# Zerodha-Clone Project

This project is a **Zerodha-clone** website that replicates features of the popular stock trading platform. The application includes a front-end for viewing and buying stocks, and a back-end built using Node.js and MongoDB for managing user orders, holdings, and positions.
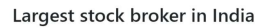
**Project Structure**

The project is organized into **three main folders**:

1. **zerodha-frontend**: Contains all the React.js components for the UI organized in separate folders based on functionality , the Navbar, footer, and reusable elements for the interface are also in this folder.

2. **dashboard**: Responsible for stock-related functionality such as **buying and selling stocks**, displaying **holdings**, and showing various **charts** for performance and data visualization. This is connected to mongo database and the data are queried from there.

3. **backend**: Built using **Node.js** and **Express.js**. This part handles data management, API routes, and communication with the **MongoDB Atlas** database, including user orders, stock holdings, and positions.

**Features**

- **Full Stack MERN App**: Complete implementation using React for frontend and Node.js with MongoDB for backend.

- **Reusability**: Components like openAccount, footer, and navbar are reused across pages, improving the code maintainability and reducing redundancy.

- **React Routes**: used to set up internal  routes for the navbar to render different sections.

- **Kite Dashboard**: A dashboard page that shows stock holdings with options to buy or sell stocks. The stock data is stored and updated in a MongoDB Atlas database.

- **Charts and Graphs**: Integration with **Chart.js** for visualizing stock performance through graphs like doughnut and vertical bar charts.

## Invest in Everything

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🏆 Economic Times Startup of the Year – 2020
🏆 NSE, BSE, MCX – Best Retail Brokerage award – 2018, 2019 & 2020

The Economic Times    Forbes    BusinessLine    THE HINDU    mint

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That's why 1.5+ crore customers trust Zerodha with ₹4.5+ lakh crores of equity investments and contribute to 15% of daily retail exchange volumes in India.

### No spam or gimmicks

No gimmicks, spam, "gamification", or annoying push notifications. High quality apps that you use at your pace, the way you like.

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Not just an app, but a whole ecosystem. Our investments in 30+ fintech startups offer you tailored services specific to your needs.

### Do better with money

With initiatives like **Nudge** and **Kill Switch**, we don't just facilitate transactions, but actively help you do better with your money.

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₹0
Free equity delivery and direct mutual funds

₹20
Intraday and F&O

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Varsity, the largest online stock market education book in the world covering everything from the basics to advanced trading.

Varsity →

TradingQ&A, the most active trading and investment community in India for all your market related queries.

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# Technology

Sleek, modern, and intuitive trading platforms

Check out our investment offerings →

## Kite

Our ultra-fast flagship trading platform with streaming market data, advanced charts, an elegant UI, and more. Enjoy the Kite experience seamlessly on your Android and iOS devices.
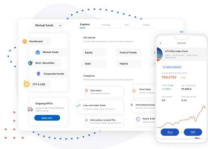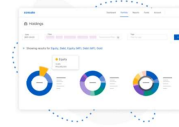
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## Console

The central dashboard for your Zerodha account. Gain insights into your trades and investments with in-depth reports and visualisations.

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## Coin

OBuy direct mutual funds online, commission-free, delivered directly to your Demat account. Enjoy the investment experience on your Android and iOS devices.

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## Kite Connect API

Build powerful trading platforms and experiences with our super simple HTTP/JSON APIs. If you are a startup, build your investment app and showcase it to our clientbase.

Kite Connect →
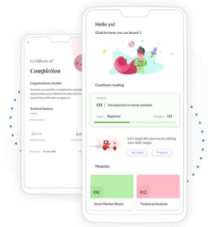
## Varsity mobile

An easy to grasp, collection of stock market lessons with in-depth coverage and illustrations. Content is broken down into bite-size cards to help you learn on the go.

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Want to know more about our technology stack? Check out the Zerodha.tech blog.

