# HEALTH CARE SYSTEM

IIHT

Time To Complete: 10 to 12 hr

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# 1 PROJECT ABSTRACT

In the ever-evolving field of healthcare, there's a growing necessity for digital platforms that facilitate efficient management of patient care, enable collaboration between providers and patients, and empower individuals to achieve their health goals. With this vision in mind, the CEO of a healthcare technology startup, Dr. X, assigns a team of developers with the task of creating a Health Care System using Angular.

Your task is to develop a digital solution that allows healthcare providers to manage patient information by adding, updating, deleting, and listing patients. Providers should also be able to create, update, delete, list and manage meal plans, meditation exercises, and workout routines tailored for their patients. Additionally, the platform should allow patients to log in and view their latest health details provided by their healthcare providers, ensuring a comprehensive and efficient healthcare management experience.

# 2 PROBLEM STATEMENT

"Health Care System" is a Single Page Application (SPA) designed to enhance the healthcare experience for providers and patients. This system allows healthcare providers to add, update, delete, and manage patient records efficiently. Providers can also create, update, and manage personalized meal plans, meditation exercises, and workout routines for their patients. Additionally, patients can log in to view their latest health details provided by their healthcare providers, and manage their wellness plans ensuring a comprehensive and personalized healthcare experience for all users.

# 3 Proposed Learning Management System Wireframe

UI needs improvisation and modification as per given use case and to make test cases passed.

# 3.1 WELCOME PAGE



Health & Wellness Application

Login

# Login

Username:	provider1	*
Password:	•••••	
	Login	

# Health & Wellness Application

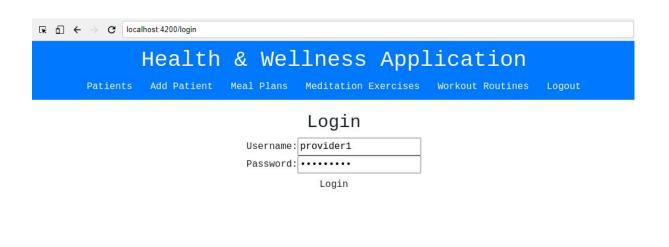
Login

# Login

Username: provider1
Password: ••••••
Invalid username or password
Login

# 3.2 PROVIDER

# \*\*\*Provider login\*\*\*



#### \*\*\*Patients\*\*\*



# **Patients**

Create New Patient

John Doe (ID: 1) Jane Smith (ID: 2)

## \*\*\*Create new Patient\*\*\*

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	Patients	Add Patient	Meal Plans	Meditation Ex	cercises	Workout Routines	Logout
			Î	Patients			
			Cr	eate New Patien			
				John Doe (ID: Jane Smith (ID:			
			N	ew Patien	t		
			Name:	lame			
			Age: 0				
				ils: Contact De	tails		
				Medical His	tory		
			Medical Hist	ory:			
		C	Current Medica	tions: Current	Medicatio	ns	
			Assigned Regi	mens: Assigned	Regimens		
				Add Patient			
			***Ac	ld New Patient	***		
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		Health	& Wel	llness	laaA	ication	
	Patients		Meal Plans	Meditation Ex		Workout Routines	Logout
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			Add	New Pati	.ent		
			Name :	r serven en estat 1995 - 19 et partir fortification	1		

Name				
Age:	0			
Contact De	tails:			
Medical His	tory:			
Current Medi	cations:			
Assigned Re	gimens:			
	Add I	Patient	S	



# Add New Patient

Name:	Mercy	
Age:	54	
Contact De	tails: 9944485347	
	Sugar	
Medical His	story:	_/
Current Medio	cations: Diet Meal	
Assigned Reg	gimens: 2	
	Add Patient	

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					Health	&	We]	lness	Арр.	lication	
		Ŋ	Pat	ien	ts Add Patient	Meal	Plans	Meditation	Exercises	Workout Routines	Logout

# **Patients**

Create New Patient

John Doe (ID: 1) Jane Smith (ID: 2) Mercy (ID: 3)

