

You have just started working at Remede Agency, an agency specialized in web application development. The team is mainly composed of back-end developers and has just started recruiting other front-end specialists.

After a few days in the company, you receive the following email:

Subject: Welcome!

From: Mila

To: Me

Welcome to the team!

My name is Mila Lavigne and I am your new project manager. We're very excited to have you join the team! I have great news: the contract we talked to you about in the interview has been accepted and the client is ready for us to start.

The project is for a new startup bank, Argent Bank, that is trying to break into the industry and needs help setting up their app. We were awarded a two-part contract that breaks down into several phases:

Phase 1: User Authentication - Creating a web application for customers to log in and manage their accounts and profiles.

Phase 2: Transactions - This would involve specifying the API endpoints needed for a possible second mission once we complete the first.

At the end of the project, you will present both deliverables to Avery Moreau, who manages the Argent Bank technical team.

We're still waiting for information, but I'll make sure you're included in all communications to keep you up to date on the project.

Looking forward to working with you!

Mila

Project Manager

A few hours later, you receive the following email:

Subject: Brief mission profile Argent Bank

From: Avery

To: Me, Mila

Hello Mila and the team,

I'm Avery Moreau VP Engineering at Argent Bank. We are excited to have you on board to build our React web application for the new user authentication system. We have a very tight deadline and will need some help!

Here's an overview of what we need for Phase 1: User Authentication.

Create the full responsive web application with React. As a starting point, we provided static HTML and CSS for the homepage, login page and profile page.

Use Redux to manage the state of the whole application.

What the application should do (see details for each on our GitHub Issues templates):

- The user can visit the home page
- The user can log in to the system
- The user can log out of the system
- User can see their own profile information only after successful login
- The user can change the profile and keep the data in the database.

You can start by forking our existing repo and track the progress with the GitHub Issue templates we have included.

Our back-end engineers have already created all the APIs you need. You can find all the Swagger documentation inside the repo.

For phase 2: Transactions, we are still in the design phase. On our side, we are developing a functionality for transactions that should allow users to :

- view all their transactions for the current month;
- view the details of a transaction in another view;
- Add, edit or delete transaction information.

Since you are already managing the web application for phase 1, we want to hear your thoughts on how you think the APIs should be modeled on the back end. We need you to provide us with a document describing the proposed transaction APIs, following the Swagger guidelines.

Key elements to specify for each API endpoint will include:

- The HTTP method (e.g. GET, POST, etc.)
- The route (e.g. /store/inventory)
- The description of what the endpoint corresponds to (e.g.: Return of the pet inventory)
- The possible parameters to account for the different scenarios (e.g. itemId (optional) = ID of the specific item to request from the inventory database)
- The different responses with corresponding response codes that make sense for this endpoint (e.g. 404: unknown item error response).

You can use the transactions page presented in the mockups to guide your choices (but you don't need to implement this page). Just make sure the document is exported to a YAML file (i.e. File > Save as YAML) using the Swagger syntax, which can be exported in the Swagger editing tool.

We will do a code review and discuss the API proposal together once everything is complete.

Looking forward to working with you!

Avery Moreau

You notice that the interface is in English. Even though you're not very comfortable with the language, you figure this is your chance to practice a little! It's always good for a developer to read

English, because professional documentation is often done in this language. And Google Translation is your friend 😊

With all this information in hand, you get to work as soon as possible!

### **Deliverables**

For this project, you will need to create the following:

A GitHub repository that contains the complete code base to fulfill all the requirements of Phase 1: User Authentication.

A swagger.yml file of the proposed API templates with the endpoints required for Phase 2: Transactions.

The GitHub repo must be named with the following convention: FullName\_#\_DatedStart. The # corresponds to the project number on the path and the date must be in ddmmyyy format. For example, FrancoisLenotre\_5\_05032020.

### **Presentation**

The presentation will be structured as follows, with the evaluator playing the role of Avery Moreau:

#### **Presentation and explanation of deliverables (10 min)**

#### **Discussion (15 minutes)**

The evaluator will ask you questions about your methodology and results.

Be prepared to defend your work, as the evaluator will challenge your decisions.

The evaluator will stop playing the role of Avery Moreau five minutes before the end of the session so that you can debrief together.

### **Competences evaluated**

- Implement a state manager in a React application
- Interact with an API
- Model an API
- Authenticate to an API