## The Zerodha Universe

Extend your trading and investment experience even further with our partner platforms

**Zerodha Fund House**

Our asset management venture that is creating simple and transparent index funds to help you save for your goals.

**SENSIBULL**

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**Streak™**

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# Charges

List of all Charges and Taxes

### ₹0
**Free equity delivery**

All equity delivery investments (NSE, BSE), are absolutely free — ₹ 0 brokerage.

### ₹20
**Intraday and F&O trades**

Flat ₹ 20 or 0.03% (whichever is lower) per executed order on intraday trades across equity, currency, and commodity trades. Flat ₹20 on all option trades.

### ₹0
**Free direct MF**

All direct mutual fund investments are absolutely free — ₹ 0 commissions & DP charges.

## Brokerage Calculator                    ## List of Charges

Call & Trade and RMS auto—squareoff: +dditional charges of «50 + GST per order.

Digital contract notes will be sent via e—mail.

Physical copies of contract notes, if required, shall be charged per contract note.

If the account is in debit balance, any order placed will be charged (40 per executed order instead of per executed order).

For NRI account (non-PIS), 0.5% or uøø per executed order for equity (whichever is lower).

Courier charges apply. For NRI account (PIS), 0.5% or per executed order for equity (whichever is lower).

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**Key Tools and Technologies**

**Frontend:**

- **React.js** for UI components and state management.

- **Material UI** and **Bootstrap** for styling and responsiveness.

- **Axios** for API calls to the backend.

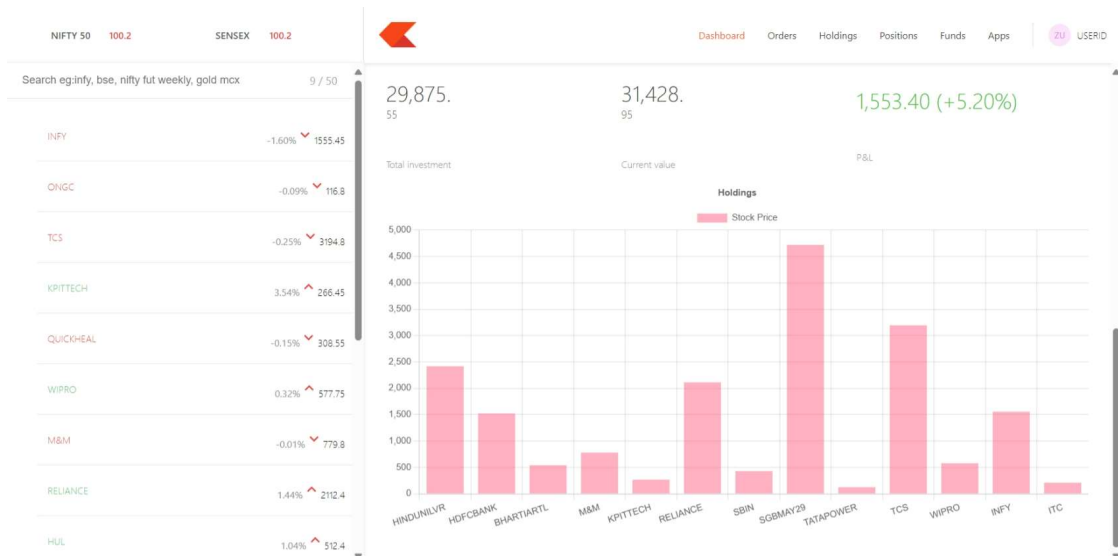- **HTML, CSS, and JavaScript** for structuring and styling.

**Backend:**

- **Node.js** and **Express.js** to handle API requests and business logic.

- **MongoDB Atlas** for storing stock data, user orders, and positions.

- **Cors** for managing cross-origin requests.

