

MUTUAL FUNDS MONITOR

Revolutionizing Investment with Real- Time Monitoring of Your Funds

A Project submitted to Mahatma Gandhi Central University in partial fulfillment
of the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING

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INTRODUCTION



INTRODUCTION

- A mutual fund is a portfolio of stocks, bonds, or other securities purchased with the pooled capital of investors.
- An individual or an entity's collection of investments is referred to as a portfolio.
- Investing in various financial instruments, including stocks, bonds, mutual funds, and even cash equivalents like certificates of deposit (CDs) or savings accounts, is similar to putting money in a basket.
- So, the objective of a portfolio is to lower risk by spreading your investments over a variety of assets.

INTRODUCTION

- Prominent websites like Groww and Google Finance give investors access to financial tools and market data for stocks and mutual funds. BUT BUT, the data is not the real-time data for Mutual Funds.
- In today's fast-paced financial landscape, access to real-time data is paramount for investors to make informed decisions.
- In response to this need, our project introduces “Mutual Funds Monitor: Revolutionizing Investment with Real-Time Monitoring of Your Funds” .
- The project introduces a groundbreaking solution to revolutionize the mutual fund investment landscape by enabling real-time tracking of mutual fund prices.

PROBLEM DEFINITION



PROBLEM DEFINITION

- The current market lacks a centralized platform that can provide instantaneous updates on mutual fund prices, leading to inefficiencies and time-consuming processes.
- Traditional approach to mutual fund pricing relies on delayed updating of Net Asset Value (NAV) after market close, which happens usually after mid-night.
- Investors potentially miss out on lucrative opportunities or fail to react to market downturns.
- Existing platforms provide only limited capabilities graphical representations of mutual fund trends over longer periods (minimum one month).



