# Investment Portfolio Management System

**Github Link**: https://github.com/DeepParekh03/MiniProject_InvestmentPortfolioManagement

## 1. Introduction

The objective of this project is to digitize client and portfolio management for a wealth management firm.
The system eliminates data loss, avoids miscommunication, and improves user engagement by providing a centralized platform to manage clients and their investment portfolios.

The application is built using Vue.js for the frontend, Vuex for state management, localStorage for persistence, and Jest for testing.

# 2. Key Features

### Client Management

- Create new clients with name, email, and status.
- Status options: **Active, Pending, Inactive**.
- Ability to edit client details and change status at any time.
- Delete clients from the system.
- When a client is deleted, all their associated portfolios are also removed.
- **Validations:**
    - Name is required.
    - Email is required, must be in valid format, and must be unique.

### Portfolio Management

- Create portfolios for specific clients.
- Portfolio status options: **Upcoming, Active, Closed**.
- Edit portfolio details and update holdings.
- View portfolio details including:
    - Client information
    - Holdings (Stocks, Mutual Funds, ETFs, Bonds)
    - Pie chart of allocation
    - Bar chart of returns growth

- **Business Rules:**
  - Portfolios cannot be created for clients with Inactive status.
  - Portfolios with Upcoming status cannot have holdings until activated.
  - Portfolios with Closed status cannot add new holdings.

# 3. Data Storage & State Management

- **Vuex Store:**
  - **Clients Module**: Handles client creation, update, deletion, and retrieval.
  - **Portfolios Module**: Handles portfolio creation, update, deletion, and retrieval by client or status.
- **Local Storage:**
  - Ensures persistence across browser sessions.
  - Vuex mutations automatically sync state with local storage.
- **Single Source of Truth:**
  - Components only interact with Vuex, not directly with localStorage.

# 4. Application Flow

## Client Flow

1. Manager creates a client in **UserForm.vue**.
2. Client appears in **UserList.vue** with status badge.
3. Manager can edit client details or delete client.
4. Status must be changed to Active before assigning portfolios.

## Portfolio Flow

1. Manager selects client and creates portfolio in **PortfolioForm.vue**.
2. If client is Inactive, system blocks portfolio creation.
3. If status is Upcoming, holdings remain empty.
4. Portfolio appears in **PortfolioList.vue** with correct status filter.
5. Manager clicks portfolio to view details in **PortfolioDetail.vue**.
6. Charts display allocation breakdown and returns history.

# 5. Visualization

- **Pie Chart:** Represents portfolio allocation across Stocks, Mutual Funds, ETFs, and Bonds.
- **Bar Chart:** Shows returns history or portfolio growth trend over time.
- Charts provide at-a-glance insights for portfolio optimization.

# 6. Testing

The system uses **Jest** and **Vue Test Utils** for testing.
Test coverage includes:

1. **ClientListForm**
   - Rendering of client table.
   - Render of Header and Addition button.
2. **PortfolioListForm**
   - Renders Portfolios List and allows filtering by status (Upcoming, Active, Closed).
   - Render of header and add portfolio button
3. **PortfolioCreationForm**
   - Validation for fields for creation of portfolio.
   - Disabling holdings for upcoming portfolios.
4. **PortfolioDetail**
   - Rendering of portfolio status.
   - Display of portfolio and client information.

# 7. System Architecture

**Technology Stack:**

- **Frontend Framework:** Vue.js (Composition API)
- **State Management:** Vuex
- **Persistence:** Local Storage
- **Routing:** Vue Router
- **Testing:** Jest + Vue Test Utils

# 8. Setup Instructions

### 1. Clone the Repository

git clone https://github.com/your-username/portfolio-management.git

cd portfolio-management

### 2. Install Dependencies

npm install

### 3. Run the Application

npm run serve

- The application will start locally.
- Open your browser and go to http://localhost:8080 to access the app.

### 4. Run Tests

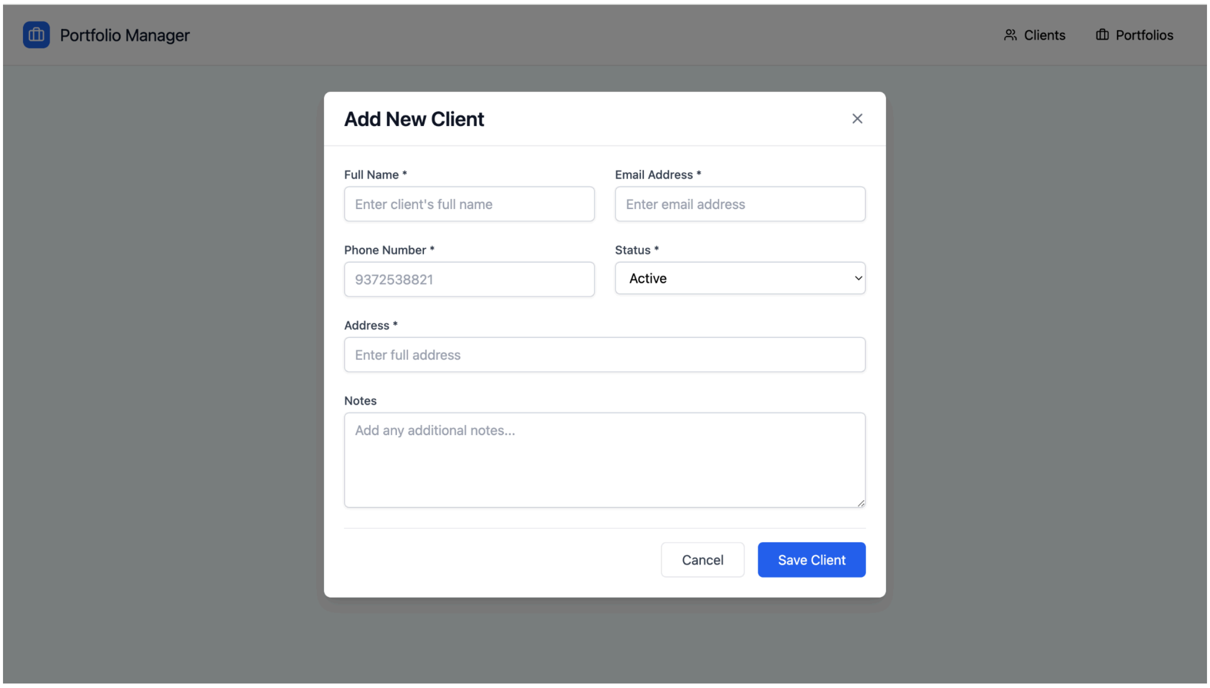
- Add the following in package.json under scripts:

