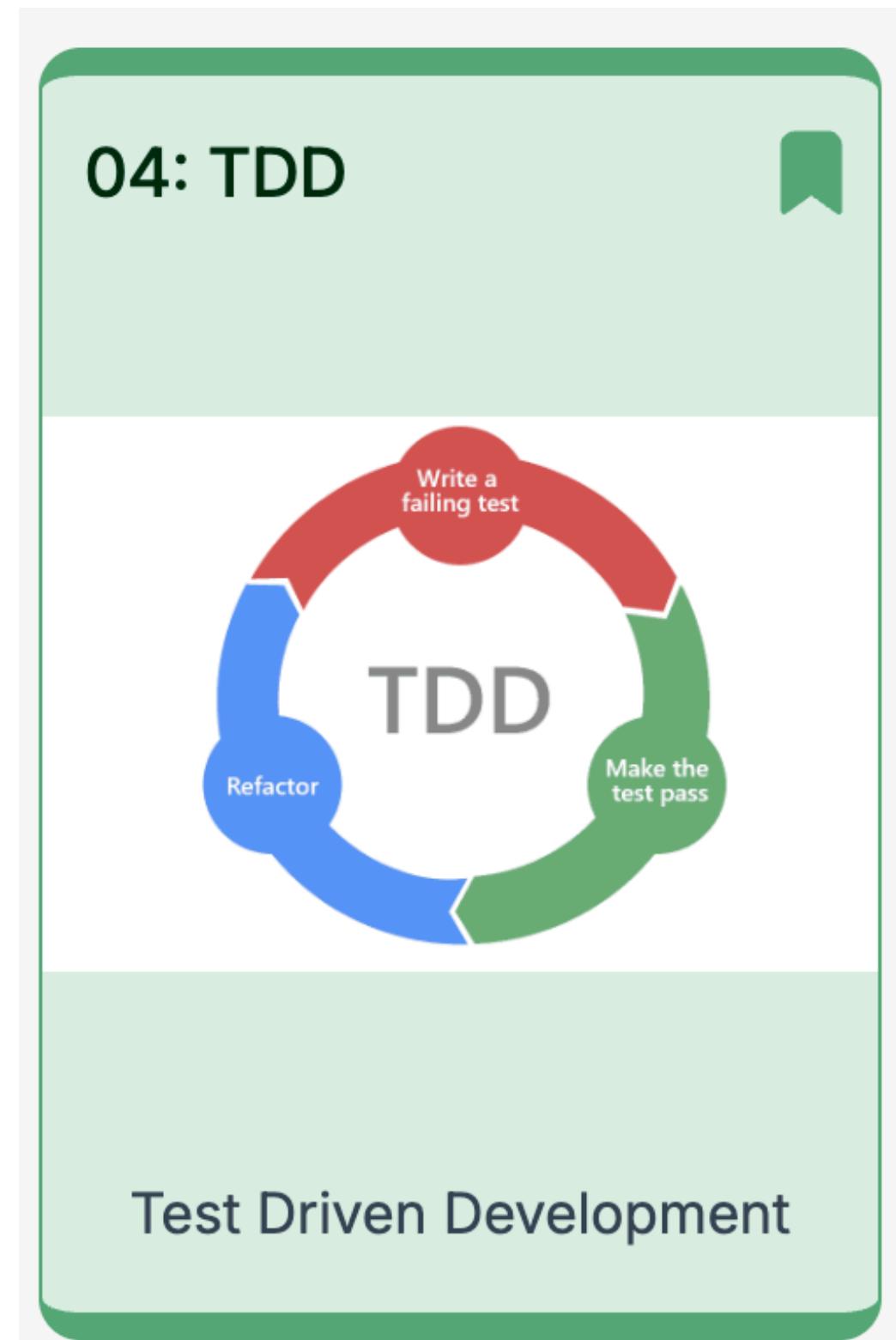
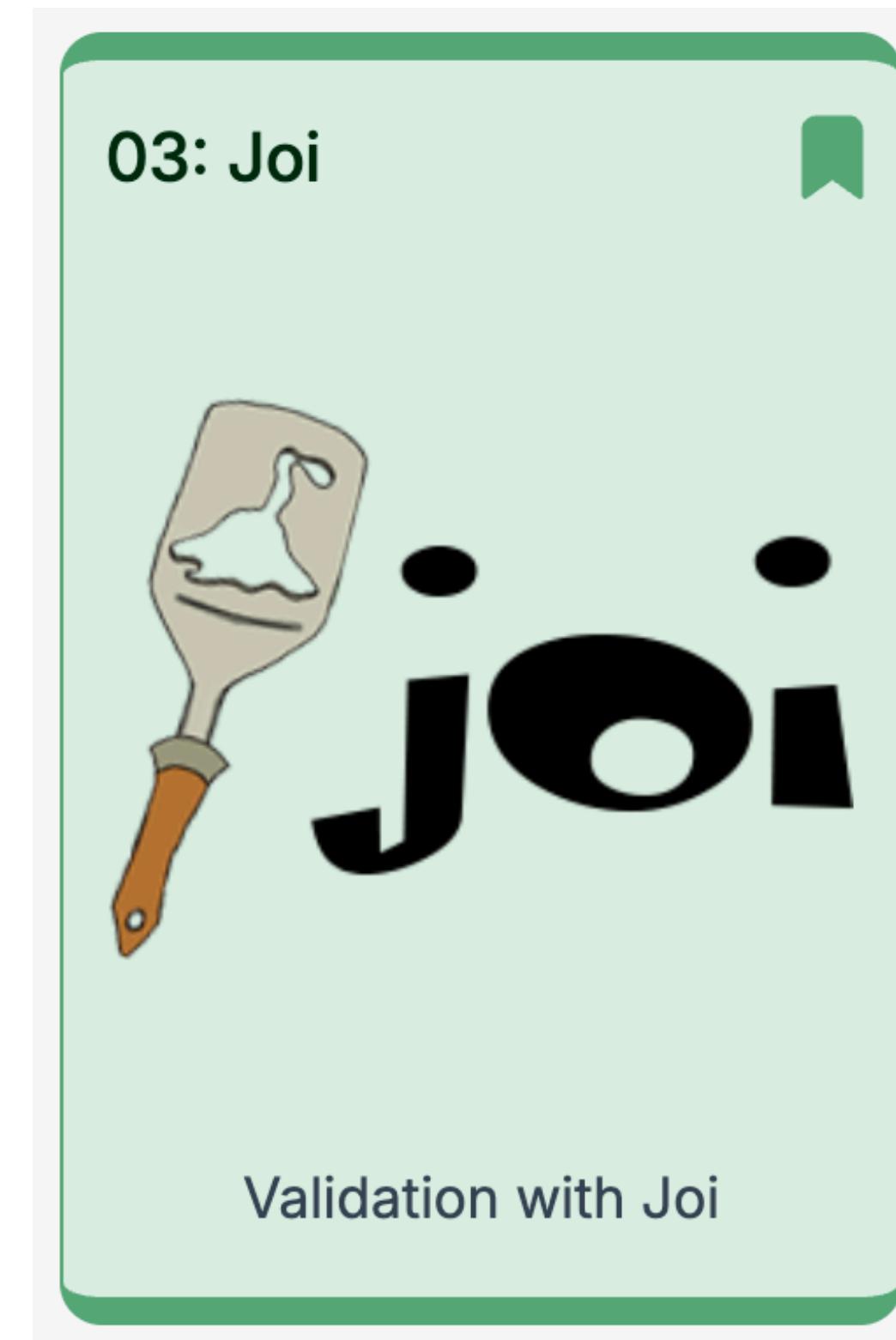




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	EXAM	10	11	12	13	14	15
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**05: Models**