**Charts:**

- **Chart.js** for dynamic charts and data visualizations.
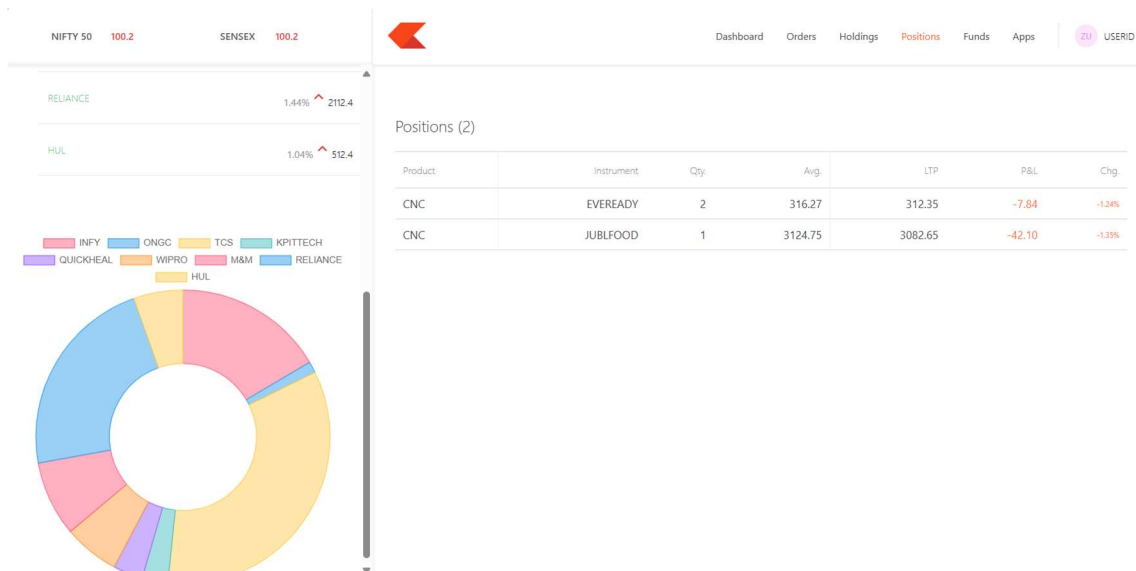


*Charts shown using data from DB and Chart.js*

Search eg:infy, bse, nifty fut weekly, gold mcx    9 / 50

| | | |
|---|---|---|
| INFY | -1.60% ⌄ | 1555.45 |
| ONGC | -0.09% ⌄ | 116.8 |
| TCS | -0.25% ⌄ | 3194.8 |
| KPITTECH | 3.54% ⌃ | 266.45 |
| QUICKHEAL | -0.15% ⌄ | 308.55 |
| WIPRO | 0.32% ⌃ | 577.75 |
| M&M | -0.01% ⌄ | 779.8 |
| RELIANCE | 1.44% ⌃ | 2112.4 |
| HUL | 1.04% ⌃ | 512.4 |

29,875.55   31,428.95   1,553.40 (+5.20%)

Total investment        Current value        P&L

**Holdings**

■ Stock Price



Charts shown using data from DB and Chart.js

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Search eg:infy, bse, nifty fut weekly, gold mcx    9 / 50

| | | |
|---|---|---|
| INFY | -1.60% ⌄ | 1555.45 |
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## Holdings (13)

