Project:

Goal:

To build an integration application with Trello that enables user authentication, card creation, and card display. The authentication details & created cards should be stored in a MongoDB database.

Requirements:

1. Angular for frontend - Version 12
2. Node.js and Express.js for the backend - Node.js - 14
3. Trello API for integration - link
4. MongoDB for data storage
5. Authentication - Display Cards - Create Card - Update Cards on Trello - Save Authentication details on MongoDB

Timeline:

1. End date: Jun 7, 2023 11:59 PM

Step-by-Step Guide:

Step 1: Setup Your Development Environment

1. Install the latest version of Node.js and npm. (Node.js version 14)
2. Install Angular CLI globally using npm. (Angular version 12)
3. Install MongoDB locally
4. Create a new Angular project using the Angular CLI.

Step 2: Create Your App with Trello

1. Documentation - https://developer.atlassian.com/cloud/trello/guides/rest-api/api-introduction/
2. Go to https://trello.com/power-ups/admin and register a new application. You'll receive a key and a secret which you'll use to authenticate your application with Trello.
3. Remember to set the Callback URL to the URL where you'll be making your requests from.

Step 3: Backend - Node.js & Express.js

1. In your project directory, create a new folder for the server.
2. Initialize a new Node.js project in this folder.

3. Install the necessary packages (express, cors, body-parser, mongoose).
4. Set up a basic Express.js server.
5. Connect your server to MongoDB using Mongoose.
6. Set up routes for user authentication and card operations (creation and retrieval).

Step 4: Trello Integration

1. Implement the user authentication route. This should redirect the user to Trello's authorization page and handle the OAuth callback.
2. Implement the card creation route. This should use the Trello API to create a card and store the card data in MongoDB.
3. Implement the card retrieval route. This should retrieve the card data from MongoDB.
4. Create - Update - Delete card API endpoints documentation link:
    a. https://developer.atlassian.com/cloud/trello/rest/api-group-cards/#api-group-cards

Step 5: Frontend - Angular

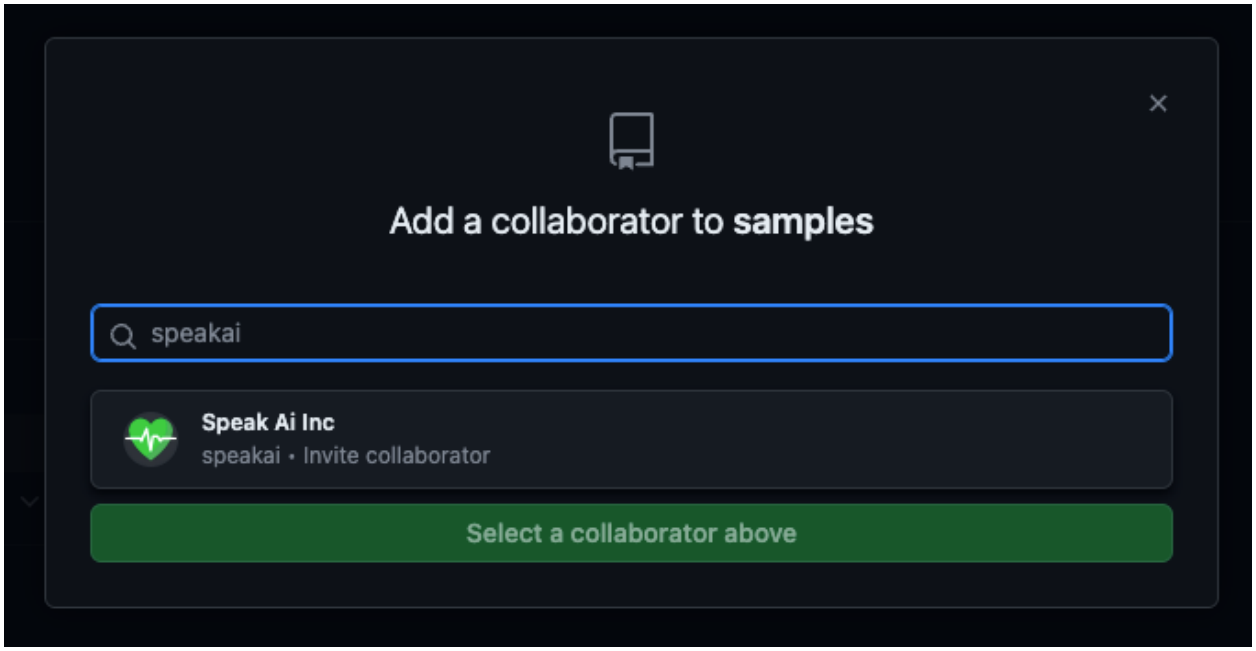
1. Create the necessary components (login, card creation, card display).
2. Implement the login component. This should direct the user to the backend authentication route.
3. Implement the card creation component. This should allow the user to input card details and send a request to the backend card creation route.
    a. Minimum required params for card creation - title, description, creation date
4. Implement the card display component. This should send a request to the backend card retrieval route and display the retrieved cards.

Step 6: Testing

1. Run your application and ensure that all components are working as expected.
2. Check that cards are properly created in Trello and stored in MongoDB.

Step 7: Submission

1. Deploy on your GitHub account and invite collaborator to “**speakai**”.
2. Create a **README.md** file to share about your project architecture, database schema, workflow & API endpoints.
3. Push your code to a GitHub repository regularly with the proper branch naming convention. (If not done correctly, it may impact the next round)



This project will assess your understanding of full-stack web development, including frontend and backend programming, database management, API integration, and OAuth authentication.

Please pay attention to code quality, commenting, and general best practices.

Let me know if you have any questions.

Good luck!

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