## \*\*\*Update Patient\*\*\*



#### \*\*\*Delete Patient\*\*\*



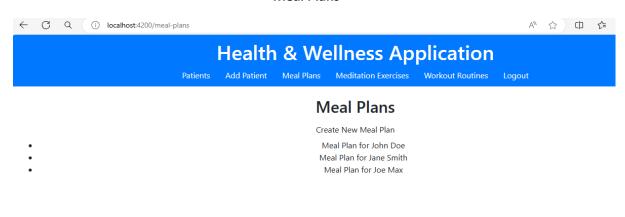
## **Patients**

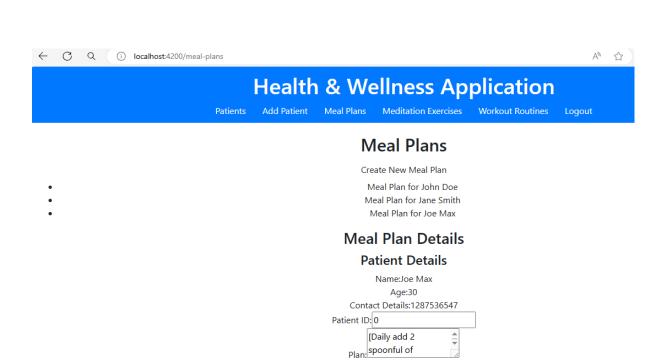
Create New Patient

John Doe (ID: 1)

Jane Smith (ID: 2)

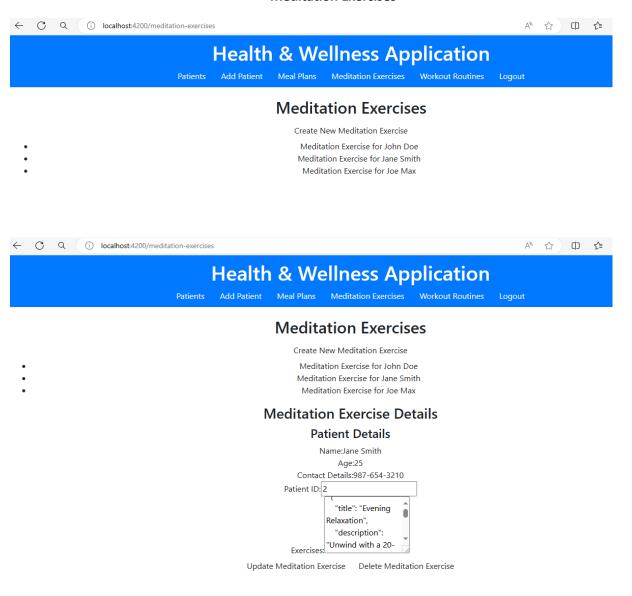
#### \*\*\*Meal Plans\*\*\*





Update Meal Plan Delete Meal Plan

#### \*\*\*Meditation Exercises\*\*\*



## \*\*\*Workout Routines\*\*\*





Update Workout Routine Delete Workout Routine

## 3.3 PATIENT

## \*\*\*Patient Login\*\*\*

localhost:4200/my-health

# Health & Wellness Application

My Health Logout

# My Health Details

Name:Jane Smith
Age:25
Contact Details:987-654-3210
Medical History:Asthma
Current Medications:Albuterol
Assigned Regimens:3

# 4 Business-Requirement:

As an application developer, develop the Health Care System (Single Page App) with below guidelines:

User Story #	User Story Name	User Story
US_01	Welcome Page	As a user I should be able to visit the welcome page as the default page.
		Acceptance criteria:  1. The Welcome Page should display the title "Health & Wellness"
		Application" as heading in h1.
		2. There should be a <b>Login</b> link in the navigation bar that allows
		users to access the login page.
		3. The login page should have the title as " <b>Login</b> " as heading in h2.
		4. The page should display a <b>Login</b> form that includes the following
		fields:
		Username: A text input field where users can enter their username.
		<ul> <li>Password: A password input field where users can enter their password.</li> </ul>
		<ul> <li>The form should include a Login button to submit the login credentials.</li> </ul>
		5. The system should validate the user credentials upon submission and provide appropriate feedback:
		<ul> <li>If the credentials are wrong, it should display "Invalid username or password".</li> </ul>
		<ul> <li>If the credentials are correct, the user should be redirected to the appropriate page based on their role (provider or patient).</li> </ul>
		6. Fake REST APIs for logging in as a provider (or) patient are provided and should be used, as specified in the <b>db.json</b> file.
		** Kindly refer to the screenshots for any clarifications. **
US_02	Logged in as a Provider	As a healthcare provider, upon logging into the Health & Wellness Application, I should have access to various functionalities.
		Acceptance criteria:  1. The Welcome Page should display the title "Health & Wellness"
		Application" as heading in h1.
		2. There should be <b>6 navigation routes/links</b> visible in the

navigation bar, and each should navigate to its respective page: **Patients:** Navigates to the page where the provider can view and manage a list of all patients. • Add Patient: Navigates to the page where the provider can add new patients to the system. • Meal Plans: Navigates to the page where the provider can manage and assign meal plans for patients. **Meditation Exercises:** Navigates to the page where the provider can manage and assign meditation exercises for patients. • Workout Routines: Navigates to the page where the provider can manage and assign workout routines for patients. Logout: Logs the provider out of the application and redirects to the login page. The above mentioned title and 6 navigation routes/links should be present and functional across all the respective pages of the Health System, allowing easy access to any section from anywhere within the app until logout. \*\* Kindly refer to the screenshots for any clarifications. \*\* **Patients** Acceptance criteria: 1. The page should display the title "Patients" as heading in h2. 2. Patient List: • The page should list all patients, each displayed with their name and unique ID. • Next to each patient's name, their ID should be displayed in parentheses (e.g., "John Doe (ID: 1)"). • Clicking on a patient's name should navigate to a detailed view of that patient. 3. There should be a "Create New Patient" button at the top of the patient list.

**Create New Patient** Button:

- 1. When clicked, this button should reveal a form allowing the user to enter new patient details after the list.
- 2. Should display the title "New Patient" as heading in h2.
- 3. The form should include the following fields:
  - Name (text input).
  - Age (number input).
  - Contact Details (text input).
  - Medical History (text area).
  - Current Medications (text input).
  - Assigned Regimens (number input).
- 4. The form should have an "Add Patient" button to submit the new patient information.

#### **Patient Details View:**

#### Acceptance criteria:

- 1. When a patient's name is clicked, the page should display the title "Patient Details" as heading in h2 with the selected patient's details in below.
- 2. The following fields should be editable:
  - Name
  - Age
  - Contact Details
  - Medical History
  - Current Medications
  - Assigned Regimens
- 3. There should be an "Update Patient" button to save changes to the patient's details.
- 4. A "Delete Patient" button should also be available to remove the patient's record.
  - \*\* Kindly refer to the screenshots for any clarifications. \*\*

#### Add Patient

- 1. The page should display the title "Add New Patient" as heading in h2.
- 2. The following fields should be present for entering new patient details:
  - Name: A text input for entering the patient's name.
  - Age: A number input for entering the patient's age.
  - **Contact Details:** A text input for entering the patient's contact details.

• **Medical History:** A text area for entering the patient's medical history. • Current Medications: A text input for entering the patient's current medications. • Assigned Regimens: A number input for entering the patient's assigned regimens. 3. There should be an "Add Patient" button at the bottom of the form to submit the new patient information. 4. Upon successful submission, the new patient should be added to the patient list, and the user should be redirected to the Patients page. \*\* Kindly refer to the screenshots for any clarifications. \*\* Meal Plans Acceptance criteria: 1. The page should display the title "Meal Plans" as heading in h2. 2. There should be a list of available meal plans for different patients, displayed as: Meal Plan for [Patient Name] 3. There should be a "Create New Meal Plan" button at the top of the list. When clicked, it should navigate to a form where a new meal plan can be created. Create New Meal Plan Button: Acceptance criteria: 1. Upon clicking the "Create New Meal Plan" button, a form should be displayed to create a new meal plan. 2. The form should contain the following fields: • Patient ID: (Dropdown to select the patient). • Plan: (Text area where the plan details should be entered in the required format). 3. There should be a "Save Meal Plan" button to save the new meal 4. The plan should be in the JSON format. If the plan is not in JSON format, an error message should be displayed: "Invalid Plan format". **Viewing and Updating Meal Plans:** 