Incorporate Mongo Models

**06: Assignment 1**



Concept, detail and grading rubric

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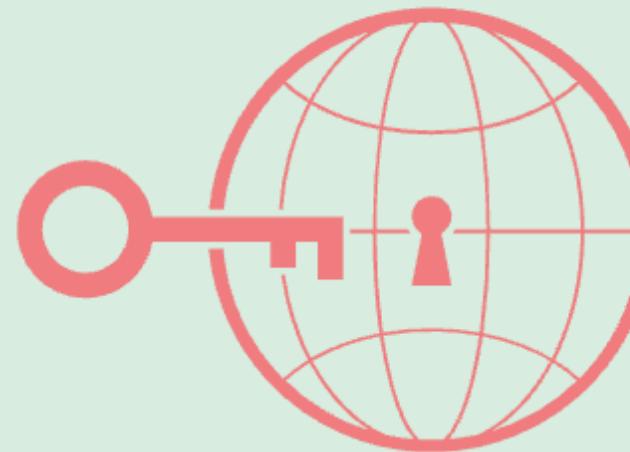
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**09: OpenAPI**



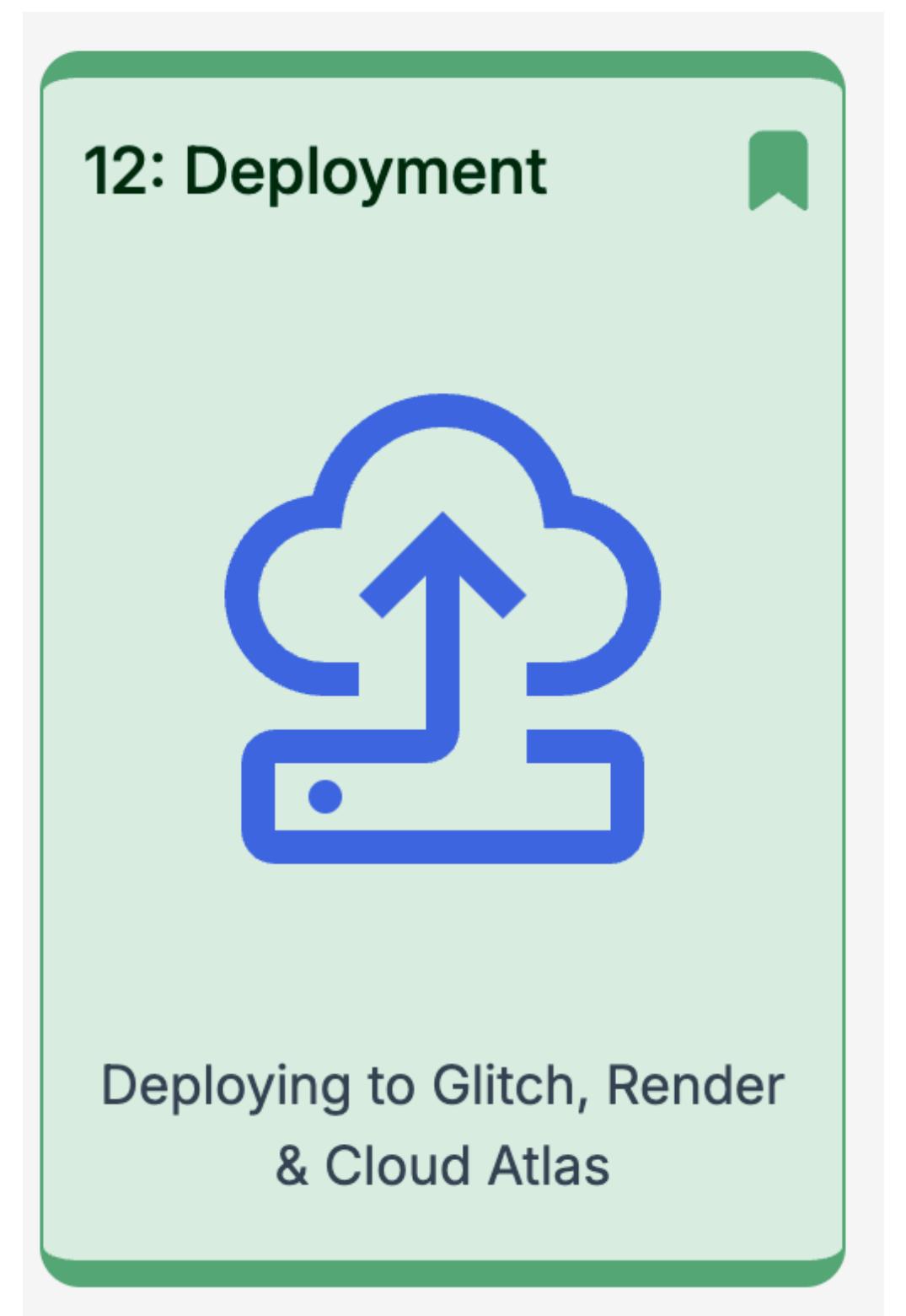
Documentating  
OpenAPI/Swagger APIs

**10: JWT**



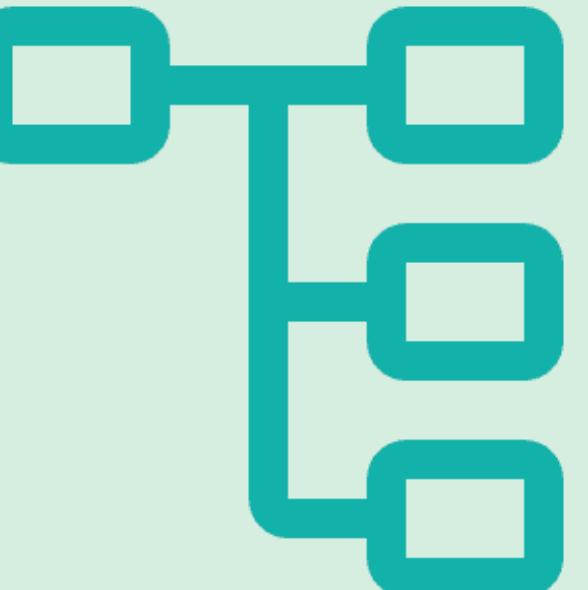
Authenticating APIs with  
JSON Web Tokens