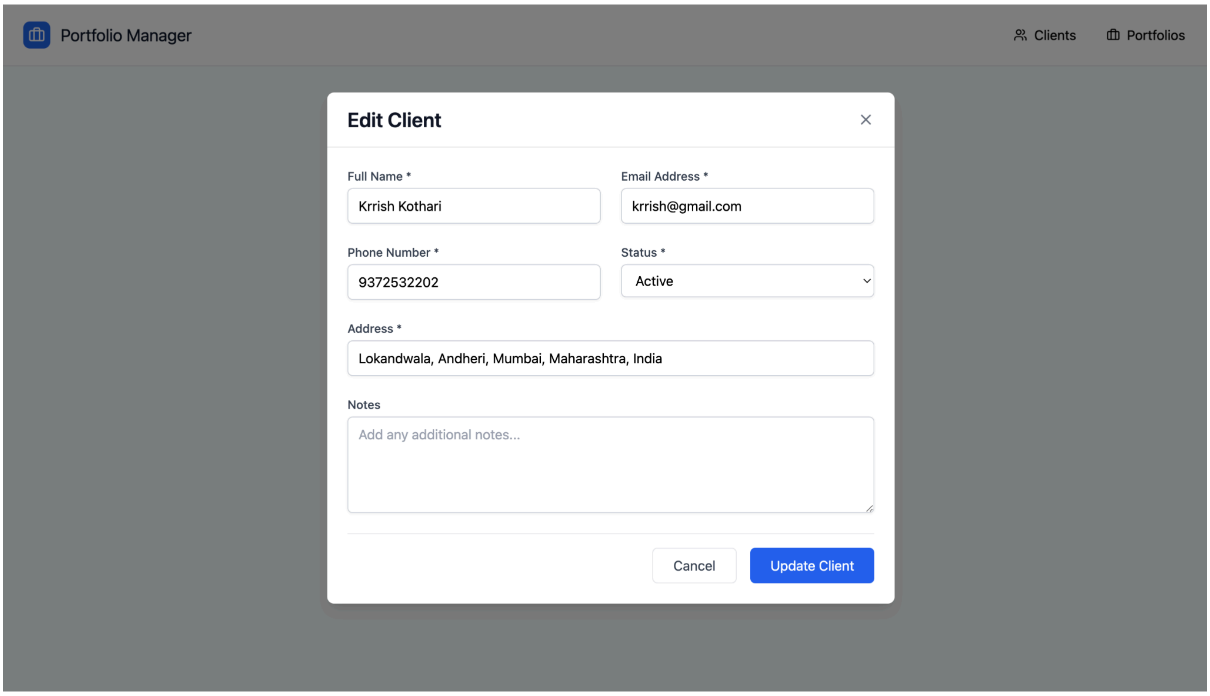
  ```
  "scripts": {
    "test": "jest"
  }
  ```

