# Project Documentation: Dashboard System

## Project Overview

The Dashboard System is a web-based application designed to provide role-based dashboards for Super Admin, Sub Admin, User, and Customer roles. It supports user authentication, password recovery, and role-specific functionalities such as user management, customer management, and performance tracking. The application features a responsive UI with animations (via Framer Motion), data visualization (via Recharts), and a modular architecture for scalability. The system aims to streamline administrative tasks and provide an intuitive interface for managing users, campaigns, and wallets, with a focus on user experience and maintainability.

## Technology Stack

The project utilizes a modern web development stack to ensure performance, scalability, and developer productivity:

- **Frontend**:
    - **React**: JavaScript library for building dynamic user interfaces.
    - **React Router**: For client-side routing and navigation.
    - **Tailwind CSS**: Utility-first CSS framework for responsive and customizable styling.
    - **Framer Motion**: For animations and transitions in UI components.
    - **Recharts**: For rendering charts (AreaChart, BarChart) in dashboards.
    - **React Icons**: For iconography (e.g., FaEnvelope, FaLock).
- **Backend** (assumed, based on authservices.js):
    - **Node.js/Express** (inferred): For handling API requests.
    - **Axios**: For making HTTP requests to the backend.
- **Database** (assumed):
    - **MongoDB** (inferred): For storing user data, authentication tokens, and application data.
- **Build Tools**:
    - **Vite**: Development server and bundler (assumed, based on modern React setup).
    - **ESLint/Prettier** (assumed): For code linting and formatting.

- **Other**:
    - **LocalStorage**: For storing authentication tokens and user data.
    - **CDN**: React and dependencies are assumed to be hosted via cdn.jsdelivr.net for production.

**Folder Structure**

The project follows a modular, MVC-inspired folder structure for the frontend, promoting maintainability and scalability. Below is the folder structure with a textual tree representation:

login screen1/

├── public/

│ ├── index.html # Entry point HTML file

├── src/

│ ├── components/

│ │ ├── Login/

│ │ │ ├── Login.css # Styles for login page

│ │ │ ├── Login.jsx # Main login page component

│ │ │ ├── LoginForm.jsx # Login form component

│ │ ├── AuthContext.jsx # Authentication context for state management

│ │ ├── Dashboard.jsx # Core dashboard component with role-based rendering

│ │ ├── Navbar.jsx # Navigation bar component

│ ├── pages/

│ │ ├── Dashboard/

│ │ │ ├── SubAdminDashboard.jsx # Sub Admin dashboard page

│ │ │ ├── SuperAdminDashboard.jsx # Super Admin dashboard page

│ │ ├── CustomerDashboard.jsx # Customer dashboard page

│ │ ├── ForgotPassword.jsx # Forgot password page

│ │ ├── UserDashboard.jsx # User dashboard page

│ ├── services/

```
|   |   ├── Authservices.js     # API service for authentication
|   ├── App.css                 # Application-specific styles (if used)
|   ├── App.jsx                 # Main app component with routing
|   ├── index.css               # Global styles with Tailwind CSS
|   ├── main.jsx                # Application entry point for React rendering
├── tailwind.config.js          # Tailwind CSS configuration
├── package.json                # Project dependencies and scripts
├── package-lock.json           # Lock file for dependency versions
```

**Folder Structure Screenshot**:

- To visualize the folder structure, use the tree command in your terminal (tree -a -I 'node_modules' to exclude node_modules) or capture a screenshot of your IDE's file explorer showing the above structure.

**Feature-wise Component & API Flow**

The application is organized into key features, each involving specific components and API interactions. Below is the flow for major features:

**1. Authentication (Login/Forgot Password)**

- **Components**:
    - Login.jsx: Renders the login page layout with logo and form.
    - LoginForm.jsx: Manages login form inputs, validation, and submission.
    - ForgotPassword.jsx: Handles password reset email requests.
    - AuthContext.jsx: Manages authentication state across the app.
- **API Flow**:
    - **Login**:
        - User submits credentials in LoginForm.jsx.
        - handleSubmit uses mock authentication (checks hardcoded credentials).
        - In a real implementation, calls loginUser from authservices.js to send POST request to /api/auth/login.
        - Stores token and user data in localStorage and updates AuthContext.

