

## Hey there, future intern! Ready for a cool challenge?

We have an exciting project for you to dive into: a Course Management System! Don't worry; we'll guide you through each step of the process!

### What's this all about?

We want to see how you handle building a whole web app from scratch. This task will show us your coding skills, how you solve problems, and how creative you can be. Oh, and you've got 3 days to work your magic!

### Part 1: Build Your Web App

#### Here's what your app should do:

1. Let users log in (use something called JWT)
2. Allow users to add new courses (with title, description, teacher, and schedule)
3. Show all the courses in a list, and when you click on one, show more details.
4. Let users search for courses or filter them by title or teacher.

#### What to use:

- For the part users see (frontend): React or Next.js
- For the behind-the-scenes stuff (backend): NestJS
- For storing all the info: MongoDB

#### Some important stuff to remember:

1. Make sure everything works and looks good on different screen sizes.
2. Check that users are entering the right kind of info (no empty fields allowed!)
3. If something goes wrong, tell the user what happened in a way they'll understand.
4. Keep your code tidy - imagine someone else needs to read it.

### Part 2: The Big Data Challenge

Here's where it gets interesting! We're going to give you a huge file with info for over 10,000 courses to be imported in your database. Your job is to make your app handle all this data without breaking a sweat.

#### What you need to do:

1. Figure out a way to show all these courses without making the page super slow (hint: ever heard of pagination?)
2. Make sure your backend can handle all this data quickly (e.g., using indexing, efficient queries)
3. Keep the search and filter working fast, even with all these courses.

### Part 3: Tell Us How It Works

Write a simple guide that explains:

- How to set up and run your app
- How to use all the features
- Any cool tricks you used to make it work.

#### How to Send It to Us

Put all your code on GitHub. Make sure to include your guide too!  
We will see your commit History to know how you progress.

#### What We're Looking For

Does your app do everything we asked for?

- Is your code clean and easy to understand?
- Can your app handle all those courses without slowing down?
- Is your guide clear and helpful?

**That's it! Show us what you've got. If you get stuck, don't be afraid to ask questions. Good luck, and have fun building your app!**