# Home assignment for web developer

**Technology Stack to Use:**

- Node.Js
- Dockers
- Microservices (frontend, backend, authentication, customer, appointment)
- TypeScript
- UI - React
- Express.js
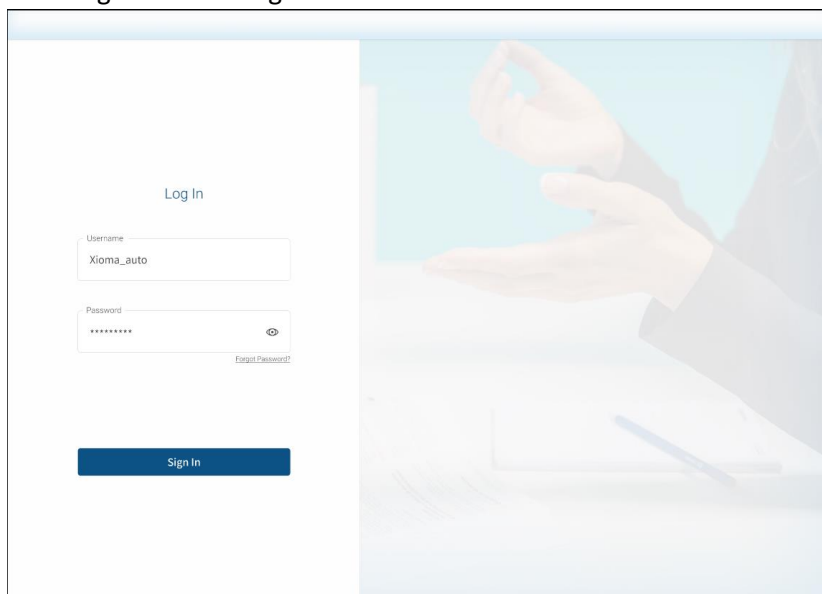- Data store – MongoDB
- Libraries to use – Mui or any other.

Figma - [UI Demo URL](UI Demo URL)

**Assignments Tasks:**

A. Authentication mechanisms
   Implement user authentication mechanisms for a web application to ensure secure access, you have a few options to choose from, including JWT (JSON Web Tokens), Token-Based Authentication, and Session Cookies.  The mechanism should include
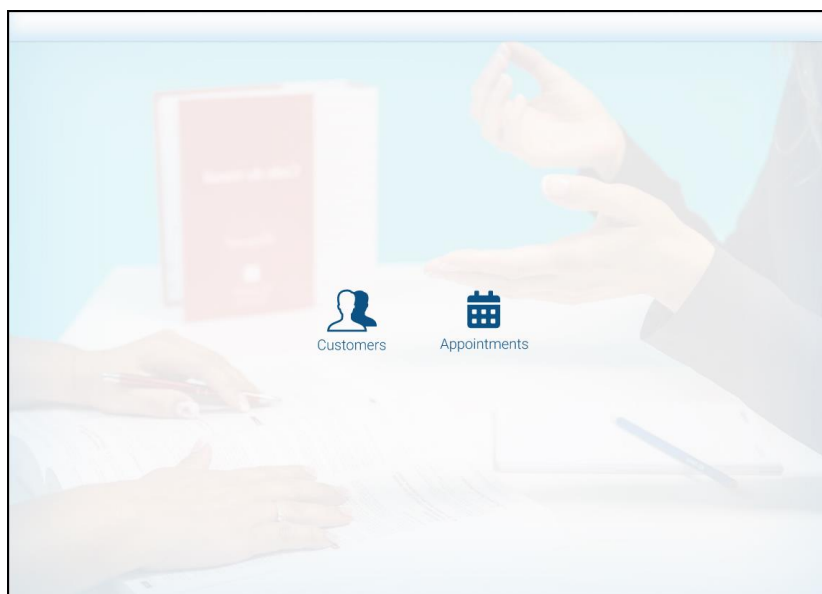   I.   User Login – form + logic



   II.   Authorization on every API call
   III.   Token/Cookie Expiry and Token Refresh/Cookie Renewal

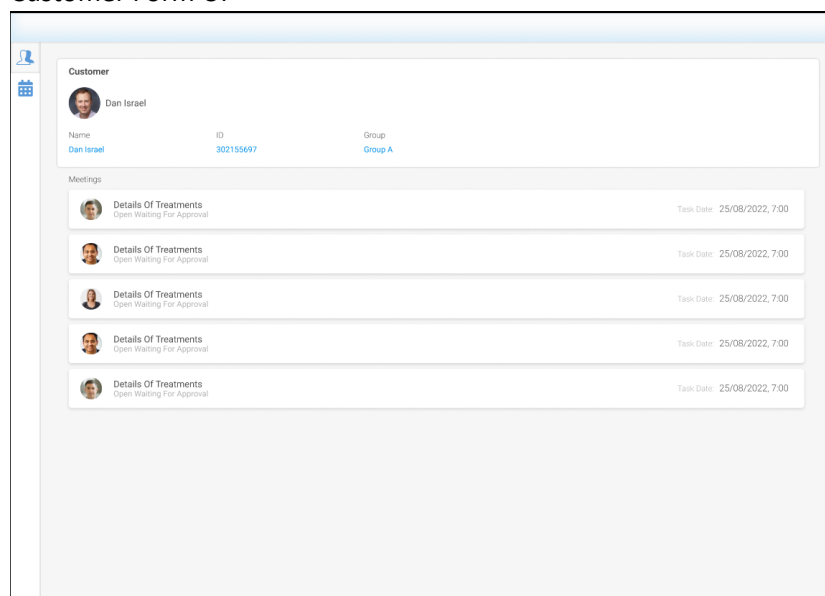B. Application Forms: Develop three distinct forms within the application, each serving a specific purpose:
   **I.**   Dashboard to access customer and appointment list