        - Redirects to role-specific dashboard (/super-admin-dashboard, /sub-admin-dashboard, /user-dashboard, /customer-dashboard).
    - **Forgot Password**:
        - User submits email in ForgotPassword.jsx.
        - Simulates API call (2-second delay) or calls forgotPassword from authservices.js to send POST to /api/auth/forgot-password.
        - Displays success or error message.
- **Flow Diagram**:
- User -> LoginForm.jsx -> authservices.js -> Backend (/api/auth/login) -> AuthContext -> Dashboard
- User -> ForgotPassword.jsx -> authservices.js -> Backend (/api/auth/forgot-password) -> Success/Error UI

**2. Dashboards (Super Admin, Sub Admin, User, Customer)**

- **Components**:
    - Dashboard.jsx: Core dashboard with role-based metrics and charts.
    - SuperAdminDashboard.jsx: Wraps Dashboard.jsx with role="superadmin".
    - SubAdminDashboard.jsx: Wraps Dashboard.jsx with role="subadmin".
    - UserDashboard.jsx: Manages user data with filtering and actions.
    - CustomerDashboard.jsx: Manages customer data with filtering and actions.
    - Navbar.jsx: Provides navigation across dashboards.
- **API Flow**:
    - Uses mock data (superAdminMetrics, subAdminMetrics, initialUsers, initialCustomers).
    - Assumed API calls for real data: /api/users, /api/customers, /api/metrics.
- **Flow Diagram**:
- User -> App.jsx -> Routes -> Dashboard (SuperAdmin/SubAdmin) -> Fetch Metrics -> Render Charts/Cards
- User -> UserDashboard.jsx -> Filter Users -> Render Table/Cards
- User -> CustomerDashboard.jsx -> Filter Customers -> Render Cards

**3. Navigation and Logout**

- **Components**:
    - Navbar.jsx: Renders role-based navigation and logout button.
    - AuthContext.jsx: Handles logout logic by clearing localStorage.
- **API Flow**:
    - Logout clears localStorage and redirects to /login without API calls.
- **Flow Diagram**:
- User -> Navbar.jsx -> handleLogout -> AuthContext.logout -> Clear localStorage -> Redirect to /login

## Component Descriptions

Below is a detailed explanation of each file's purpose and functionality:

**1. Login.css**

- **Purpose**: Defines styles for the login page, including animations and responsive design.
- **Functionality**:
    - fadeIn animation for login container entrance.
    - shake animation for error messages.
    - Input focus effects with blue shadow.
    - Button hover (translateY) and active states.
- **Usage**: Applied to Login.jsx and LoginForm.jsx via className.

**2. Login.jsx**

- **Purpose**: Renders the login page layout with a logo, title, and LoginForm.
- **Functionality**:
    - Displays a gradient logo and centered title.
    - Renders LoginForm within a shadowed card.
    - Includes a footer with copyright text.
    - Uses Tailwind CSS for responsive styling.
- **Dependencies**: LoginForm.jsx, Login.css.

**3. LoginForm.jsx**

- **Purpose**: Manages the login form, user input, and authentication logic.
- **Functionality**:
    - Handles email, password, "Remember Me," and show/hide password state.
    - Validates email against hardcoded list (superadmin@example.com, etc.).
    - Checks credentials for Super Admin (SuperPass123), Sub Admin (SubPass123), User (user123), and Customer (customer123).
    - Stores email in localStorage if "Remember Me" is checked.
    - Redirects to role-specific dashboards using useNavigate.
    - Displays error messages and loading spinner.
    - Uses icons (FaEnvelope, FaLock, FaEye, FaEyeSlash) for UI.
- **Dependencies**: react, react-router-dom, react-icons/fa.

**4. AuthContext.jsx**

- **Purpose**: Provides a context for authentication state management.
- **Functionality**:
    - Creates AuthContext and useAuth hook.
    - Manages user, isAuthenticated, and loading states.
    - Checks localStorage for authToken and userData on mount.
    - Provides login, logout, getToken, and updateUser methods.
    - Wraps app with AuthProvider to share context.
- **Dependencies**: react.

**5. Dashboard.jsx**

- **Purpose**: Renders role-specific dashboard content with metrics and charts.
- **Functionality**:
    - Displays superAdminMetrics (Total Users, Customers, Revenue, Campaigns, Active Sub Admins) or subAdminMetrics (Assigned Tasks, Reviewed Screenshots, Wallet Actions) based on role.
    - Uses Recharts for Super Admin charts (AreaChart for user growth, BarChart for campaign performance).
    - Uses Framer Motion for animated counters and card transitions.

    - Includes Sub Admin quick action buttons (Screenshot Verification, Task Assignment).
- **Dependencies**: react, recharts, framer-motion.

**6. Navbar.jsx**

- **Purpose**: Renders a responsive navigation bar with role-based branding.
- **Functionality**:
    - Displays logo with role-specific initials (e.g., "SA" for admins).
    - Shows role-specific title and color (purple-600 for Super Admin, green-600 for Sub Admin).
    - Includes notification button (hidden on mobile) and user avatar.
    - Provides logout button to clear localStorage and redirect to /login.
- **Dependencies**: react, react-router-dom.