- 1. When a meal plan link for a patient is clicked, the page should display the title "Meal Plan Details" as heading in h3 with the selected patient's details in below.
- 2. The following fields should be shown and editable:
  - Should display the title "Patient Details" as heading in h4
    with the selected patient's details in below like: Name,
    Age, Contact Details, Patient ID
  - Plan: (In the JSON format)
- 3. The system should validate that the entered plan adheres to the specified JSON format. If the format is incorrect, the user should receive an error message: "Invalid Plan format".
- 4. There should be an "Update Meal Plan" button to save any changes made to the plan.
- 5. A "Delete Meal Plan" button should also be available to remove the plan.
  - \*\* Kindly refer to the screenshots for any clarifications. \*\*

# Meditation Exercises

#### Acceptance criteria:

- 1. The page should display the title "Meditation Exercises" as heading in h2.
- 2. There should be a list of available meditation exercises for different patients, displayed as:
  - Meditation Exercise for [Patient Name]
- 3. There should be a "Create New Meditation Exercise" button at the top of the list. When clicked, it should navigate to a form where a new meditation exercise can be created.

#### **Create New Meditation Exercise Button:**

- 1. Upon clicking the "Create New Meditation Exercise" button, a form should be displayed to create a new meditation exercise.
- 2. The form should contain the following fields:
  - Patient ID: (Dropdown to select the patient).
  - **Exercises:** (Text area where the exercise details should be entered in the required format)
- 3. There should be a "Save Meditation Exercise" button to save the new exercise.
- 4. The exercises should be in the following JSON format. If the exercises are not in this format, an error message should be displayed: "Invalid exercises format".

### **Viewing and Updating Meditation Exercises:**

#### Acceptance criteria:

- 1. When a meditation exercise link for a patient is clicked, the page should display the title "Meditation Exercise Details" as a heading in h3 with the selected patient's details in below.
- 2. The following fields should be shown and editable:
  - Should display the title "Patient Details" as heading in h4
    with the selected patient's details in below like: Name,
    Age, Contact Details, Patient ID
  - Exercises: (In the JSON format)
- 3. The system should validate that the entered exercises adheres to the specified JSON format. If the format is incorrect, the user should receive an error message: "Invalid exercises format".
- 4. There should be an "Update Meditation Exercise" button to save any changes made to the exercises.
- 5. A "Delete Meditation Exercise" button should also be available to remove the exercises.
  - \*\* Kindly refer to the screenshots for any clarifications. \*\*

#### **Workout Routines**

## Acceptance criteria:

- 1. The page should display the title "Workout Routines" as heading in h2.
- 2. There should be a list of available workout routines for different patients, displayed as:
  - Workout Routine for [Patient Name]
- 3. There should be a "Create New Workout Routine" button at the top of the list. When clicked, it should navigate to a form where a new workout routine can be created.

#### **Create New Workout Routine Button:**

- 1. Upon clicking the "Create New Workout Routine" button, a form should be displayed to create a new workout routine.
- 2. The form should contain the following fields:
  - Patient ID: (Dropdown to select the patient).
  - Routine: (Text area where the workout routine details should be entered in the required format)

