

Class 26: Selected Topics

- Selected Topics
- Q & A

Selected Topics

Student Provided Topic Suggestions

- Prop Drilling / Context
- Tailwind CSS
- MERN from Scratch
- Deploying MERN
- Design Activity
- Design Portfolio
- Review API Design
- Review Most Missed Questions from Past Exams
- Q & A for Final Exam
- The meaning of life
- Is the moon made of cheese?

Prop Drilling / Context

Typically, we pass data from parent to child components via props.

For deep component trees, this can lead to “**prop drilling**”: passing props through many intermediate components that do not need the data, just to get it to a deeply nested component that does.

Context is a React feature that allows us to share data across the component tree without having to pass props down manually at every level.

Deploying MERN

Client

1. `npm run build`
2. Deploy `client/dist` folder to static hosting service (e.g. GitHub Pages)

Server

1. Create Express server configuration (i.e. Dockerfile)
2. MongoDB server configuration + initialization (i.e. Dockerfile or Docker compose)
3. Deploy server to hosting service (e.g. Hostinger, Fly.io, Render, Heroku, etc.)

MERN from Scratch

1. Create a new Git repo
2. Add “devcontainer” configuration files.
3. Use `vite` to create a new React app in the `client` folder.
4. Set up Express server in the `server` folder.
5. Configure MongoDB (e.g. using Docker).

Portfolio Design

Demonstrate your ability through verifiable proof of work + UX process.

It is no longer sufficient to have a bunch pictures of your Figma projects in your portfolio – that can all be “faked” with AI.

Document your UX process (i.e. user interviews, user testing, etc.) including your **failure cases** (e.g. what did you learn from user testing that led to a pivot in your design?).

#1 Missed Question from Exam I

- “ 5. (2 points) A component is defined in JSX as a function. Yet, when we use a component in JSX, we write it as an HTML element. For example: `<Logo />`. Explain what `<Logo />` does in terms of JavaScript code. Your answer should include the JavaScript code that is equivalent to `<Logo />` and an explanation of how that code works. (~2 sentences) ”

#1 Missed Question from Exam II

“ 5. Answer the following questions using the MongoDB shell command below. (You may assume the `produce` collection exists in the `test` database and a document with the specified `_id` exists.)

```
db.produce.find({ _id: "69c3d6d488562e515a8ce5be" })
```

b. (2 points) Describe the result of running the above command. Explain your answer. (1-2 sentences) ”

API Design

- What do the developers need? Collections or Documents?
- What operations do the developers need? CRUD or just Read?
- Do any resources have a hierarchical relationship? If so, how should the API reflect that?

Q & A

What's Next

Friday: no sections; no practice problem workshop

Monday: Semester wrap-up + final exam Q & A