**7. SubAdminDashboard.jsx**

- **Purpose**: Entry point for Sub Admin dashboard.
- **Functionality**:
    - Renders Navbar with role="subadmin".
    - Renders Dashboard with role="subadmin".
    - Sets gray background for the page.
- **Dependencies**: Navbar.jsx, Dashboard.jsx.

**8. SuperAdminDashboard.jsx**

- **Purpose**: Entry point for Super Admin dashboard.
- **Functionality**:
    - Renders Navbar with role="superadmin".
    - Renders Dashboard with role="superadmin".
    - Sets gray background for the page.
- **Dependencies**: Navbar.jsx, Dashboard.jsx.

**9. CustomerDashboard.jsx**

- **Purpose**: Manages customer data with filtering and actions.
- **Functionality**:

    - Displays mock customer data (initialCustomers) with name, email, plan, campaigns, wallet, and stats.
    - Supports filtering by name/email and plan (Bronze, Silver, Gold).
    - Renders expandable cards with action buttons (Approve Campaigns, Adjust Wallet, Change Plan, View Stats).
    - Uses dynamic badge colors for plans (e.g., yellow-500 for Gold).
- **Dependencies**: react.

**10. ForgotPassword.jsx**

- **Purpose**: Handles password reset requests.
- **Functionality**:
    - Renders email input form with a simulated API call (2-second delay).
    - Displays success message with email confirmation or error message.
    - Provides "Try again" and "Back to Sign in" options.
    - Includes logo, title, and footer.
- **Dependencies**: react, react-router-dom, react-icons/fa.

**11. UserDashboard.jsx**

- **Purpose**: Manages user data with filtering and actions.
- **Functionality**:
    - Displays mock user data (initialUsers) with name, email, location, age, gender, referral, and wallet.
    - Supports filtering by search, location, age, gender, and referral.
    - Renders table (desktop) or cards (mobile) with action buttons (View Profile, Assign Task, Verify User, Ban User, Adjust Wallet).
    - Updates user state for verification, banning, and wallet adjustments.
- **Dependencies**: react, react-icons/fa.

**12. Authservices.js**

- **Purpose**: Provides API service functions for authentication.
- **Functionality**:
    - Defines loginUser to send POST to /api/auth/login.

    - Defines forgotPassword to send POST to /api/auth/forgot-password.
    - Uses environment-based API_URL (/api/auth for development).
    - Handles errors with meaningful messages.
- **Dependencies**: axios.

**13. App.jsx**

- **Purpose**: Configures client-side routing.
- **Functionality**:
    - Uses react-router-dom to define routes for /login, /super-admin-dashboard, /sub-admin-dashboard, /user-dashboard, /customer-dashboard, and /forgot-password.
    - Renders components based on URL path.
- **Dependencies**: react-router-dom, all page components.

**14. App.css**

- **Purpose**: Placeholder for application-specific styles.
- **Functionality**: Not used in the provided code; can be used for custom styles outside index.css.
- **Dependencies**: None.

**15. index.css**

- **Purpose**: Defines global styles for the application.
- **Functionality**:
    - Imports Google Fonts (Inter) and Tailwind CSS.
    - Sets default font and background color (#f6f3f3).
    - Customizes input focus styles with blue ring.
- **Dependencies**: Tailwind CSS, Google Fonts.

**16. main.jsx**

- **Purpose**: Entry point for rendering the React application.
- **Functionality**:
    - Renders App.jsx into the DOM at #root.
    - Wraps App with AuthProvider for authentication context.

- **Dependencies**: react, react-dom, AuthContext.jsx, App.jsx.

**17. tailwind.config.js**

- **Purpose**: Configures Tailwind CSS.
- **Functionality**:
    - Specifies content files for Tailwind to scan (index.html, src/**/*).
    - Extends theme with custom colors (primary, secondary, accent, background) and font family (Inter).
- **Dependencies**: Tailwind CSS.