Aditya Birla Sun Life PSU Equity Fund Direct Growth

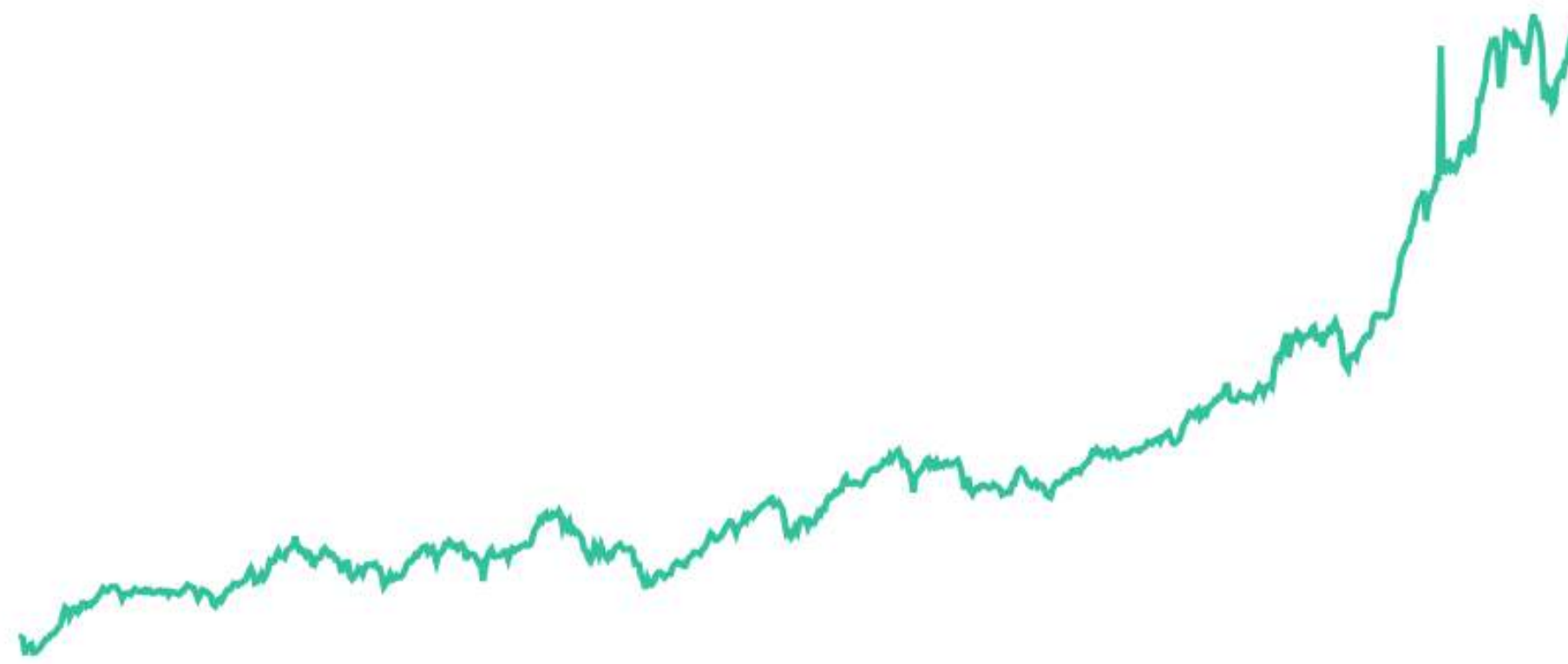
Equity

Sectoral / Thematic

Very High Risk

45.59% 3Y annualised

+0.54% 1D



1M

6M

1Y

3Y

All

HOME > ADIT_BSL_PSU_10JHJEX • MUTUAL FUND

Aditya Birla Sun Life PSU Equity Fund Direct Growth

₹35.40 ↑ 0.77% +0.27 1M

Apr 5 • INR • MUTF_IN • Disclaimer

1M 6M YTD 1Y 5Y MAX



CAGR ⓘ

₹1,000 invested for 1 month

This Fund

₹986.9

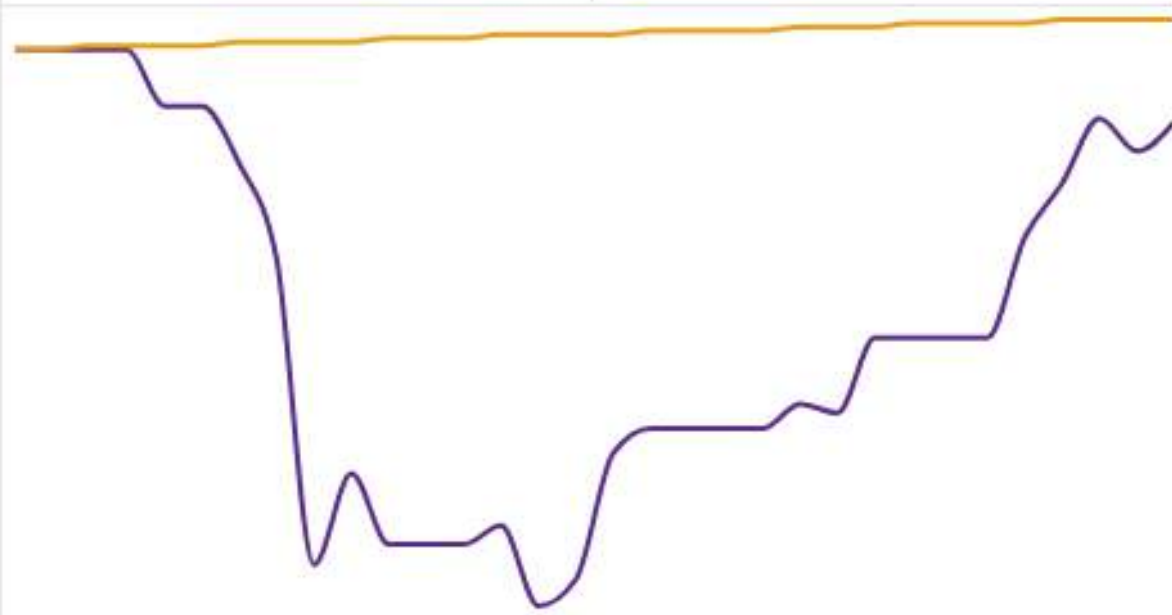
-15.2%



Fixed Deposit

₹1005.43

7%



1M | 3M | 6M | 1Y | 3Y | 5Y | All



EQUITY • SECTORAL / THEMATIC

Aditya Birla Sun Life PSU Equity Fund Direct Plan Growth

Fund 1 Month Return

-1.32%



1M | 3M | 6M | 1Y | 3Y | 5Y | ALL



EQUITY • SECTORAL / THEMATIC

Aditya Birla Sun Life PSU Equity Fund Direct Plan Growth

Fund 1 Month Return

-1.32%



1M

3M

6M

1Y

3Y

5Y

ALL

ADITYA BIRLA PSU MF HOLDING COMPANIES

Holdings (42)

Name	Sector	Instrument	Assets
State Bank of India	Financial	Equity	10.22%
Oil & Natural Gas Corporation Ltd.	Energy	Equity	7.76%
NTPC Ltd.	Energy	Equity	7.61%
Coal India Ltd.	Energy	Equity	6.12%
Bank Of Baroda	Financial	Equity	5.56%
Power Grid Corporation Of India Ltd.	Energy	Equity	5.46%
GAIL (India) Ltd.	Energy	Equity	5.09%
Bharat Heavy Electricals Ltd.	Capital Goods	Equity	3.42%
Bank of India	Financial	Equity	3.28%
Life Insurance Corporation of India	Insurance	Equity	3.12%
See All			

PROBLEM DEFINITION

- Absence of graphs depicting intra-week fluctuations hinders investors' ability to track shorter-term trends.
