📊 Trading Studio – Strategy Builder (Next.js + TypeScript)

Welcome to **Trading Studio**, a powerful front-end application built with **Next.js**, **TypeScript**, **Tailwind CSS**, and **Framer Motion**. It allows users to create, edit, and manage trading strategies using a multi-step form with a visual rule builder and persistent localStorage support.

🚀 Features Implemented

✅ Assignment Requirements

Feature	Status
Create a new strategy	✅ Implemented
Save incomplete strategy and return later	✅ Implemented using `localStorage`
Submit strategy for simulation	✅ Simulated via final review step
View list of previously saved strategies	✅ Done on `/strategies`
Load/edit existing strategy	✅ Load & Edit with persistent ID
Multi-step strategy form	✅ Scanner → Buy → Sell → Review
Export strategy as JSON	✅ Download `.json` button
Redirect to saved strategies after submission	✅ Implemented

✨ Extra Features Added (Above Requirements)

- 🌳 **Recursive Rule Builder** using AND/OR logic for advanced rule grouping

- 🌌 **Animated Particle Background** using `react-tsparticles` for visual appeal
- 🎨 **Framer Motion Transitions** for smooth, modern UI animations
- 🧠 **Step Validation Logic**: Users cannot proceed unless required fields are filled
- 💡 **Strategy Naming + Load/Edit UI** with strategy name, exchange, and instrument metadata
- 🌈 **Responsive, Mobile-Friendly UI** using Tailwind CSS grid & flex layouts
- 🧪 **Clear distinction between Create vs Edit Mode** via localStorage key tracking
- 📂 Clean folder structure with `components/StrategyForm` and modular page routes

🛠️ How to Run Locally

1. Clone the Repository

```
git clone <your-repo-url>
cd trading-studio
```

2. Install Dependencies

```
npm install
```

3. Run the Development Server

```
npm run dev
```

Open `http://localhost:3000` in your browser.

🧠 Assumptions Made

- No backend API was required; all strategy data is persisted in `localStorage`

- "Simulation" refers to reviewing final JSON output — not backend-triggered live strategy execution
- Only one user uses the browser at a time; multi-user authentication was not required
- Each strategy must contain at least one rule in the Scanner step before proceeding

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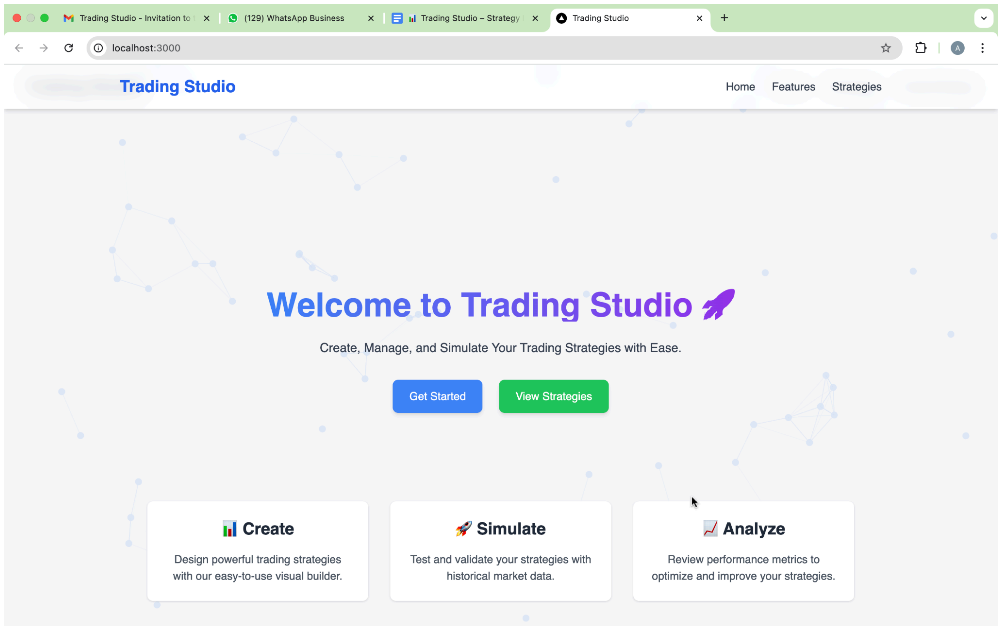
🧾 File Structure Overview

```
pages/
  index.tsx                 → Landing page with animations
  strategies/
    index.tsx               → View saved strategies
    create.tsx              → Multi-step strategy creation form
components/
  Navbar.tsx
  StrategyForm/
    ScannerStep.tsx
    RuleBuilder.tsx
    StrategyForm.tsx
public/
  particles/                → Particle config if externalized
styles/
  globals.css
```

📸 Screenshots



Trading Studio

Home Features Strategies

Welcome to Trading Studio 🚀

Create, Manage, and Simulate Your Trading Strategies with Ease.