**API Documentation**

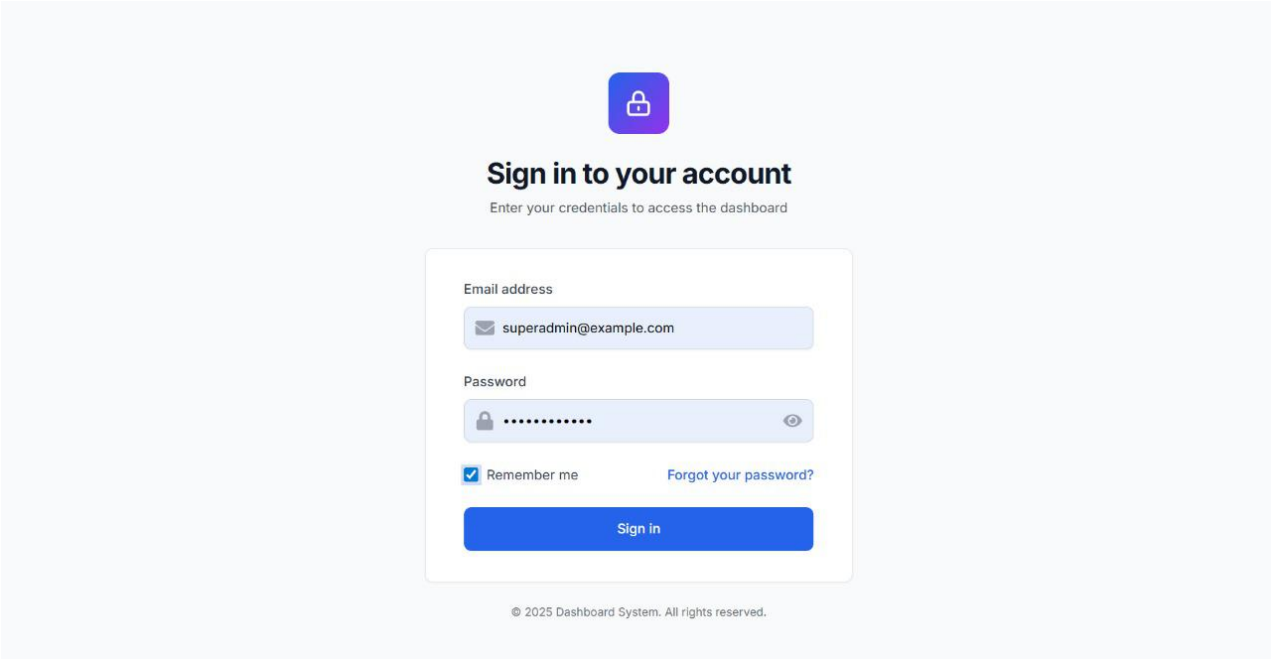
The application uses the following API endpoints (based on authservices.js, with others inferred):

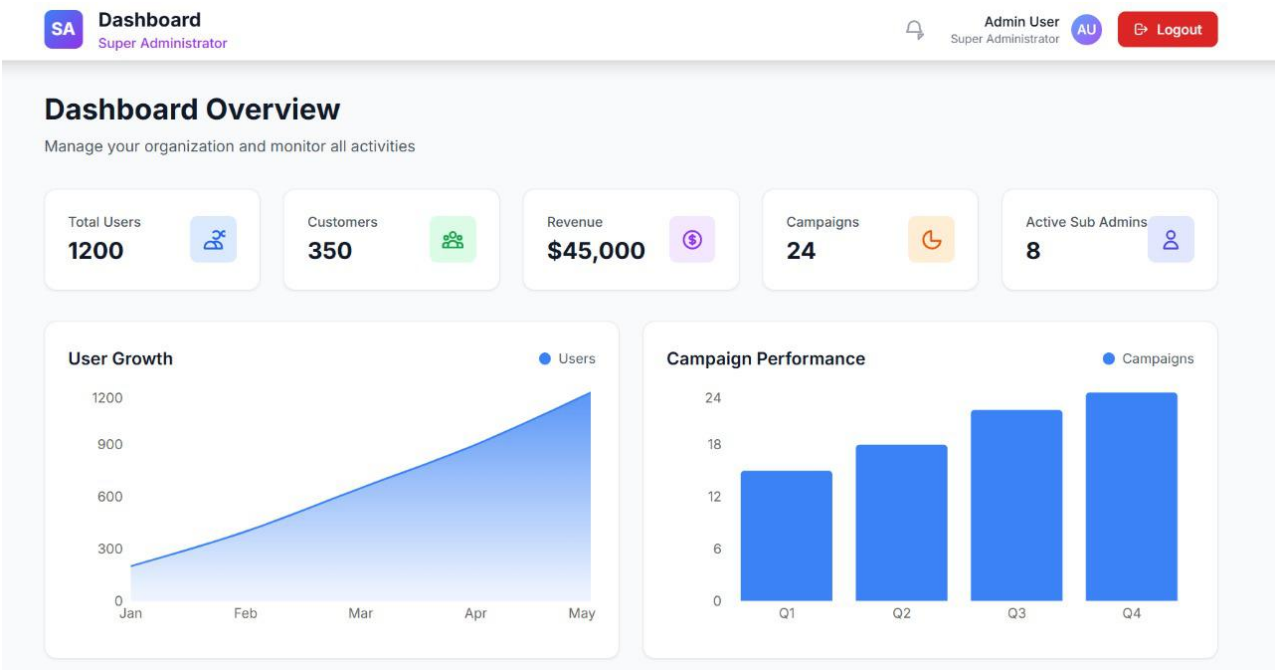
| Endpoint | Method | Description | Request Body | Response |
|---|---|---|---|---|
| /api/auth/login | POST | Authenticates user credentials | { email, password } | { token, userData } |
| /api/auth/forgot-password | POST | Sends password reset email | { email } | { message } |
| /api/users (assumed) | GET | Fetches user data for UserDashboard | None | { users: [] } |
| /api/customers (assumed) | GET | Fetches customer data for CustomerDashboard | None | { customers: [] } |
| /api/metrics (assumed) | GET | Fetches metrics for dashboards | None | { metrics: {} } |