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**13: DOM**



The Document Object Model  
Model

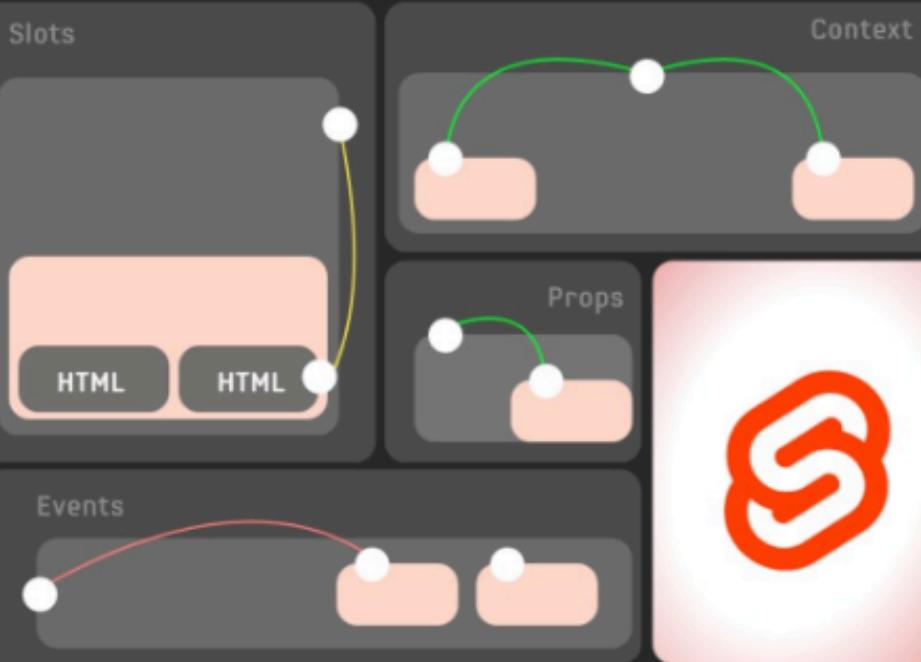
**14: Svelte  
Introduction**



First encounters with the  
Svelte Framework

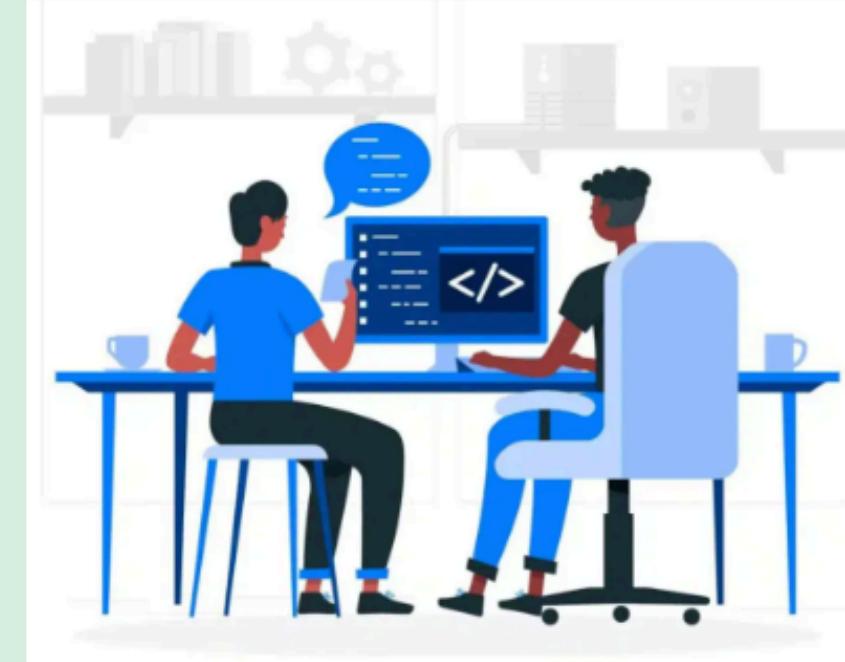
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## 15. Svelte Components



Introducing the Svelte Component Model

## 16: Assignment 2



Concept, detail and grading rubric

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## 17: Donation Applications



Overview of Donation Applications - Hapi & Svelte

## 18: TypeScript



TypeScript Hapi Applications

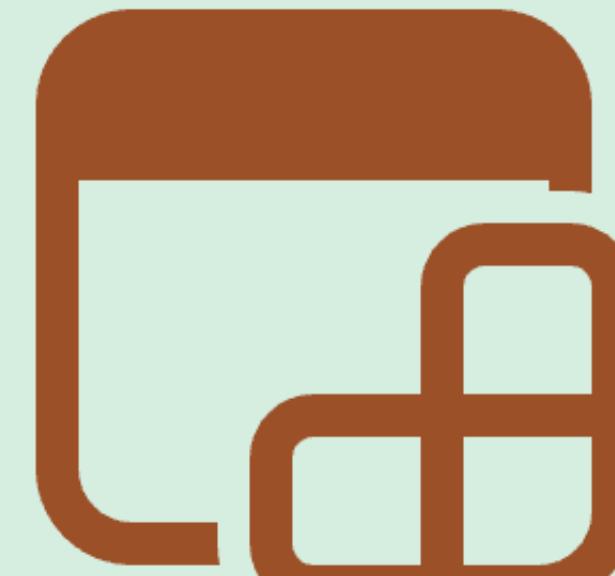
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## 19: SvelteKit Routing



Application Routing in SvelteKit

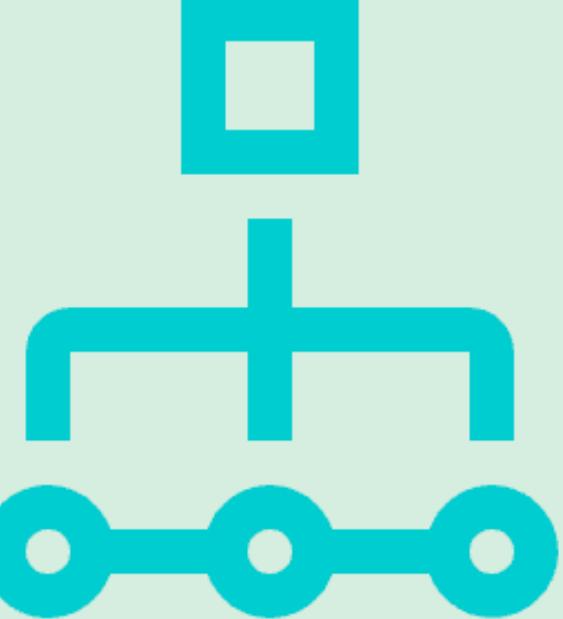
## 20: Svelte Applications



The Structure of Applications in Svelte

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## 21: Charts & Graphs



Frappe Charts and Graphs in Svelte

## 22: Maps



Mapping components in Svelte

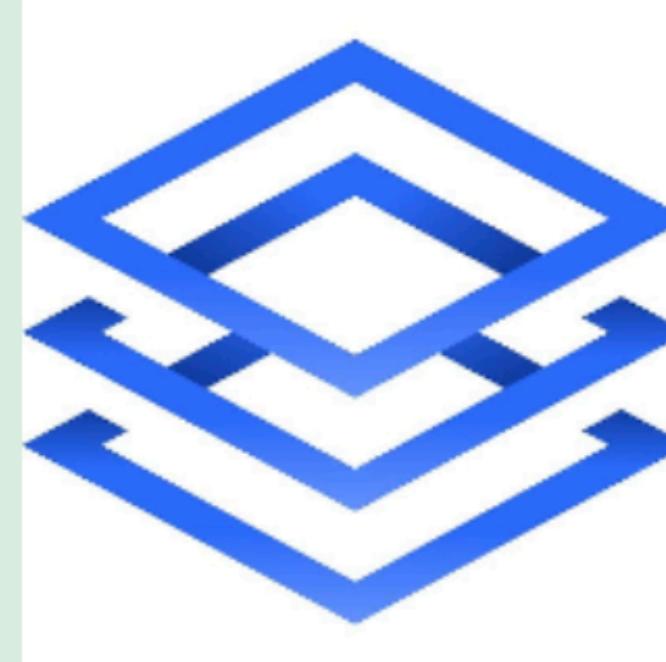
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**23: Server Side Rendering**