- Need for a solution enabling real-time tracking of mutual fund prices, allowing monitoring on a daily, even second-to-second basis.

OBJECTIVES OF THE PROJECT



OBJECTIVES OF THE PROJECT



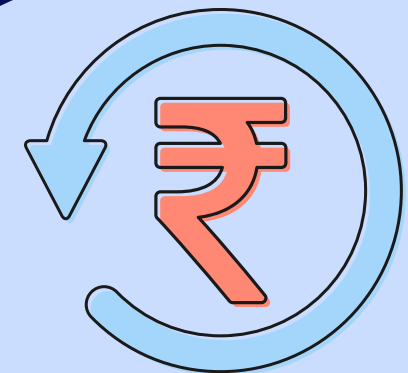
OBJECTIVE 1

Designing an intuitive & user-friendly interface that allows users to add funds in Your Funds Section & instantly access up-to-date market prices, facilitating intra-week monitoring.



OBJECTIVE 2

Ensuring accuracy & reliability in the real-time data provided to users, enabling them to make informed decisions throughout the week.



OBJECTIVE 3

Empowering investors of all levels to proactively manage their portfolios & seize opportunities presented by intra-week market movements, thereby maximizing investment returns.

OBJECTIVES OF THE PROJECT

- The primary objective of this project is to develop and implement "Mutual Funds Monitor," a user-friendly platform that enables investors to track real-time market prices of mutual funds effortlessly, with focussing particularly on facilitating intra-week investment strategies.
- "Mutual Funds Monitor" aims to disrupt the traditional approach to mutual fund investment by providing users with a seamless solution for tracking real-time market prices.
- Objective is to empower investors with timely insights, actionable information, and flexibility for informed and responsive investment decision-making.

WORKFLOW



WORKFLOW

1. USER INTERACTION

- Users interact with the application to buy or sell mutual funds.
- Users specify the quantity and type of mutual fund they wish to transact.