		<ol> <li>There should be a "Save Workout Routine" button to save the new routine.</li> <li>The routine should be in the JSON format. If the routine is not in the JSON format, an error message should be displayed: "Invalid routine format".</li> </ol>
		Viewing and Updating Workout Routines:
		Acceptance criteria:  1. When a workout routine link for a patient is clicked, the page should display the title "Workout Routine Details" as a heading in h3 with the selected patient's details in below.
		2. The following fields should be shown and editable:
		<ul> <li>Should display the title "Patient Details" as heading in h4 with the selected patient's details in below like: Name,</li> <li>Age, Contact Details, Patient ID</li> </ul>
		<ul> <li>Routine: (In the JSON format)</li> <li>The system should validate that the entered routine adheres to the specified JSON format. If the format is incorrect, the user should receive an error message: "Invalid routine format".</li> </ul>
		4. There should be an "Update Workout Routine" button to save any changes made to the routine.
		5. A "Delete Workout Routine" button should also be available to remove the routine.
		** Kindly refer to the screenshots for any clarifications. **
	Logout	When the "Logout" button is clicked, the user should be immediately logged out of the application.
		2. Upon logout, the user should be redirected to the "Login" page.
		** Kindly refer to the screenshots for any clarifications. **
US_03	Logged in as a Patient	As a patient, upon logging into the Health & Wellness Application, I should be able to view my health details and log out securely.
		Acceptance criteria:  1. The Welcome Page should display the title "Health & Wellness  Application" as heading in h1.
		2. There should be <b>2 navigation routes/links</b> visible in the navigation bar, and each should navigate to its respective page:

	My Health: Navigates to the page where the patient can
	view their respective health details.
	Logout: Logs the patient out of the application and
	redirects to the login page.
	The above mentioned title and 2 navigation routes/links should be
	present and functional across both the respective pages of the Health
	System, allowing easy access to any section from anywhere within the
	app until logout.
	** Kindly refer to the screenshots for any clarifications. **
My Health	
	Acceptance criteria:  1. The page should display the title "My Health Details" as heading
	in h2.
	<ol><li>The "My Health Details" page should fetch and display the respective patient's health details provided by the health provider, including:</li></ol>
	• Name
	• Age
	Contact Details
	Medical History
	Current Medications
	Assigned Regimens
	** Kindly refer to the screenshots for any clarifications. **
Logout	When the "Logout" button is clicked, the user should be immediately logged out of the application.
	2. Upon logout, the user should be redirected to the "Login" page.
	** Kindly refer to the screenshots for any clarifications. **

# **5** Constraints

1. You should be able to press the "TAB" key and "SHIFT + TAB" to navigate from top field to bottom field and vice-versa.

# 6 Mandatory Assessment Guidelines

- All actions like build, compile, running application, running test cases will be through Command Terminal.
- To open the command terminal the test takers, need to go to
   Application menu (Three horizontal lines at left top) -> Terminal ->New Terminal.
- 3. This editor Auto Saves the code.
- 4. If you want to exit(logout) and continue the coding later anytime (using Save & Exit option on Assessment Landing Page) then you need to use CTRL+Shift+B-command compulsorily on code IDE. This will push or save the updated contents in the internal git/repository. Else the code will not be available in the next login.
- 5. These are time bound assessments the timer would stop if you logout and while logging in back using the same credentials the timer would resume from the same time it was stopped from the previous logout.
- 6. This is a web-based application, to run the application on a browser, use the internal browser in the workspace. Click on the second last option on the left panel of IDE, you can find Browser Preview, where you can launch the application.

Note: The application will not run in the local browser

- 7. You can follow series of command to setup Angular environment once you are in your project-name folder:
  - a. npm install -> Will install all dependencies -> takes 10 to 15 min.
  - b. npm run start -> To compile and deploy the project in browser. You can press the <Ctrl> key while clicking on localhost:4200 to open the project in the browser -> takes 2 to 3 min.
  - c. npm run json:server -> to deploy fake rest api created with json-server -> takes 10 to 15 seconds

- d. npm run test -> to run all test cases. It is mandatory to run this command before submission of workspace -> takes 5 to 6 min.
- 8. Once you are done with development and ready with submission, you may navigate to the previous tab and submit the workspace. It is mandatory to click on "Submit Assessment" after you are done with code.
- 9. You need to use CTRL+Shift+B command compulsorily on code IDE, before final submission as well. This will push or save the updated contents in the internal git/repository, and will be used to evaluate the code quality.