# Application Flow

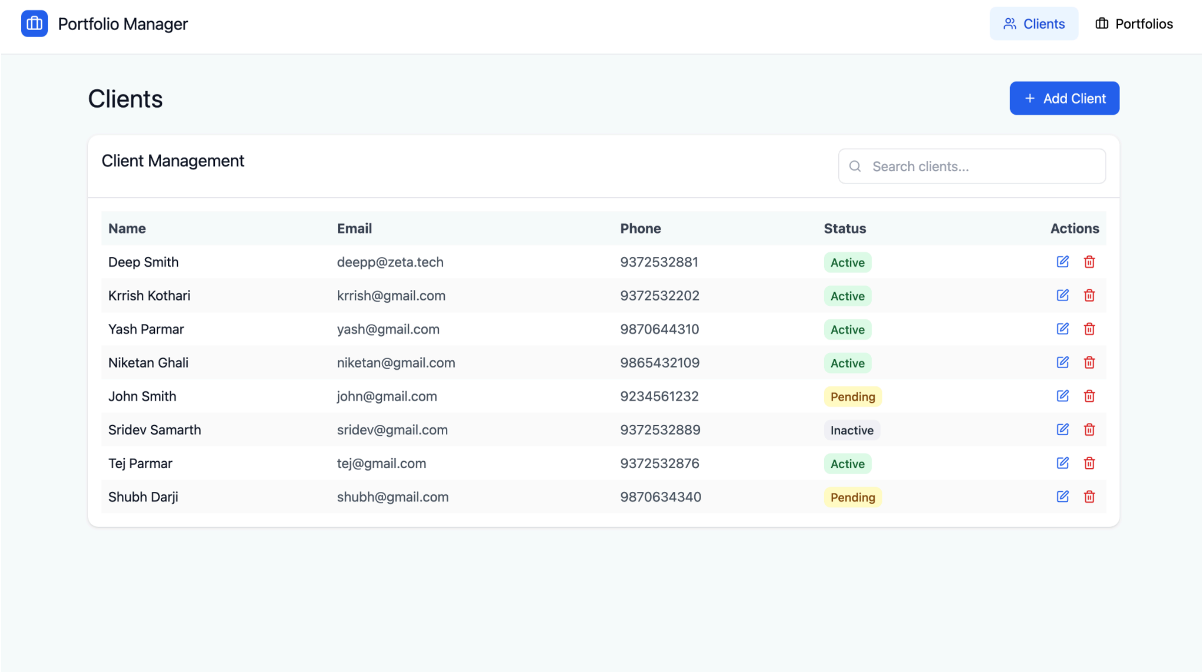
## Client Pages

Client Addition/ Updation



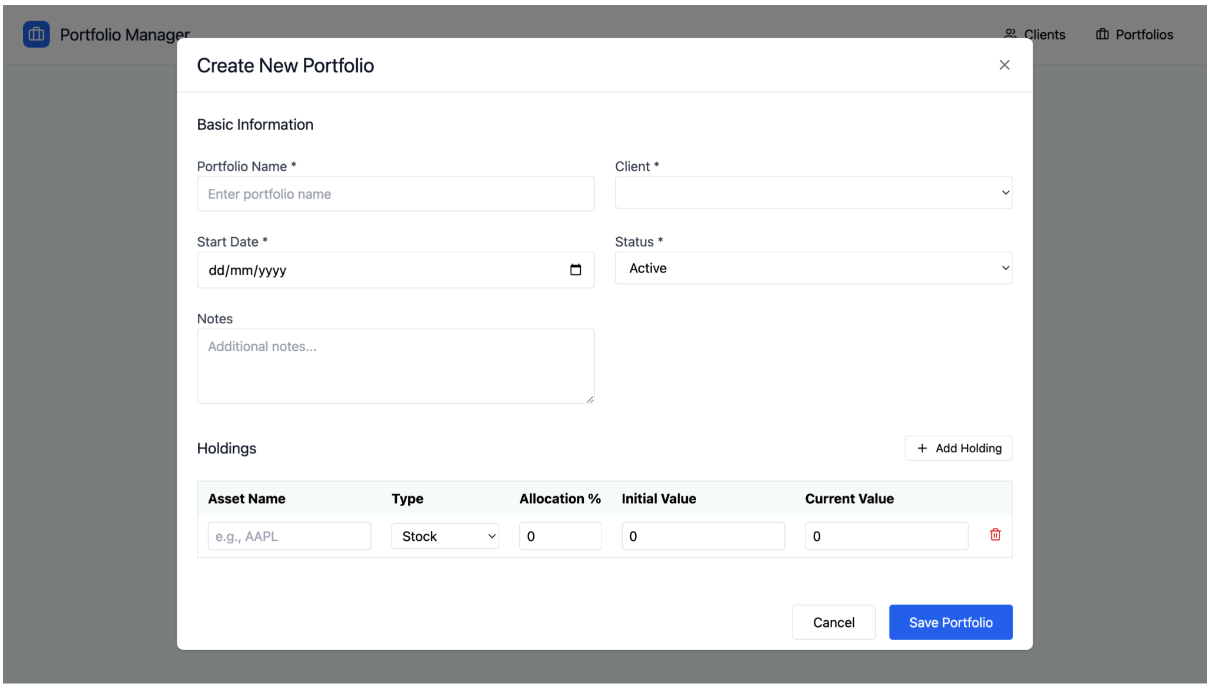



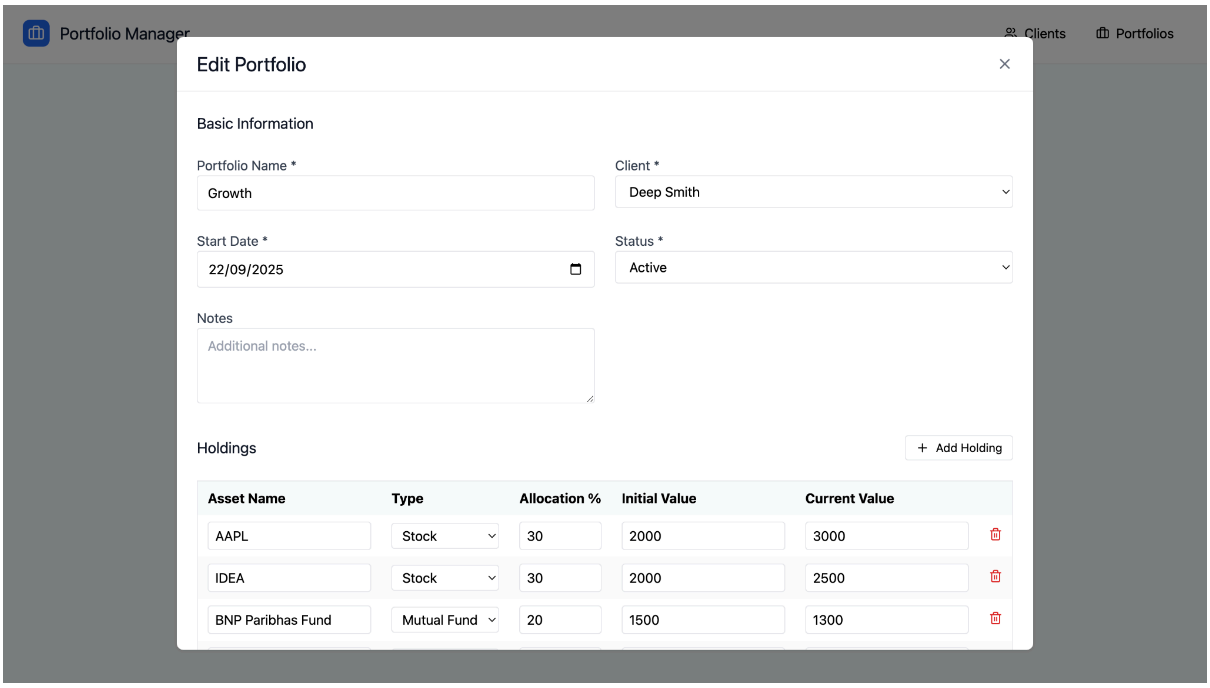
## Client List



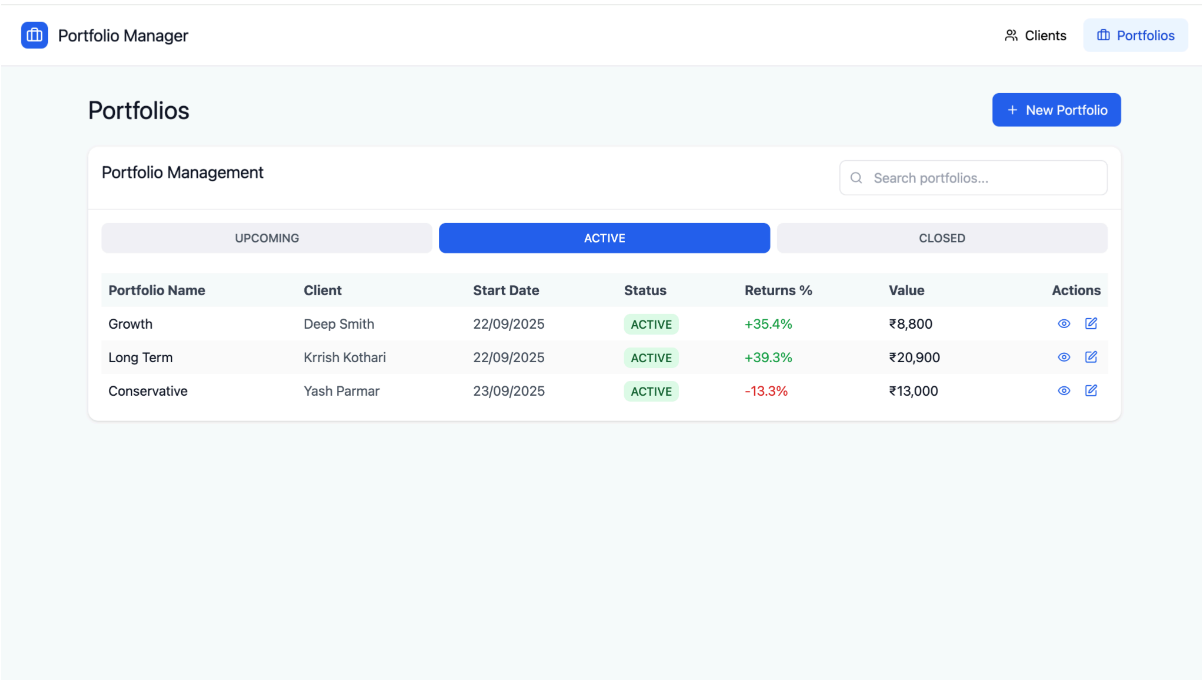