Get Started | View Strategies

📊 Create

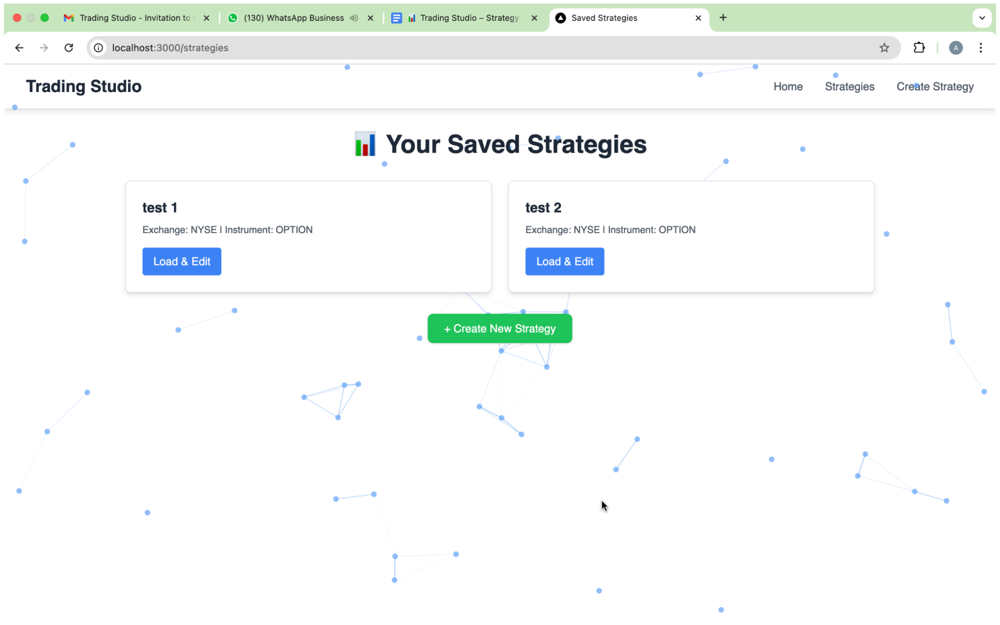
Design powerful trading strategies with our easy-to-use visual builder.

🚀 Simulate

Test and validate your strategies with historical market data.

📈 Analyze

Review performance metrics to optimize and improve your strategies.



Trading Studio

Home Strategies Create Strategy

📊 Your Saved Strategies

test 1

Exchange: NYSE | Instrument: OPTION

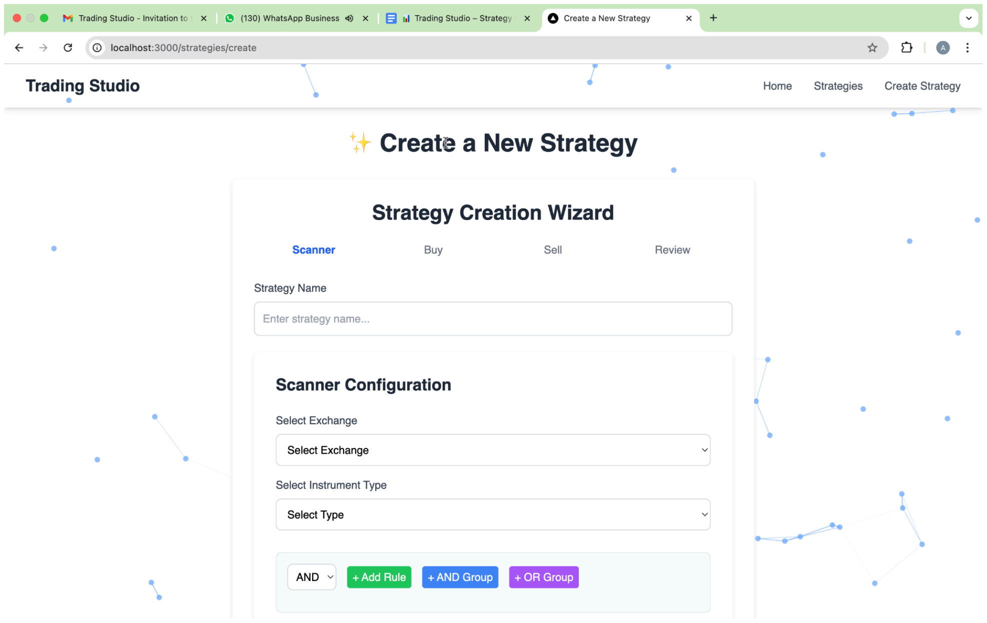
Load & Edit

test 2

Exchange: NYSE | Instrument: OPTION

Load & Edit

+ Create New Strategy


Trading Studio - Invitation to
(130) WhatsApp Business
Trading Studio – Strategy
Create a New Strategy
localhost:3000/strategies/create

Trading Studio

Home Strategies Create Strategy

✨ Create a New Strategy

Strategy Creation Wizard

Scanner Buy Sell Review

Strategy Name

Enter strategy name...

Scanner Configuration

Select Exchange

Select Exchange

Select Instrument Type

Select Type

AND + Add Rule + AND Group + OR Group

📌 Tech Stack

- Next.js 14.x (Pages Router)
- TypeScript
- Tailwind CSS
- Framer Motion
- React TSParticles
- LocalStorage (for persistence)
- UUID (for unique strategy IDs)

🙌 Acknowledgements

- Starter guidance provided in the assignment PDF

- Particle background inspired by `tsparticles.dev`
- UI inspired by trading tools and strategy simulators