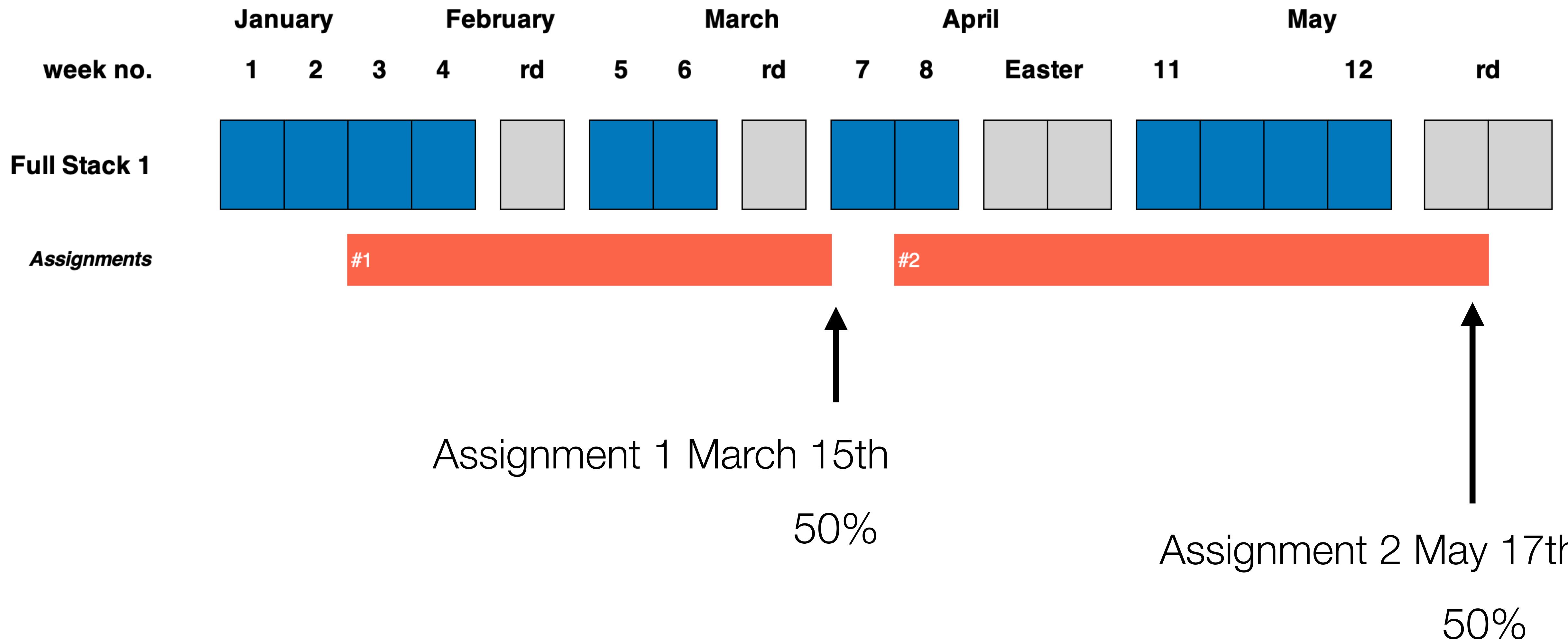


SSR patterns in SvelteKit

**24: Full Stack Development**



Patterns for Full Stack in SvelteKit



Lecture for the Topic  
Slides or External references/repos used in the lecture

Links to video chapter from main lecture

The screenshot shows a digital notebook interface with three main sections:

- Introducing Node**: A slide featuring logos of SE TU and OTH Regensburg, a photo of Eamonn de Leistar, and a diagram of a full stack developer role.
- Introducing Node & HAPI**: A slide with four cards: "Full Stack Web Development", "Node Context", "The Hapi Framework", and "Hapi Building Blocks".
- Introducing Playtime**: A slide with two cards: "Code Quality Tools" and "Model View Controller in HAPI".

The screenshot shows a digital notebook interface with three cards:

- Learning Resources**: A card for a Node.js podcast episode titled "01.Node Nov 7 · Full Stack Development".
- Lab-01-Playtime-0-1-0**: A card for a lab titled "First version of Playtime, implementing user signup + simple global playlists".
- LLM Notebook**: A card for a pre-trained LLM on the topic.

AI Generated Summary Podcast (10 mins)