# Portfolio Pages

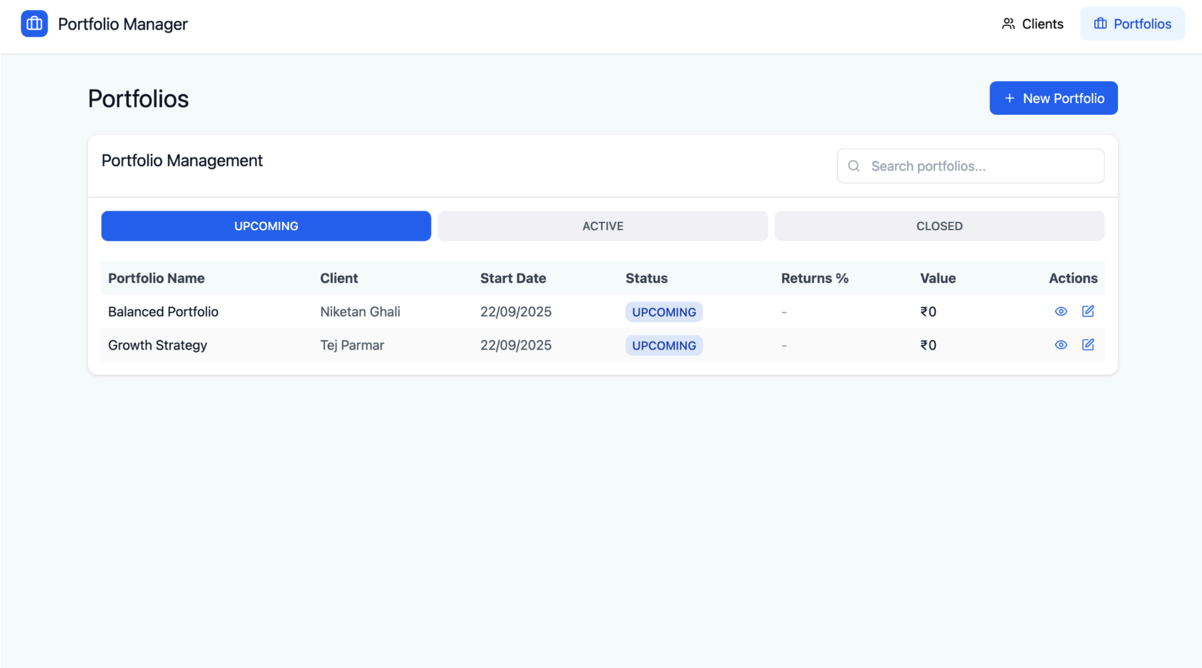
## Portfolio Creation/ Updation

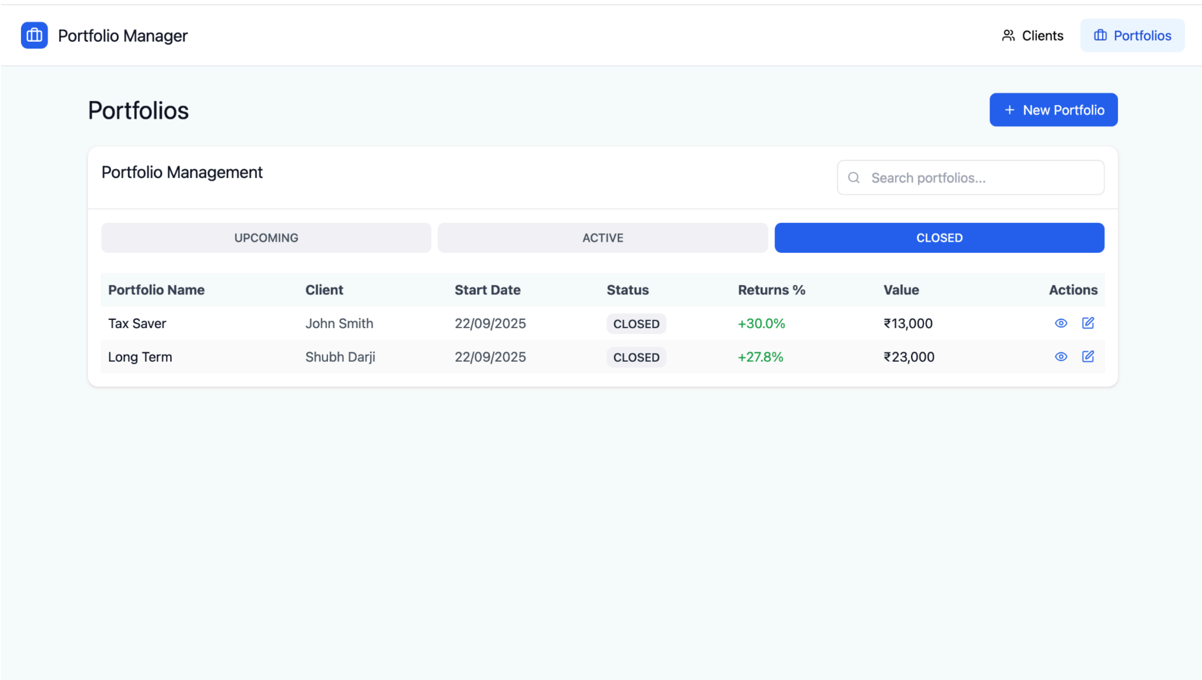




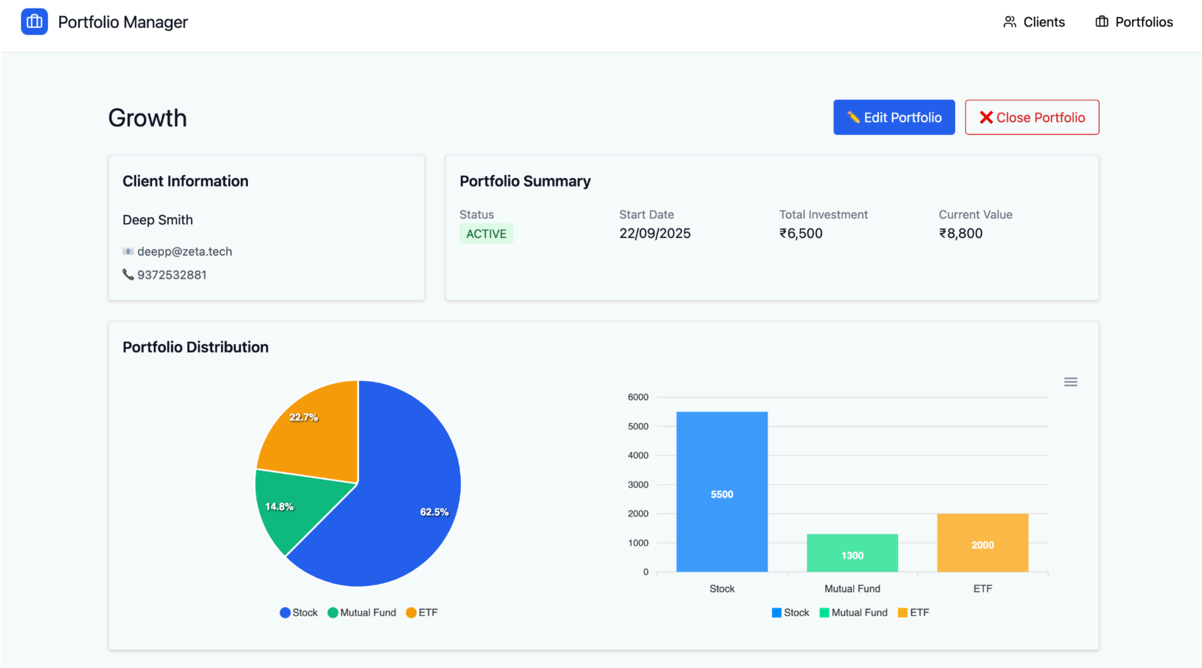

Portfolio List

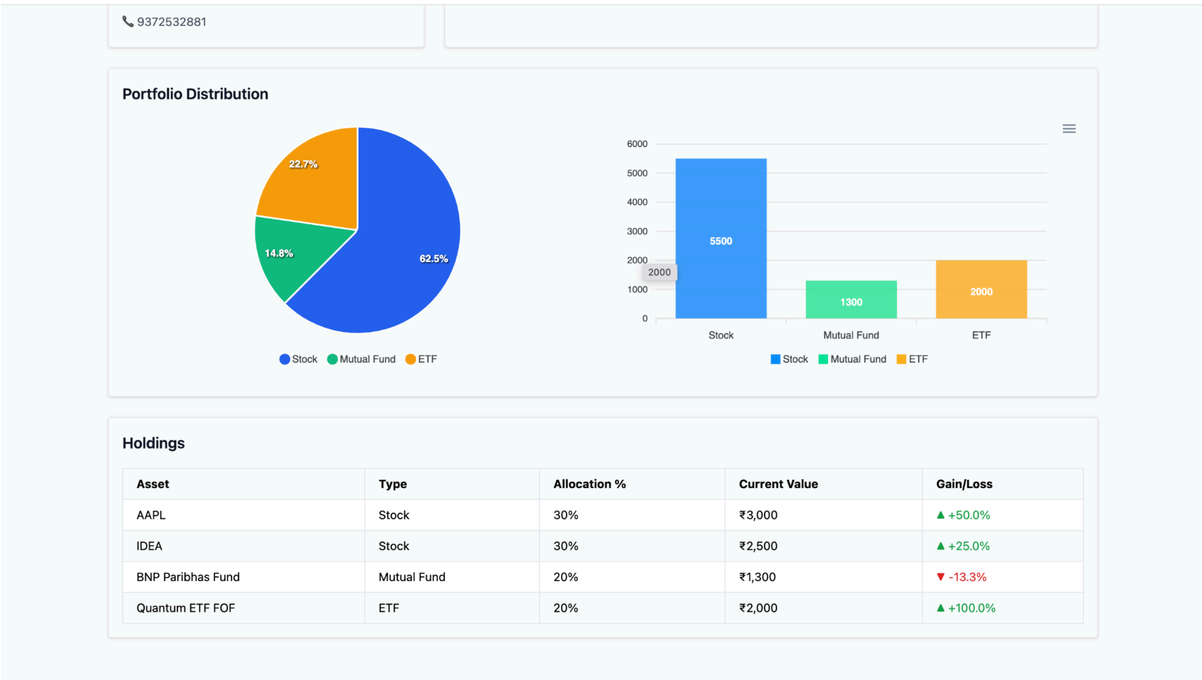



Portfolio Manager
Clients
Portfolios
Portfolios
New Portfolio
Portfolio Management
Search portfolios...
UPCOMING
ACTIVE
CLOSED
Portfolio Name
Client
Start Date
Status
Returns %
Value
Actions
Balanced Portfolio
Niketan Ghali
22/09/2025
UPCOMING
-
₹0
Growth Strategy
Tej Parmar
22/09/2025
UPCOMING
-
₹0


Portfolio Manager
Clients
Portfolios
Portfolios
New Portfolio
Portfolio Management
Search portfolios...
UPCOMING
ACTIVE
CLOSED
Portfolio Name
Client
Start Date
Status
Returns %
Value
Actions
Tax Saver
John Smith
22/09/2025
CLOSED
+30.0%
₹13,000
Long Term
Shubh Darji
22/09/2025
CLOSED
+27.8%
₹23,000