**Notes**:

- LoginForm.jsx uses mock authentication; real implementation would use /api/auth/login.
- Other endpoints are inferred based on dashboard data needs but not implemented in the provided code.

**Screenshots**


Sign in to your account
Enter your credentials to access the dashboard
Email address
superadmin@example.com
Password
Remember me
Forgot your password?
Sign in
© 2025 Dashboard System. All rights reserved.


SA
Dashboard
Super Administrator
Admin User
Super Administrator
AU
Logout
Dashboard Overview
Manage your organization and monitor all activities
Total Users
1200
Customers
350
Revenue
$45,000
Campaigns
24
Active Sub Admins
8
User Growth
Users
1200
900
600
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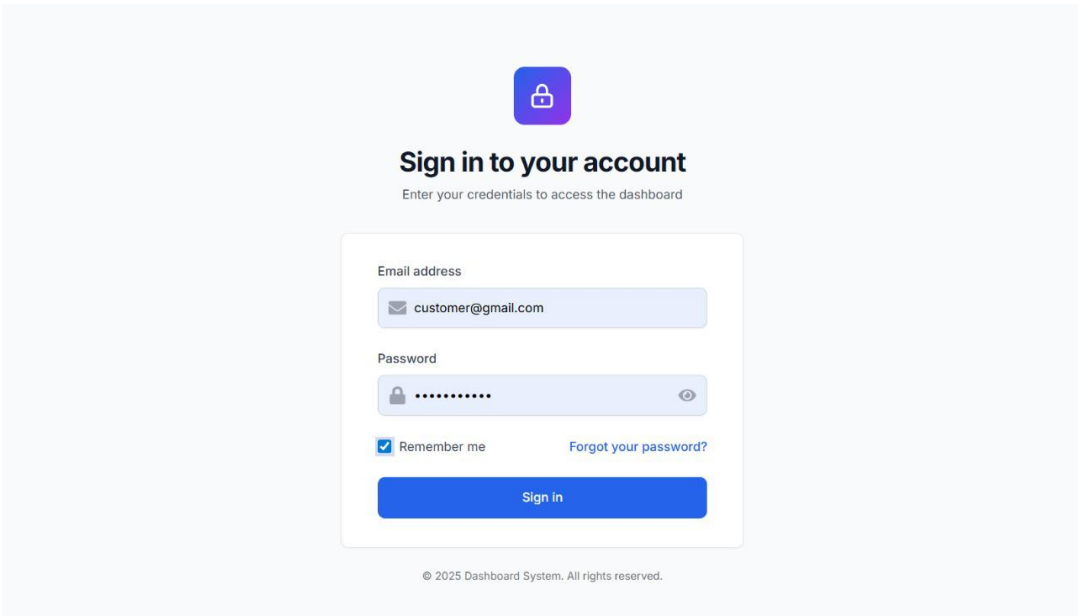
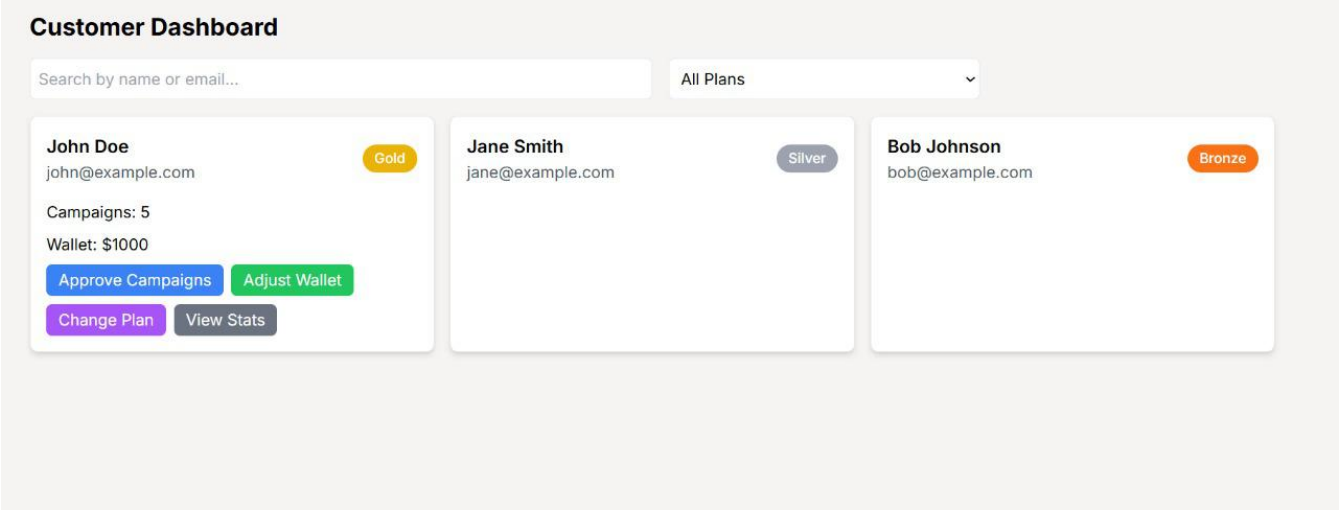
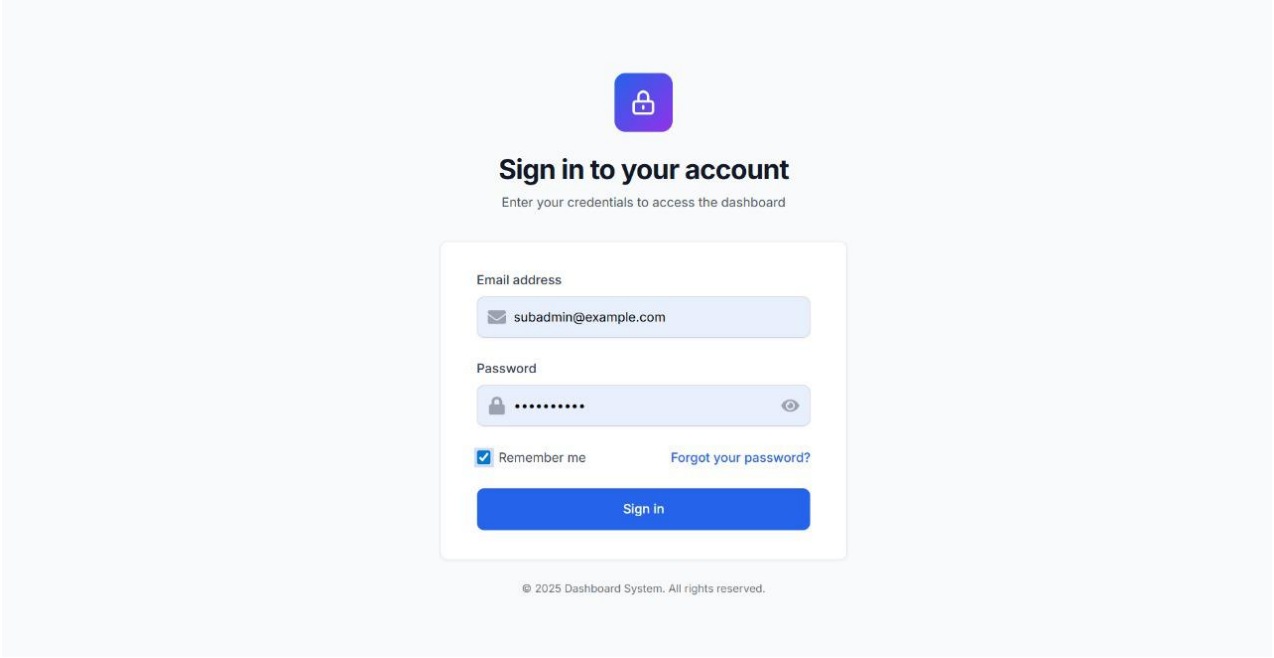
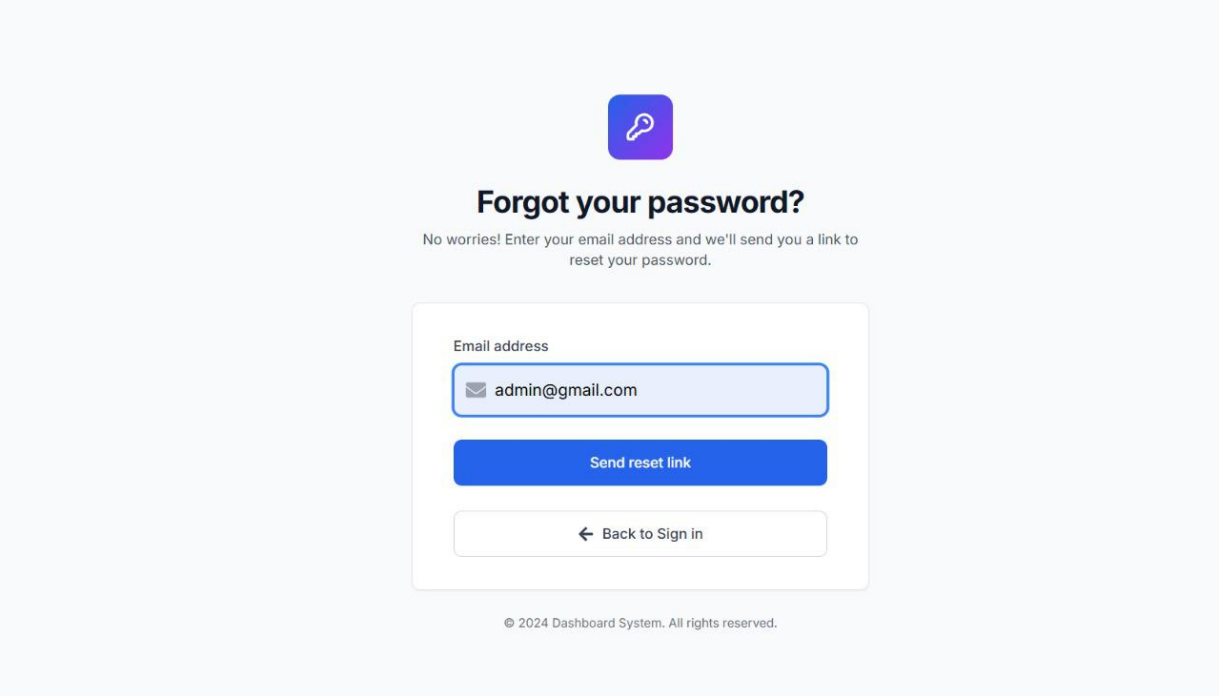
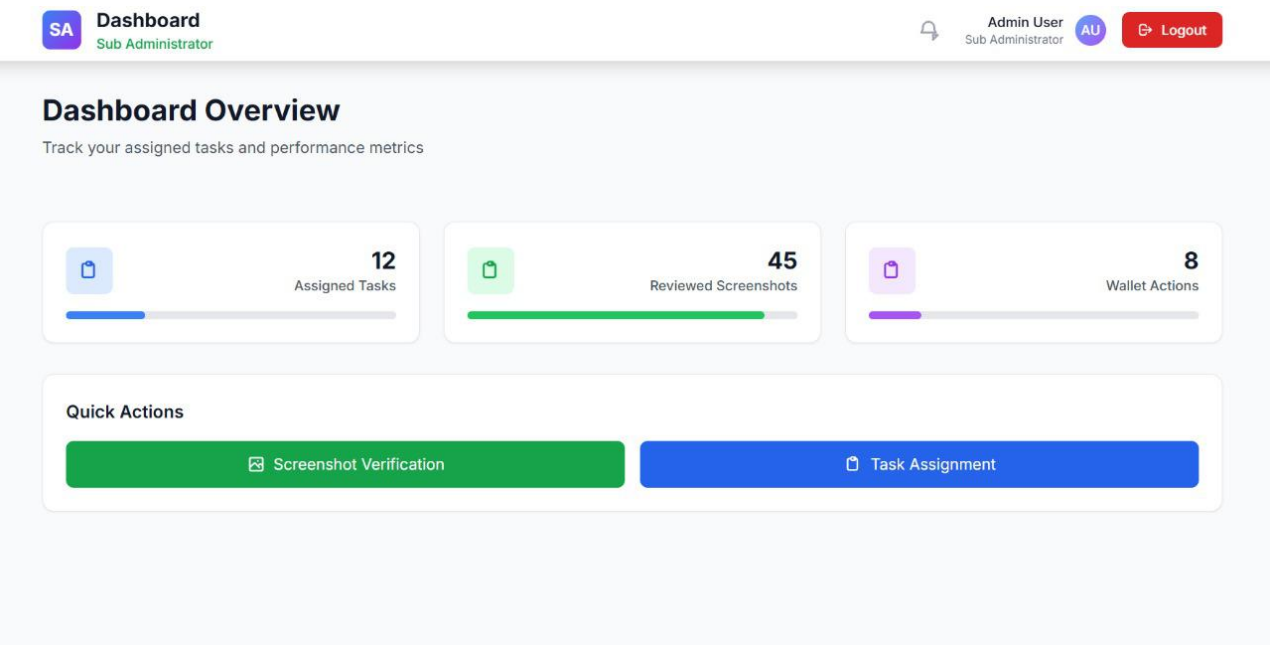
Campaign Performance
Campaigns
24
18
12
6
0
Q1
Q2
Q3
Q4