| Instrument | Qty. | Avg. cost | LTP | Cur. val | P&L | Net chg. | Day chg. |
|---|---|---|---|---|---|---|---|
| HINDUNILVR | 1 | 2335.85 | 2417.40 | 2417.40 | 81.55 | +3.49% | +0.21% |
| HDFCBANK | 2 | 1383.40 | 1522.35 | 3044.70 | 277.90 | +10.04% | +0.11% |
| BHARTIARTL | 2 | 538.05 | 541.15 | 1082.30 | 6.20 | +0.58% | +2.99% |
| M&M | 2 | 809.90 | 779.80 | 1559.60 | -60.20 | -3.72% | -0.01% |
| KPITTECH | 5 | 250.30 | 266.45 | 1332.25 | 80.75 | +6.45% | +3.54% |
| RELIANCE | 1 | 2193.70 | 2112.40 | 2112.40 | -81.30 | -3.71% | +1.44% |
| SBIN | 4 | 324.35 | 430.20 | 1720.80 | 423.40 | +32.63% | -0.34% |
| SGBMAY29 | 2 | 4727.00 | 4719.00 | 9438.00 | -16.00 | -0.17% | +0.15% |
| TATAPOWER | 5 | 104.20 | 124.15 | 620.75 | 99.75 | +19.15% | -0.24% |
| TCS | 1 | 3041.70 | 3194.80 | 3194.80 | 153.10 | +5.03% | -0.25% |
| WIPRO | 4 | 489.30 | 577.75 | 2311.00 | 353.80 | +18.08% | +0.32% |
| INFY | 1 | 1350.50 | 1555.45 | 1555.45 | 204.95 | +15.18% | -1.60% |
| ITC | 5 | 202.00 | 207.90 | 1039.50 | 29.50 | +2.92% | +0.80% |

Holdings displayed along with watchlist to buy an item
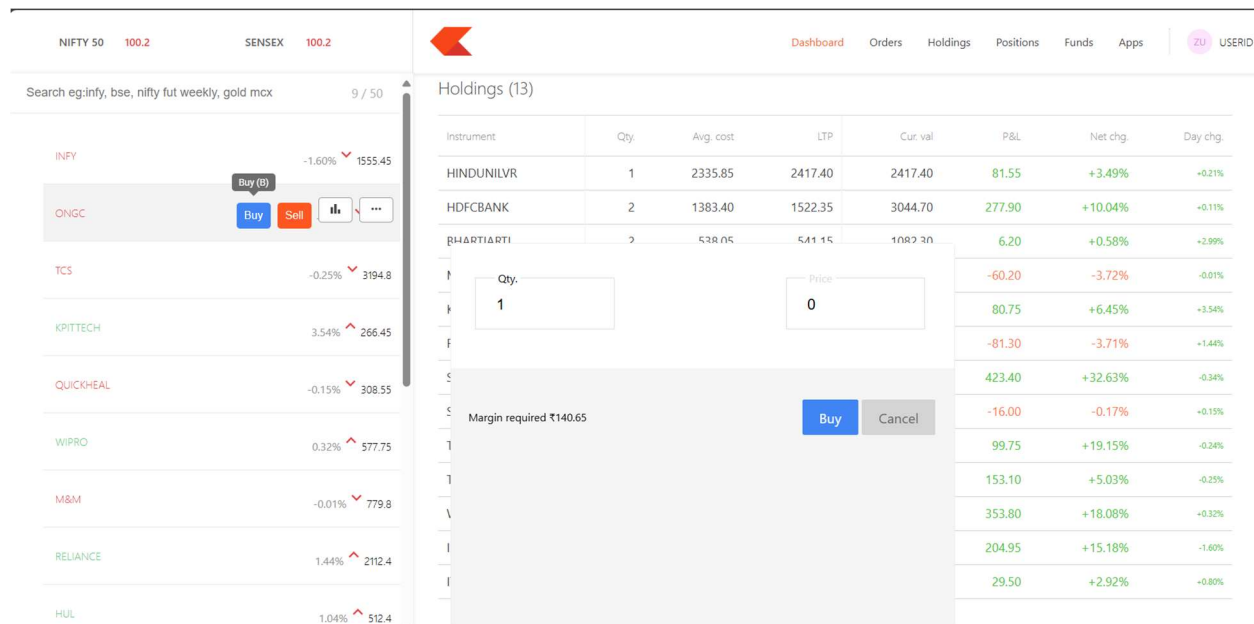
*Option to Buy and Sell the stocks*

## Future Improvements

- **User Authentication**: Add authentication for secure stock trading.

- **Real-Time Data**: Integrate a real-time stock data API.

- **Stock Search**: Add a search feature to allow users to search for stocks.