# Portfolio Detail

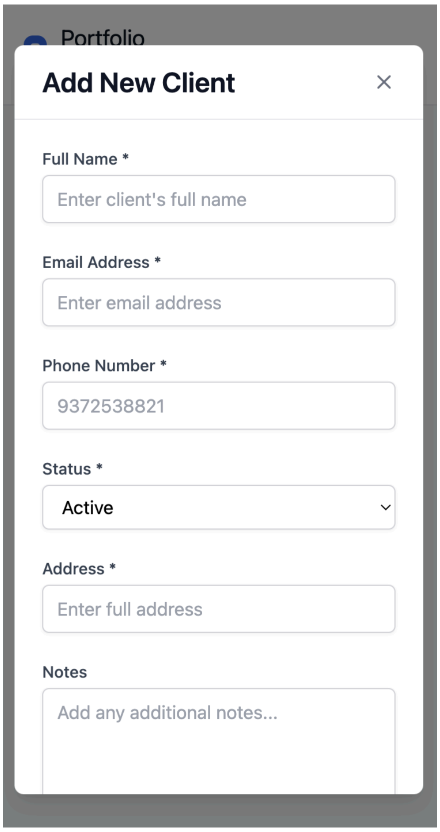


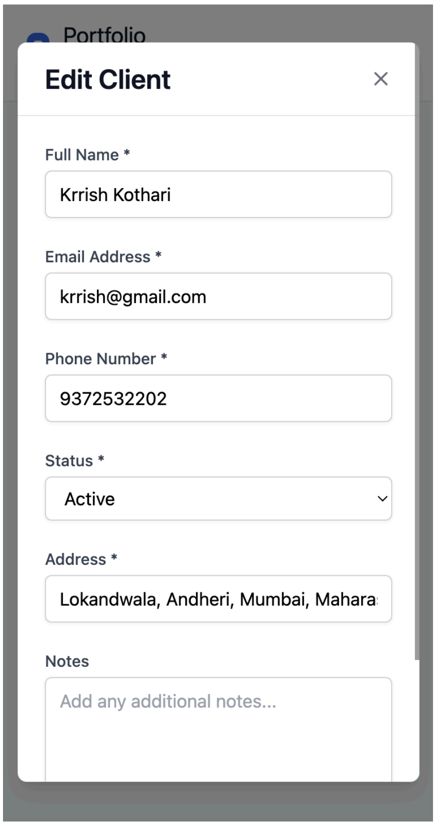



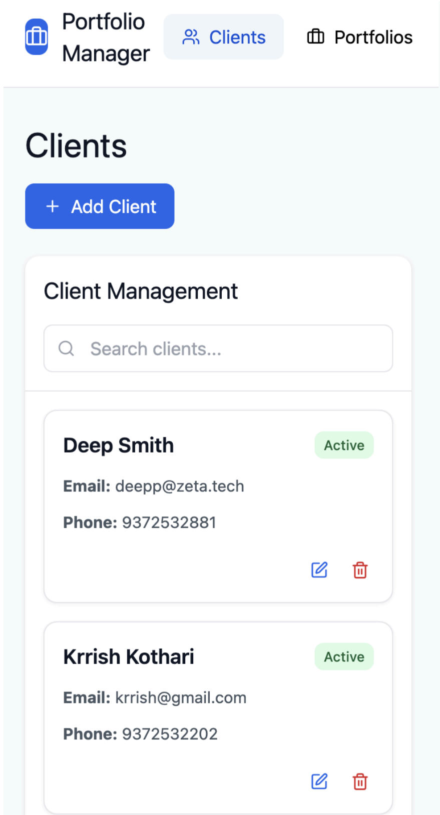

| Asset | Type | Allocation % | Current Value | Gain/Loss |
|---|---|---|---|---|
| AAPL | Stock | 30% | ₹3,000 | ▲ +50.0% |
| IDEA | Stock | 30% | ₹2,500 | ▲ +25.0% |
| BNP Paribhas Fund | Mutual Fund | 20% | ₹1,300 | ▼ -13.3% |
| Quantum ETF FOF | ETF | 20% | ₹2,000 | ▲ +100.0% |