## II. Customer Form

In the Customer Form, we aim to create a comprehensive and user-friendly interface for managing customer information efficiently. Here are the key features and improvements:

- Customer List – No UI sample is provided, developed based on the provided style guide for the other components
  a. List all customer include the picture, name and id
  b. Clicking on a record will open the customer form
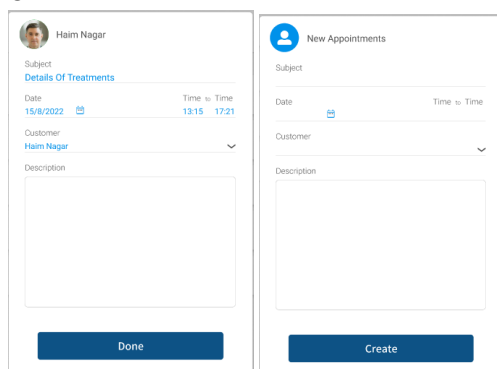  c. Supprot adding new customer by + button
- Customer Form UI –



- Customer Form Vital Information
  a. Name - Gather the customer's name, ensuring accurate identification.
  b. Group Selection - Choose the customer's group from a predefined list, simplifying organization and categorization.

    c. Customer ID - Implement validation when exiting this field to maintain data accuracy.

- Customer Profile Picture
  a. Allow users to upload a profile picture for the customer. This image can provide a visual reference and personalize the customer's profile.
  b. Store the uploaded pictures securely in the database, ensuring data integrity and privacy.
  c. Show the picture as part of the customer profile
- List Customer Appointment History
  a. Show list of the customers appointments
  b. Support the opening of the Appointment modal/popup screen directly from the customer's profile. This feature allows users to access and review appointment details associated with the selected customer easily.

### III. Appointment Modal/Popup Form:

The Appointment Modal/Popup Form is a critical component for scheduling and organizing appointments efficiently.

- UI



- Appointment Vital Information
  a. Subject - Title for the appointment, making it easy to understand its purpose.
  b. Customer - Provide a dropdown or auto-suggest feature to select the customer associated with the appointment. This ensures a clear linkage between the appointment and the respective customer.
  c. Date and Time - Include fields to specify both the start and end times for the appointment. This granularity aids in precise scheduling.
  d. Status – Open or Closed, set default for new appointments as New. Allow to close appointments by changing the value to Close.
  e. Multi-Line Text Field: Provide a spacious, free-form multi-line text field for "Notes." This area allows users to input any relevant information, additional details, or special instructions related to the appointment.
- Validation and Error Handling
  a. Date and Time Validation - Implement validation checks to ensure that the end time is after the start time, preventing scheduling conflicts.
  b. Single Meeting Per Timeframe: To prevent overlapping appointments, implement logic that checks the availability of the selected date and time
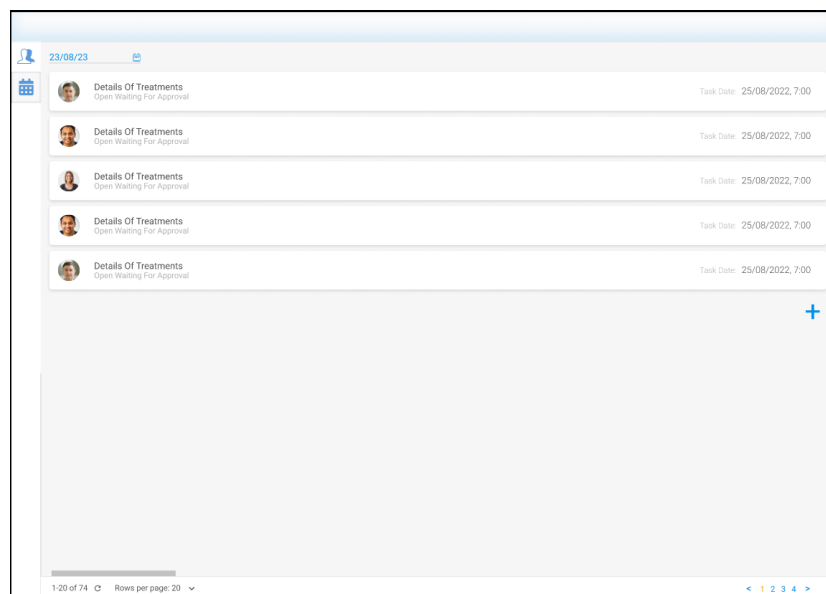
range. If another appointment already exists within the same timeframe, notify the user of the conflict.

    c.  Customer Validation - Ensure that the selected customer is valid and exists in the database.

- Add or Update the appointment –on a valid appointment implement posting/patching of the date in database by the Done/Create button

## IV.   Appointment List/Agenda Form:

The Agenda Form is designed to offer a comprehensive view of all appointments scheduled for a selected day. To make this form more effective and user-friendly

- UI



- Date Selection:
    a. Allow users to select the day they want to view appointments for. This date picker should be prominent and user-friendly
    b. Show only appointments scheduled for the selected day
- Appointment List
    a. Display a clear and organized list of all appointments scheduled for the selected day. This list should include the time, subject, and customer + customer picture associated with each appointment.
    b. Detailed Appointment Information will be displayed by clicking on the line and show the appointment details in the appointment popup/modal form

- Add new appointment by clicking the plus button. This will open the appointment modal/popup screen for the user to create a new appointment.