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Completed the project SINGLE PAGE APPLICATION Phase-01

TECHNOLOGY PROJECT NAME: IBM-FE- SINGLE PAGE APPLICATION

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Problem Statement:

Modern users demand fast, intuitive, and responsive web applications. Traditional multi-page applications (MPAs) often reload the entire page during interactions, leading to delays, inconsistent experiences, and increased server load. These inefficiencies are unacceptable in today's competitive digital landscape.

A Single Page Application (SPA) solves these problems by dynamically loading content without full-page reloads. This approach enhances user experience, improves performance, and reduces server interactions. The aim of this project is to build a SPA tailored to a practical use case (e.g.taskmanager, booking system, inventory management) using modern web technologies like React, Vue, or Angular.

Users & Stakeholders:

General Users: Regular users accessing the application to perform tasks like creating, viewing, or updating data.

Admin Users: Users with elevated privileges to manage the system, such as user roles, data control, and settings.

Stakeholders: Client/Product Owner: Provides the project vision and core requirements.

Developers: Implement the SPA features and integrations.

UI/UX Designers: Ensure the application is intuitive, attractive, and responsive.

Project Manager: Ensures deliverables meet deadlines and quality standards.

User Stories:

- As a user, I want to register and log in so I can access my personal dashboard.
- As a user, I want to create and manage items (e.g., tasks/bookings) efficiently without page reloads.
- As an admin, I want to manage users and data securely from an admin dashboard.
- As a user, I want the application to be responsive so I can use it on my mobile device.
- As a user, I want to receive real-time feedback (success/failure messages) on my actions.

MVP Features:

- User authentication (Sign Up / Login / Logout)
- Responsive user interface
- Dashboard with dynamic content rendering
- CRUD operations (Create, Read, Update, Delete)
- API integration for data exchange
- Admin panel (basic role-based access control)
- Real-time feedback and error handling

Wireframes / API Endpoint List
Wireframes (To be attached separately):

- ❖ Login / Signup Page
- ❖ Dashboard / Item List Page
- ❖ Item Detail / Edit Page
- ❖ Admin Panel (optional)

API Endpoint List:

Endpoint	Method	Description
/api/signup	POST	Register a new user
/api/login	POST	Authenticate and log in user
/api/logout	POST	Log out current user
/api/items	GET	Retrieve all items
/api/items/:id	GET	Retrieve a specific item
/api/items	POST	Create a new item
/api/items/:id	PUT	Update an existing item
/api/items/:id	DELETE	Delete an item
/api/users/:id	PATCH	Update user role (admin only)

Acceptance Criteria:

Users can register, log in, and log out securely.

Application must load dynamically without full-page refresh.

Users can perform CRUD operations on items.

Role-based access: Admins can manage users; regular users cannot.

API endpoints return expected responses (status codes & messages).

Application works on all device sizes (responsive design).

Proper error messages and success confirmations are displayed.