**Mobile View**

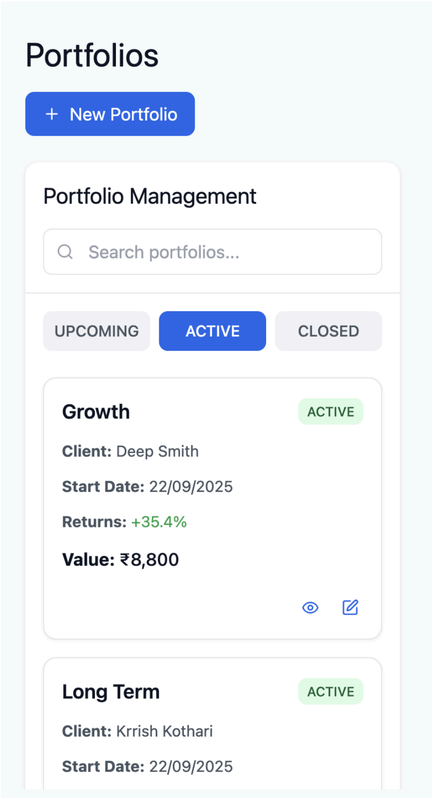
**Client**

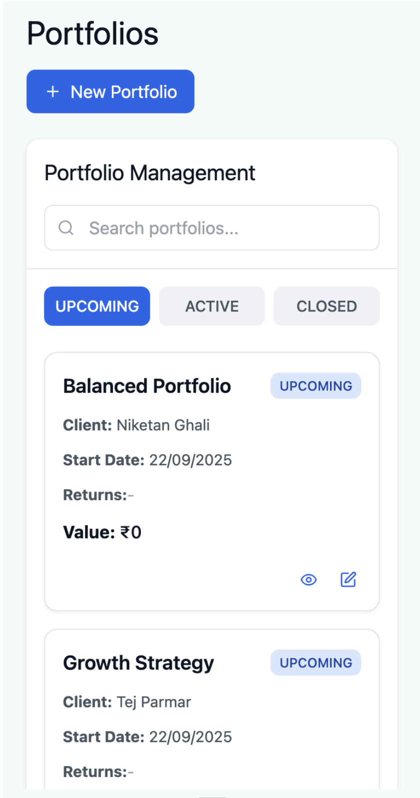


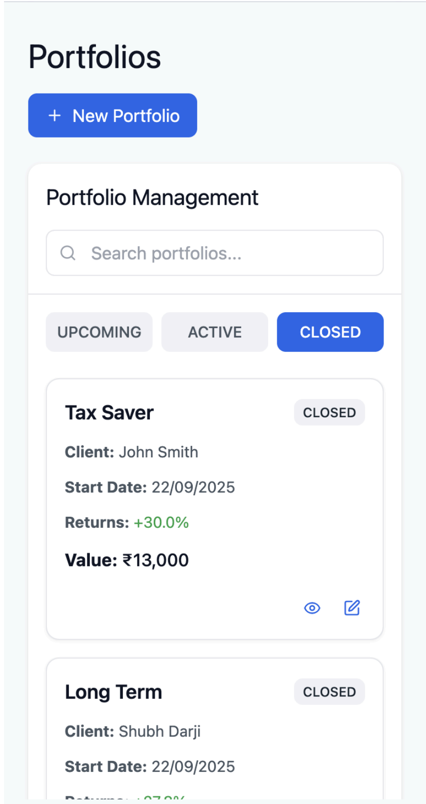



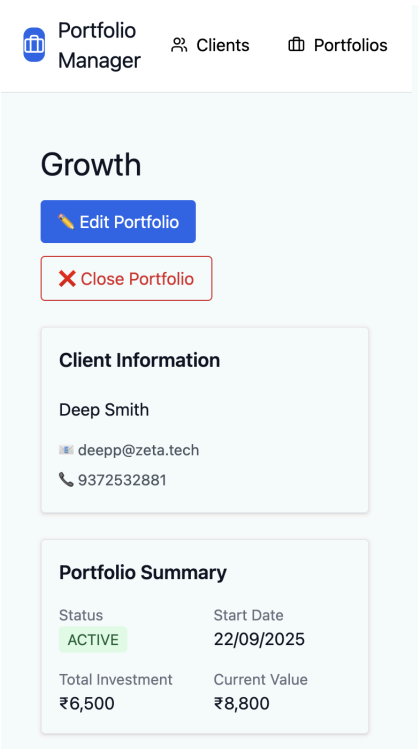



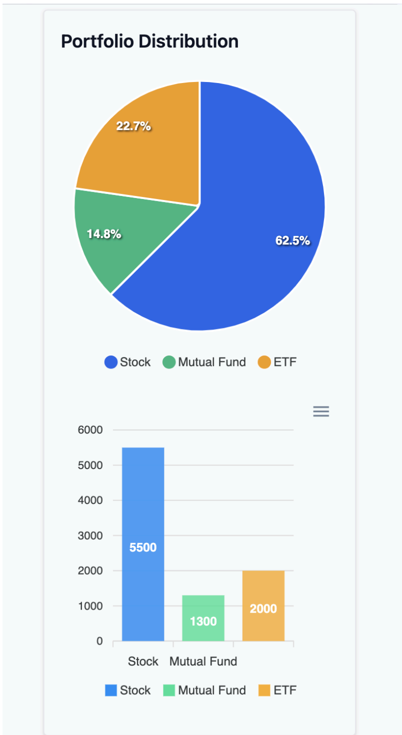
**Portfolio**

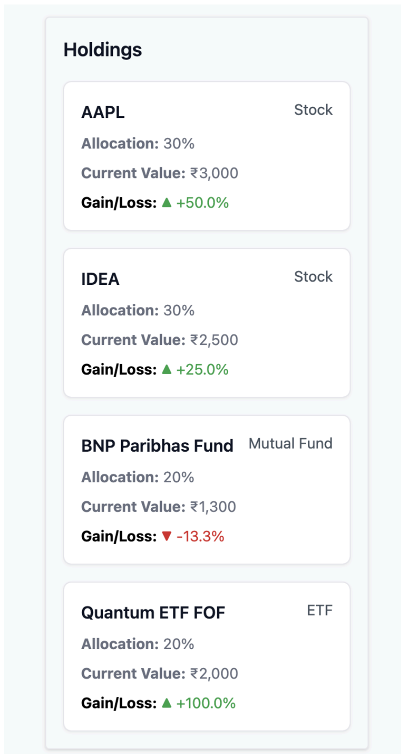

Portfolios
+ New Portfolio
Portfolio Management
Search portfolios...
UPCOMING
ACTIVE
CLOSED
Growth
ACTIVE
Client: Deep Smith
Start Date: 22/09/2025
Returns: +35.4%
Value: ₹8,800
Long Term
ACTIVE
Client: Krrish Kothari
Start Date: 22/09/2025


Portfolios
+ New Portfolio
Portfolio Management
Search portfolios...
UPCOMING
ACTIVE
CLOSED
Balanced Portfolio
UPCOMING
Client: Niketan Ghali
Start Date: 22/09/2025
Returns:-
Value: ₹0
Growth Strategy
UPCOMING
Client: Tej Parmar
Start Date: 22/09/2025
Returns:-


Portfolios
+ New Portfolio
Portfolio Management
Search portfolios...
UPCOMING
ACTIVE
CLOSED
Tax Saver
CLOSED
Client: John Smith
Start Date: 22/09/2025
Returns: +30.0%
Value: ₹13,000
Long Term
CLOSED
Client: Shubh Darji
Start Date: 22/09/2025


Portfolio Manager
Clients
Portfolios
Growth
Edit Portfolio
Close Portfolio
Client Information
Deep Smith
deepp@zeta.tech
9372532881
Portfolio Summary
Status
ACTIVE
Start Date
22/09/2025
Total Investment
₹6,500
Current Value
₹8,800


Portfolio Distribution
22.7%
14.8%
62.5%
Stock
Mutual Fund
ETF
6000
5000
4000
3000
2000
1000
0
5500
1300
2000
Stock
Mutual Fund
Stock
Mutual Fund
ETF


Holdings
AAPL
Stock
Allocation: 30%
Current Value: ₹3,000
Gain/Loss: ▲ +50.0%
IDEA
Stock
Allocation: 30%
Current Value: ₹2,500
Gain/Loss: ▲ +25.0%
BNP Paribhas Fund
Mutual Fund
Allocation: 20%
Current Value: ₹1,300
Gain/Loss: ▼ -13.3%
Quantum ETF FOF
ETF
Allocation: 20%
Current Value: ₹2,000
Gain/Loss: ▲ +100.0%