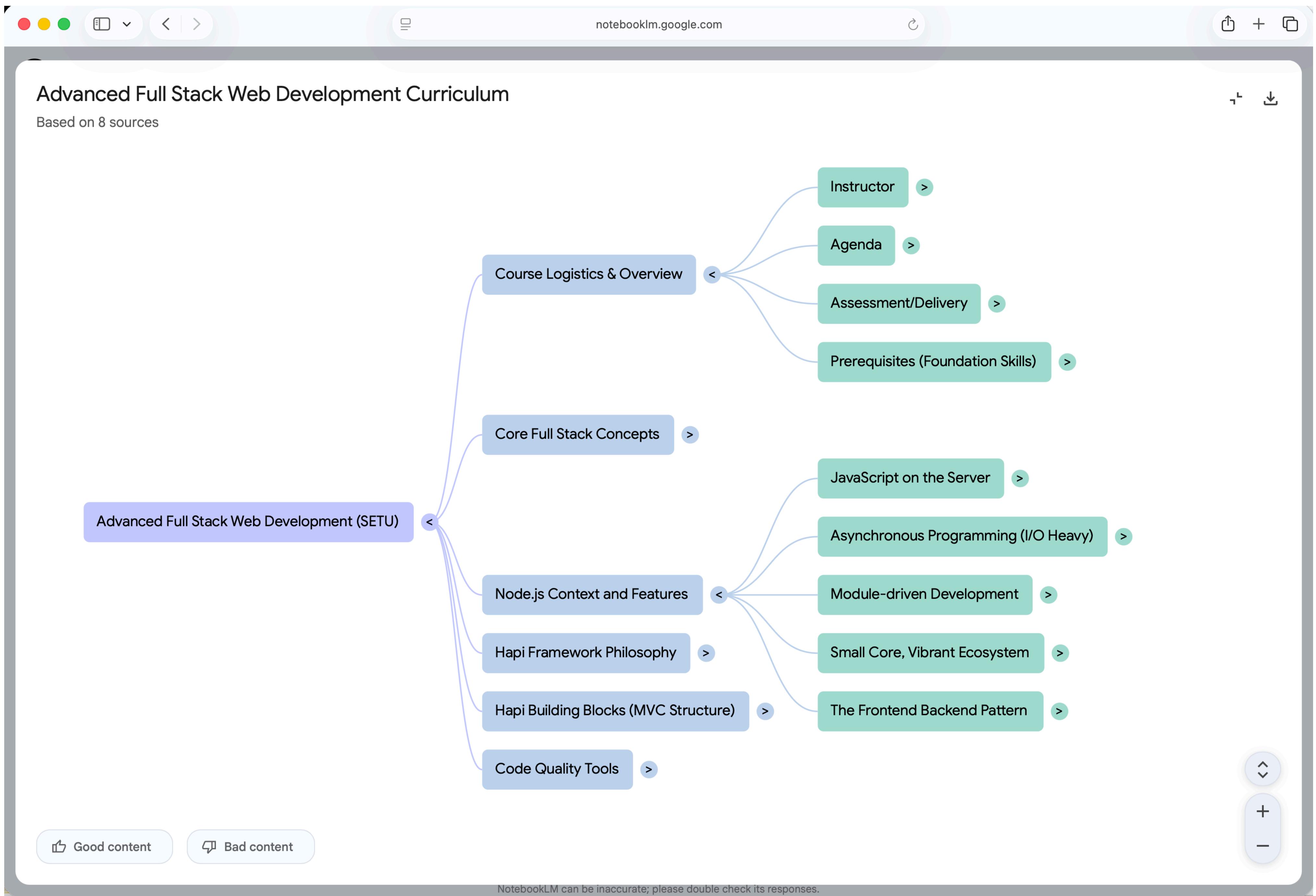
Lab for the Topic

Pre-trained LLM on this specific topic

Typical Topic Layout

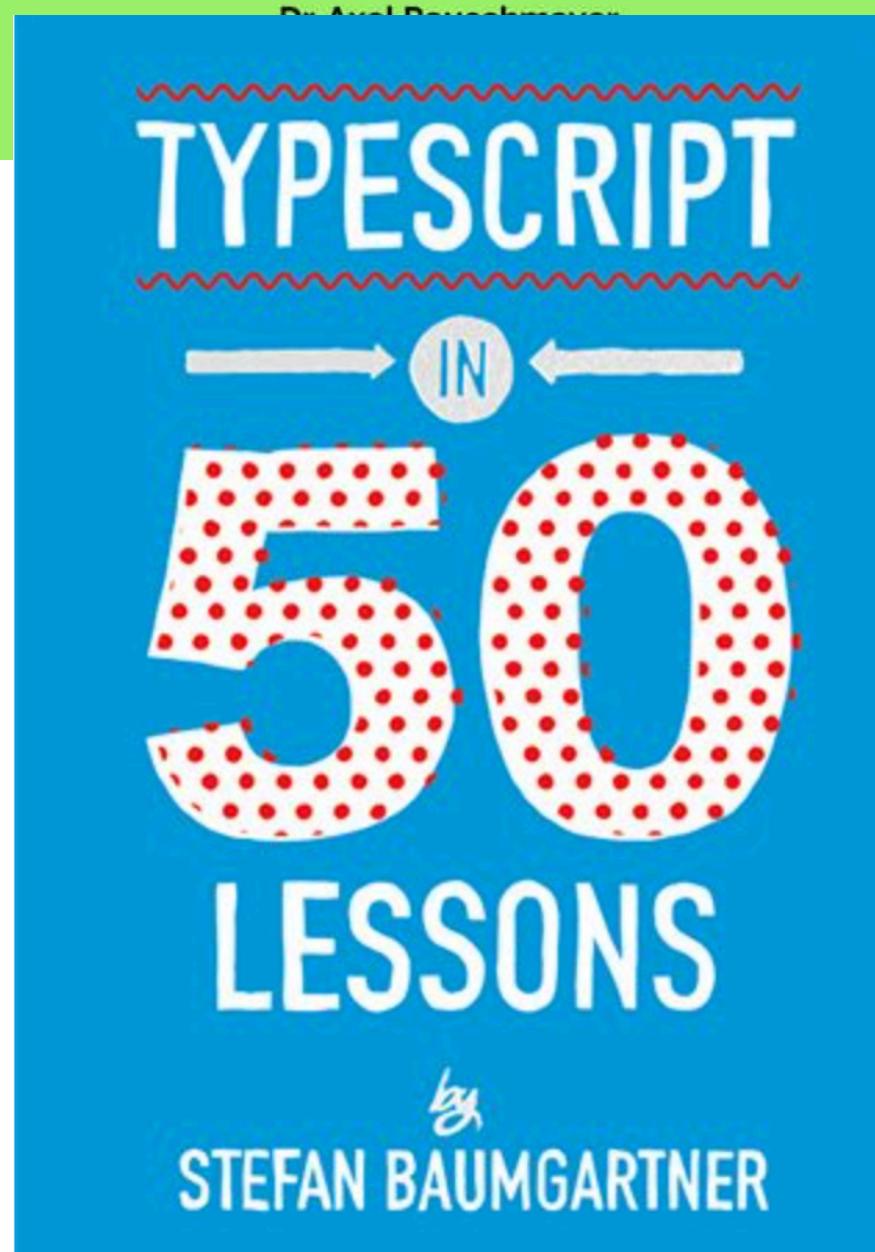
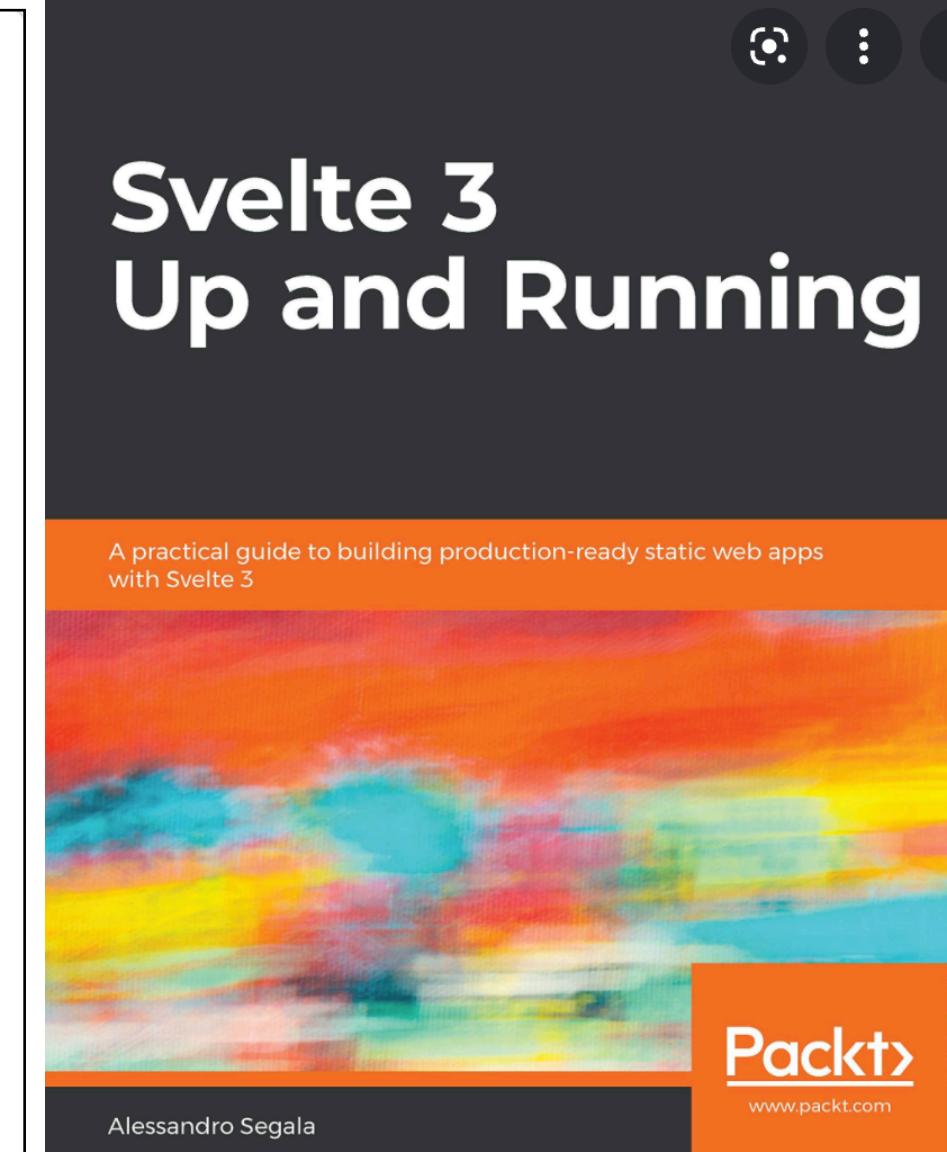
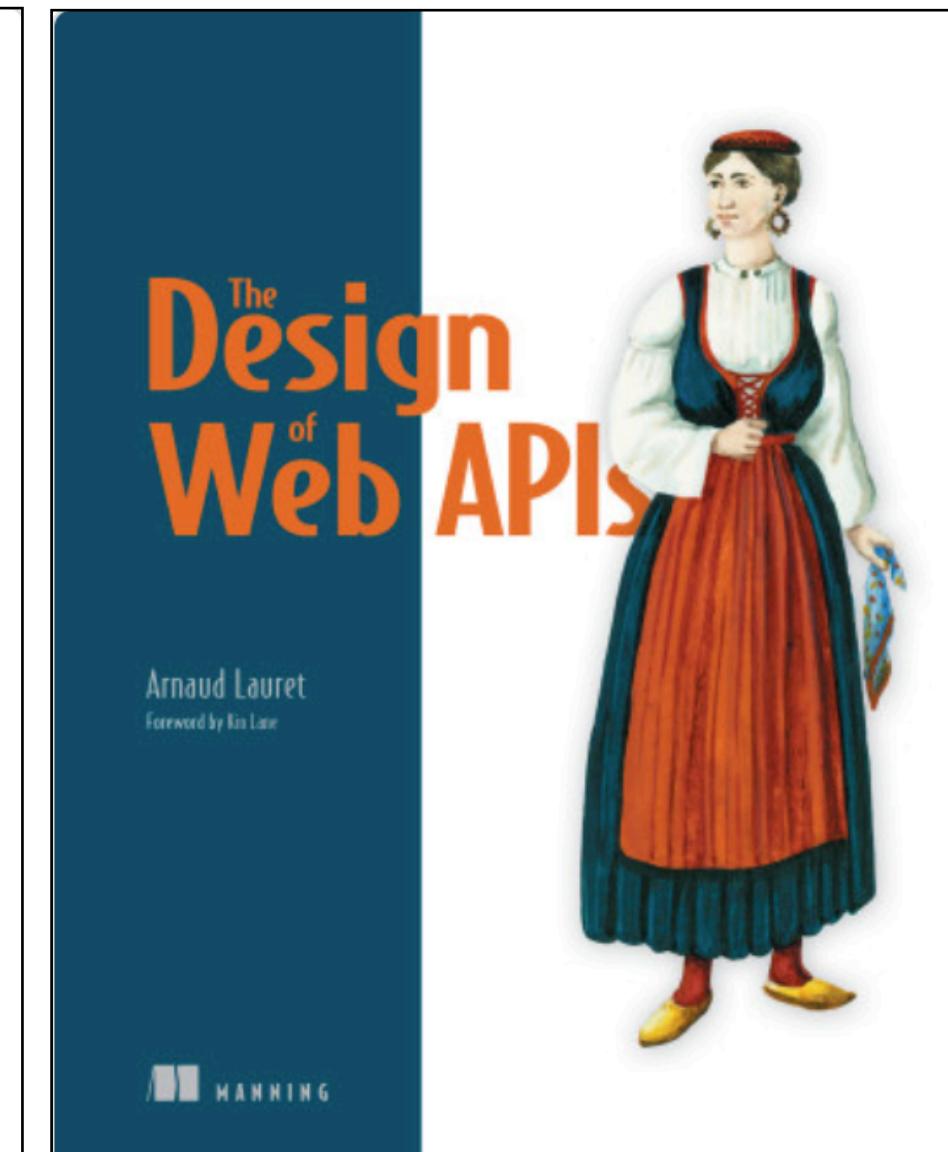
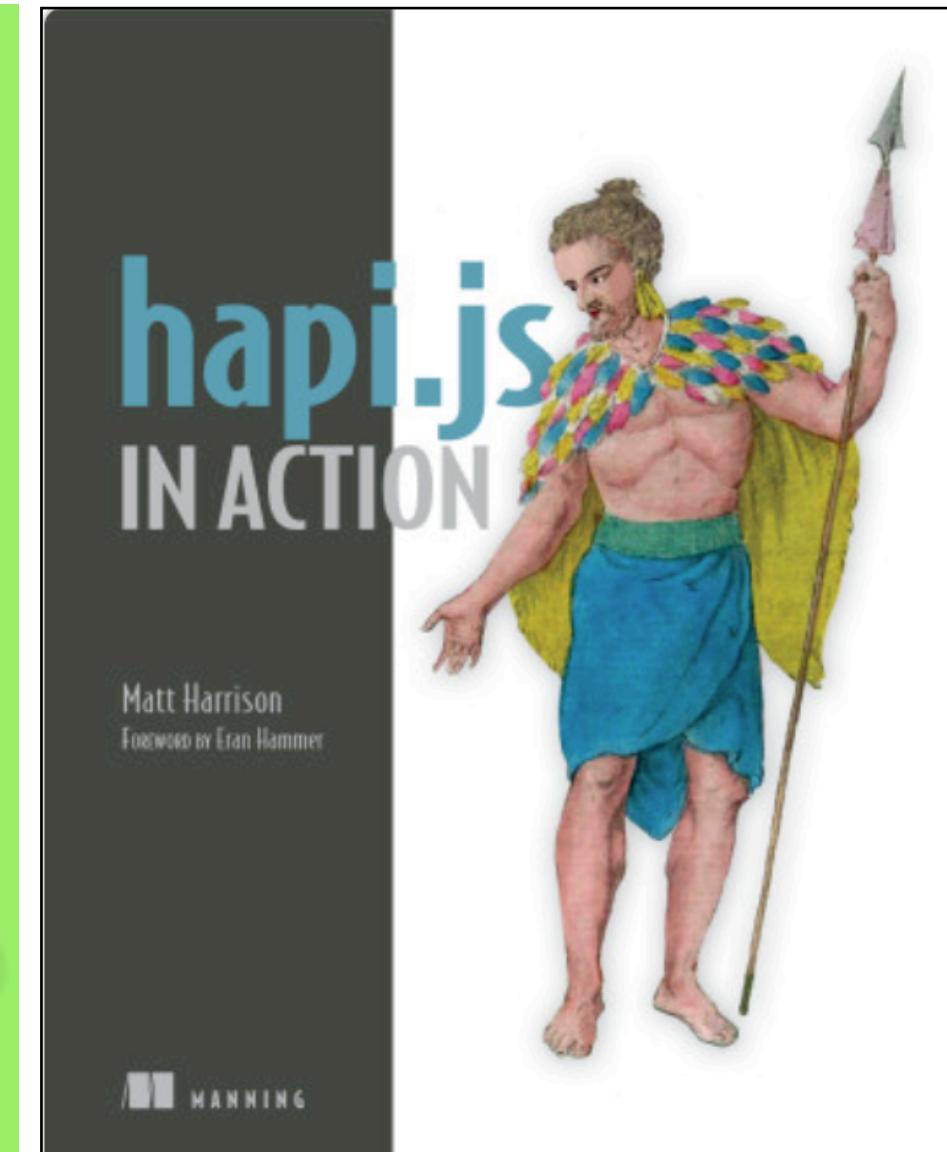
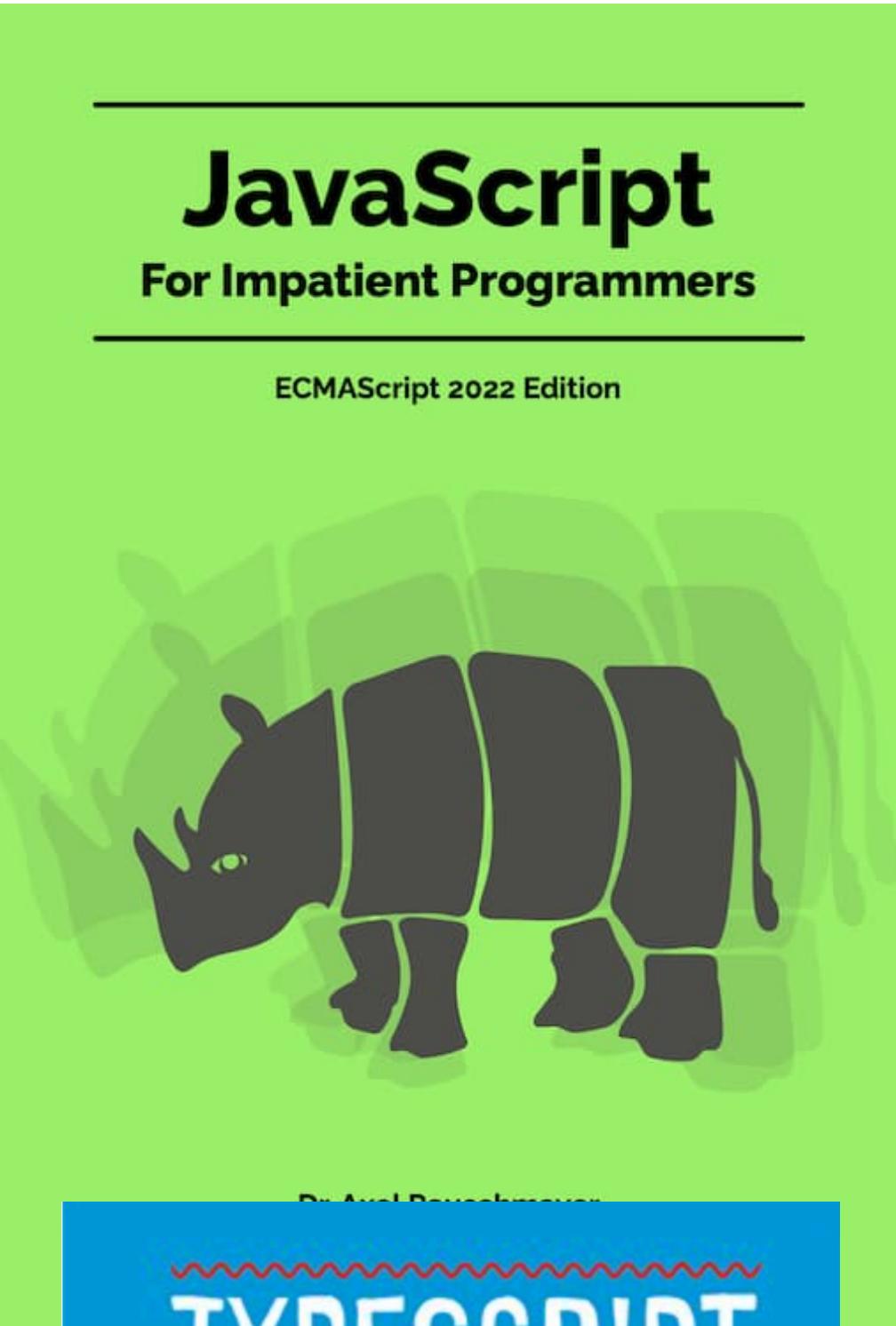
The screenshot shows the NotebookLM application interface. At the top, there's a navigation bar with icons for window control, a search bar containing 'notebooklm.google.com', and a user profile icon. The main area is titled '01 Node' and is marked as 'Public'. On the left, a sidebar titled 'Sources' lists various files with checkboxes next to them, all of which are checked. The central panel is titled 'Chat' and features a large green circular icon with the text '01 Node'. Below this, it says '8 sources' and provides a detailed description of the course material, mentioning 'Advanced Full Stack Web Development', 'Node.js', 'Hapi', 'asynchronous programming', 'modular design', 'Playtime', 'Model-View-Controller (MVC)', 'code quality tools', 'ESLint', 'Prettier', 'Airbnb style guide', 'laboratory instructions', 'server setup', 'web routes', and 'user authentication'. It also highlights 'convention over configuration'. At the bottom of the central panel is a text input field with 'Start typing...' placeholder text and a send button. To the right, a 'Studio' panel displays a list of outputs: 'Advanced Full Stack Web...', 'Node.js Architecture...', 'Briefing Document: Advanced Full...', and another 'Advanced Full Stack Web...'. Each item has a small icon, a title, a subtitle indicating '8 sources', and a timestamp ('69d ago' or '70d ago'). There are also three-dot and circular icons next to each entry.

