how to use your MFAMS (Mutual Fund Account Management System) project — both from the **User** and **Admin** perspective — **step-by-step**, with clear API purposes, input examples, and expected results.

□□ 1. Project User Roles

Role	**What they can do**
□ User	Register, login, view funds, buy/sell funds, see portfolio
□ Admin	All user features + Add new mutual funds to system

□ A. USER WORKFLOW (END-TO-END)

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1. Register a New User

□ **Why? -** To create a user account.

□ **API - ** `POST /api/auth/register`

□ **Request Body:**

```
Json

{
  "name": "Mayur Bagul",
  "email": "mayur@example.com",
  "password": "password123"
}
```

□ **Response:**

```
Json

{ "token": "JWT_TOKEN_HERE" }
```

□ Save this token — you'll need it for all future requests.

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2. Login (Optional – for returning users)

- **Why? -** To get a JWT token for authorization if you're a returning user.
- **API: -** `POST /api/auth/login`
- **Request:**

```
json

{
  "email": "mayur@example.com",
  "password": "password123"
}
```

- **Response:**

```
Json

{ "token": "JWT_TOKEN_HERE" }
```

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3. Get Logged-in User Details

- **Why? -** To fetch your profile info using your token.
- **API: -** `GET /api/auth/me`
- **Headers:** `Authorization: Bearer <your_token>`
- **Response:**

```
json

{
  "id": 1,
  "name": "Mayur Bagul",
  "email": "mayur@example.com",
  "role": "USER"
}
```

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4. View All Mutual Funds

- **Why? -** To explore available mutual funds before investing.
- **API -** `GET /api/funds`
- **Response Example:**

```
json
 [
  {
    "id": 1,
    "fundName": "ICICI Bluechip Fund",
    "fundCode": "ICICI001",
    "category": "Equity",
    "nav": 150.50
  }
]
```

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5. Buy Mutual Fund

- **Why? -** To invest in mutual funds.
- **API -** `POST /api/transactions/buy`
- **Headers -** `Authorization: Bearer <user_token>`
- **Request Body:**

```
json
{
  "mutualFundId": 1,
  "units": 10
}
```

- **Response:**

```
json
{
  "type": "BUY",
  "mutualFundId": 1,
  "units": 10,
  "amount": 1505.00
}
```

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6. Sell Mutual Fund

- **Why? -** To sell previously purchased units.

- **API** - `POST /api/transactions/sell`
- **Request:**

```json
{
  "mutualFundId": 1,
  "units": 5
}
```

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7. View All Transactions

- **Why? -** To see your full investment history (BUY/SELL).
- **API** - `GET /api/transactions`

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8. View Portfolio Summary

- **Why? -** To get your profit/loss, total units, invested amount, and current value.
- **API** - `GET /api/transactions/portfolio`
- **Response Example:**

```json
 [
  {
    "fundName": "ICICI Bluechip Fund",
    "totalUnits": 10,
    "amountInvested": 1505.00,
    "currentNAV": 155.00,
    "currentValue": 1550.00,
    "profitOrLoss": 45.00
  }
]
```

B. ADMIN WORKFLOW

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1. Make a User an Admin (Manually via DB)

Run this query in MySQL:

```sql
UPDATE users SET role = 'ADMIN' WHERE email = 'admin@example.com';
```

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2. Add a Mutual Fund

- **Why? -** To populate available mutual fund catalog.
- **API -** POST /api/funds
- **Header -** Authorization: Bearer <admin_token>
- **Body:**

```json
{
  "fundName": "Axis Growth Fund",
  "fundCode": "AXIS001",
  "category": "Equity",
  "nav": 102.25
}
```

---

3. Scheduled NAV Auto-Update (Backend)

- **Why?**

To simulate real market behavior, NAVs are auto-updated every 30 seconds.

You’ll see this in console:

```
NAVs updated at: 2025-06-27
```

Check with: GET /api/funds

Summary of All APIs to Test in Postman

Action	API	Method	Auth Required
Register	/api/auth/register	POST	
Login	/api/auth/login	POST	

Action	API	Method	Auth Required
Get Profile	`/api/auth/me`	GET	□
View All Funds	`/api/funds`	GET	□
Add Fund (Admin)	`/api/funds`	POST	□ (Admin)
Buy Mutual Fund	`/api/transactions/buy`	POST	□
Sell Mutual Fund	`/api/transactions/sell`	POST	□
View Transactions	`/api/transactions`	GET	□
Portfolio Summary	`/api/transactions/portfolio`	GET	□