Sign in to your account
Enter your credentials to access the dashboard
Email address
customer@gmail.com
Password
Remember me
Forgot your password?
Sign in
© 2025 Dashboard System. All rights reserved.


Customer Dashboard
Search by name or email...
All Plans
John Doe
john@example.com
Gold
Campaigns: 5
Wallet: $1000
Approve Campaigns
Adjust Wallet
Change Plan
View Stats
Jane Smith
jane@example.com
Silver
Bob Johnson
bob@example.com
Bronze


Sign in to your account
Enter your credentials to access the dashboard
Email address
subadmin@example.com
Password
Remember me
Forgot your password?
Sign in
© 2025 Dashboard System. All rights reserved.




1. **Folder Structure**: Use tree -a -I 'node_modules' in the terminal or capture your IDE's file explorer showing the structure above.

2. **Login Page**: Shows logo, title, and login form with email, password, and "Remember Me" options.
3. **Forgot Password Page**: Displays email input form and success state with "Check your email" message.
4. **Super Admin Dashboard**: Shows metrics cards (Total Users, Customers, Revenue, Campaigns, Active Sub Admins), user growth chart, and campaign performance chart.
5. **Sub Admin Dashboard**: Displays task metrics (Assigned Tasks, Reviewed Screenshots, Wallet Actions) and quick action buttons.
6. **User Dashboard**: Shows user table (desktop) or cards (mobile) with filters and action buttons.
7. **Customer Dashboard**: Displays customer cards with filters, plan badges, and expandable actions.
8. **Navbar**: Shows role-specific branding, notification button (desktop), user avatar, and logout button.

**How to Run the Project**

Follow these steps to set up and run the project locally.

**Prerequisites**

- **Node.js**: Version 16 or higher.
- **npm**: Package manager for installing dependencies.
- **MongoDB**: Local or cloud instance (e.g., MongoDB Atlas) for the backend.
- **Git**: For cloning the repository (if applicable).

**Steps**

1. **Clone the Repository** (if applicable):
2. git clone <repository-url>
3. cd login-screen1
4. **Install Frontend Dependencies**:
5. npm install

Installs dependencies: react, react-router-dom, recharts, framer-motion, react-icons, axios, tailwindcss.

6. **Set Up Backend** (assumed, not provided):

- Create a Node.js/Express backend with MongoDB integration.
- Implement /api/auth/login and /api/auth/forgot-password endpoints.
- Configure environment variables in .env:
- NODE_ENV=development
- API_URL=http://localhost:5000/api/auth
- Start the backend server:
- cd backend
- npm install
- npm start

7. **MongoDB Connection Setup**:
    - Install MongoDB locally or use MongoDB Atlas.
    - Configure the connection string in the backend .env:
    - MONGODB_URI=mongodb://localhost:27017/dashboard-system
    - Ensure the backend connects to MongoDB for authentication and data storage.
8. **Run the Frontend**:
9. npm run dev
    - Starts the Vite development server at http://localhost:5173.
    - If using Create React App, use npm start (port http://localhost:3000).
10. **Access the Application**:
    - Open http://localhost:5173 in a browser.
    - Use credentials:
        - Super Admin: superadmin@example.com / SuperPass123
        - Sub Admin: subadmin@example.com / SubPass123
        - User: user@gmail.com / user123
        - Customer: customer@gmail.com / customer123

# Conclusion

**Outcomes**

- **Role-based Dashboards**: Successfully implemented dashboards for Super Admin, Sub Admin, User, and Customer roles.
- **Responsive UI**: Achieved with Tailwind CSS, ensuring usability across devices.
- **Animations**: Enhanced user experience with Framer Motion for counters and transitions.
- **Modular Architecture**: MVC-inspired structure improves maintainability.
- **Mock Functionality**: Enabled rapid prototyping with mock data and authentication.

**Challenges Faced**

- **Mock Data**: Reliance on hardcoded data (initialUsers, initialCustomers, mock credentials) limits dynamic functionality. A real backend is needed for production.
- **Authentication**: LoginForm.jsx uses mock authentication, requiring integration with authservices.js for real API calls.
- **Scalability**: Current implementation is lightweight; large datasets would require pagination and optimized API calls.
- **State Management**: AuthContext is sufficient for small apps but may need Redux for complex state handling.
- **Security**: Mock authentication lacks JWT or session validation, which is critical for production.

**Future Improvements**

- Integrate a real Node.js/Express backend with MongoDB.
- Implement JWT-based authentication and secure API endpoints.
- Add pagination and sorting for UserDashboard and CustomerDashboard.
- Enhance charts with real-time data fetching.
- Improve accessibility (e.g., ARIA labels, keyboard navigation).