Pre-trained  
LLM on this  
specific topic

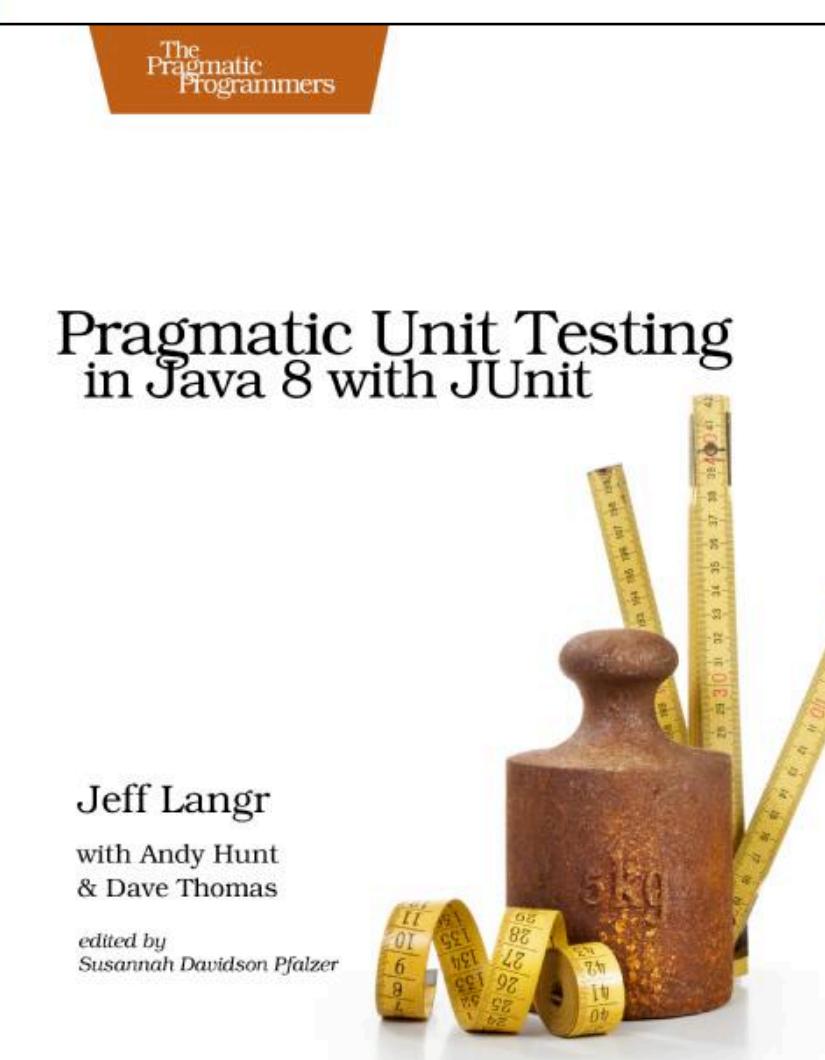
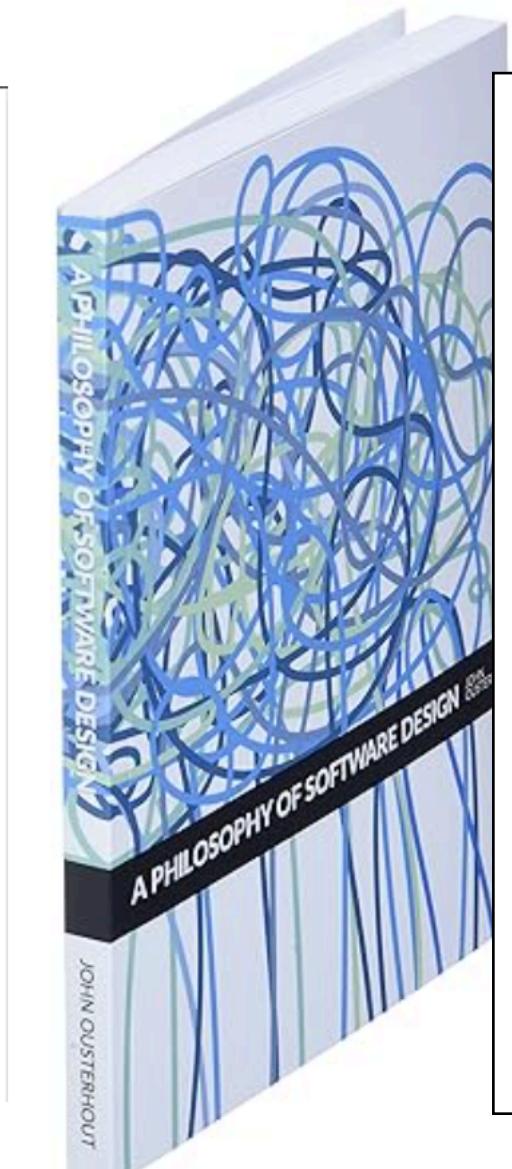
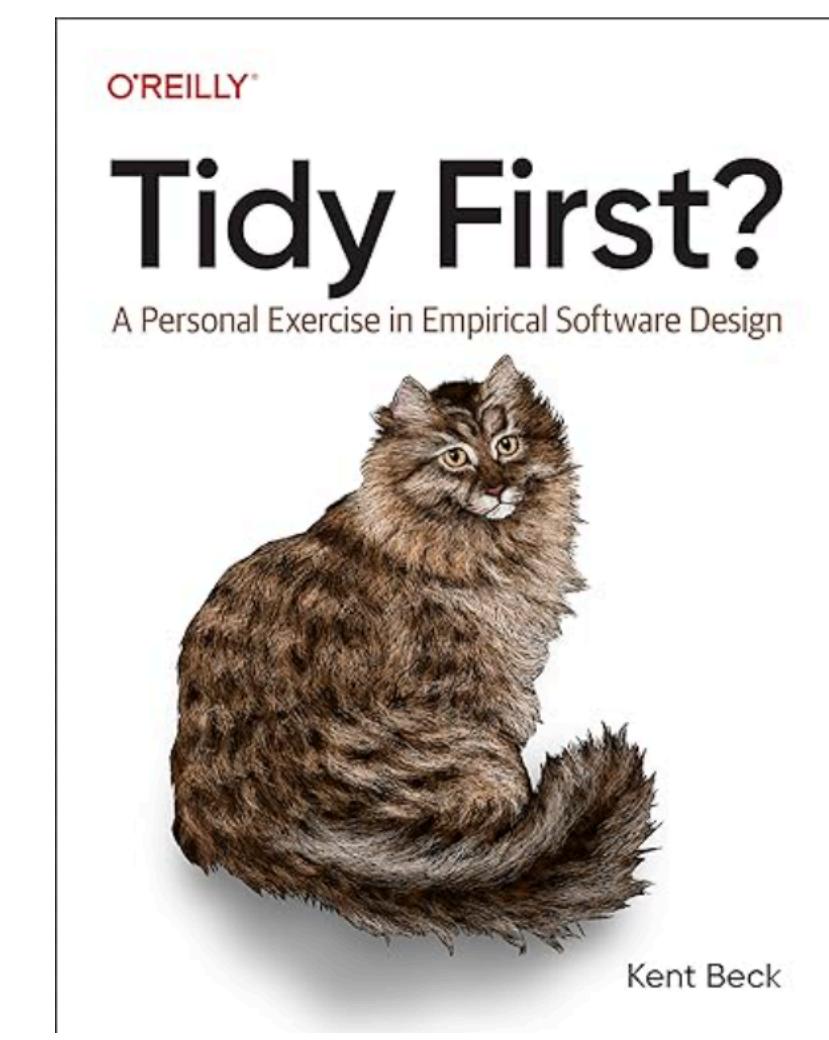


LLM  
Generated  
Concept  
Map

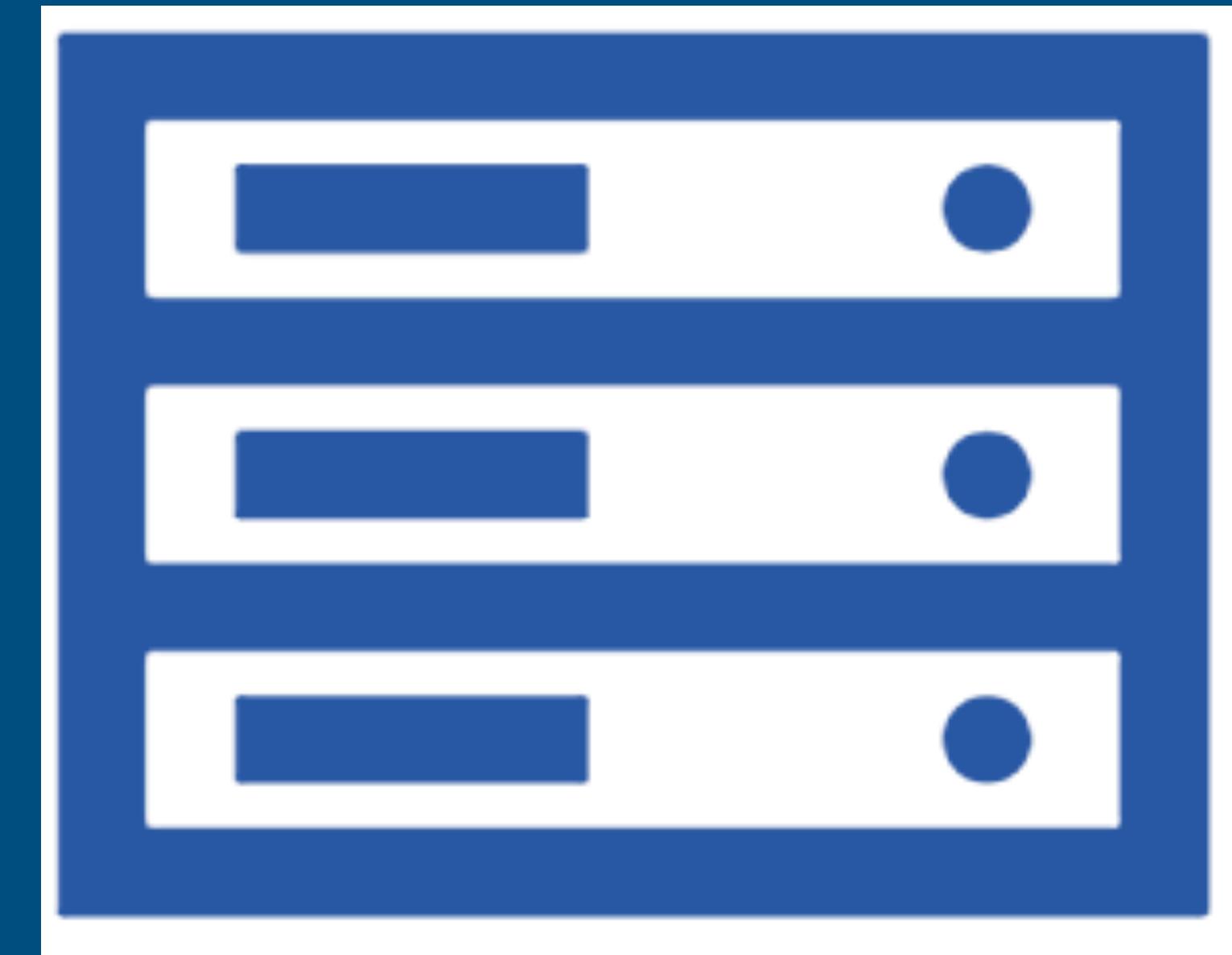




- <https://exploringjs.com/impatient-js/toc.html>
- <https://nodeweekly.com/>
- <https://javascriptweekly.com/>
- <https://frontendfoc.us/>
- <https://svelte.dev/blog>



# Course Overview



Full Stack Development 1