2. TRANSACTION TIMING CONSIDERATIONS:

- If the transaction (buying or selling) is initiated before 3:00 PM:
 - The NAV of the same date is applicable for the transaction.
- If the transaction is initiated after 3:00 PM:
 - The NAV of the next day, which is the NAV at 3:30 PM (market closing time), is applicable.

WORKFLOW

← Order Details



₹20,000.00

One-time · Completed

Aditya Birla Sun Life PSU Equity Fund Direct Growth >

Completed on

13 Feb '24 ⓘ

NAV date

12 Feb '24 ⓘ

Status



Payment confirmed

09 Feb '24, 5:41 PM



Order approved by fund house

09 Feb '24, 5:41 PM



Units allocated

13 Feb '24, 11:23 AM

WORKFLOW

- To ensure the NAV of the same date is applicable, users are advised to initiate transactions 1-2 hours prior to 3:00 PM.

3. PAYMENT PROCESSING AND APPROVAL BY THE FUND HOUSE

- Upon confirmation of the transaction, payment processing is initiated..
- The transaction details are forwarded to the respective fund house for approval.
- Approval by the fund house may take from a few minutes to 1-2 hours, depending on the fund house's processing time.



**We aim to illustrate the workflow
of our project to showcase the
tangible benefits derived from
intra-week investments.**

DEMONSTRATION

Before 3 PM

← Order Details

✓

₹20,000.00

One-time · Completed

Quant Infrastructure Fund Direct Growth >

Completed on
07 Apr '24 ⓘ

NAV date
06 Apr '24 ⓘ

⚡ Speedy order completion in just 1 working day

Status

✓ Payment confirmed
06 Apr '24, 1:26 PM

✓ Order approved by fund house
06 Apr '24, 1:26 PM

✓ Units allocated
07 Apr '24, 7:03 AM

ORDER PLACED AT 1:26 PM

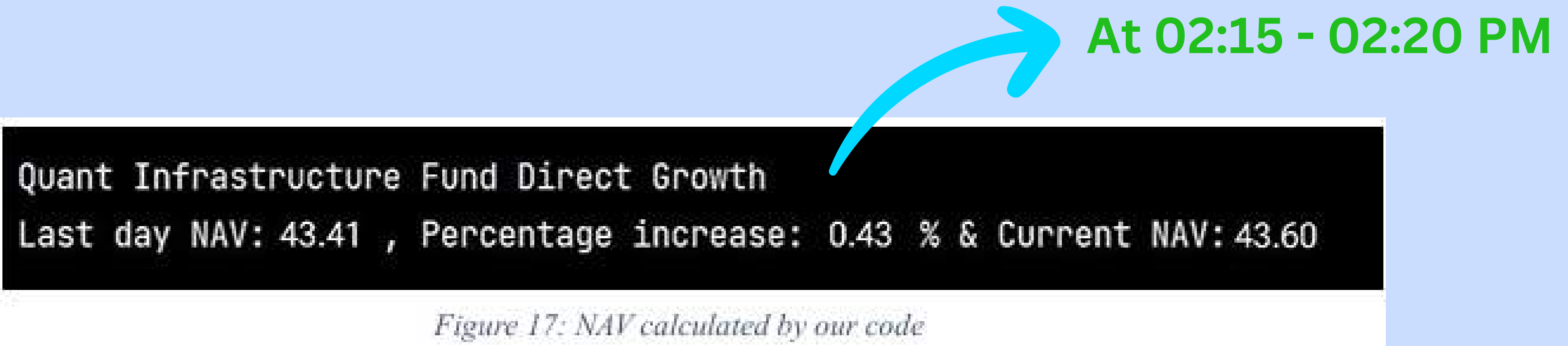
APPROVED BY FUND HOUSE AT 1:26 PM

UNITS ALLOTTED AT 7:03 AM



DEMONSTRATION

At 02:15 - 02:20 PM



```
Quant Infrastructure Fund Direct Growth  
Last day NAV: 43.41 , Percentage increase: 0.43 % & Current NAV: 43.60
```

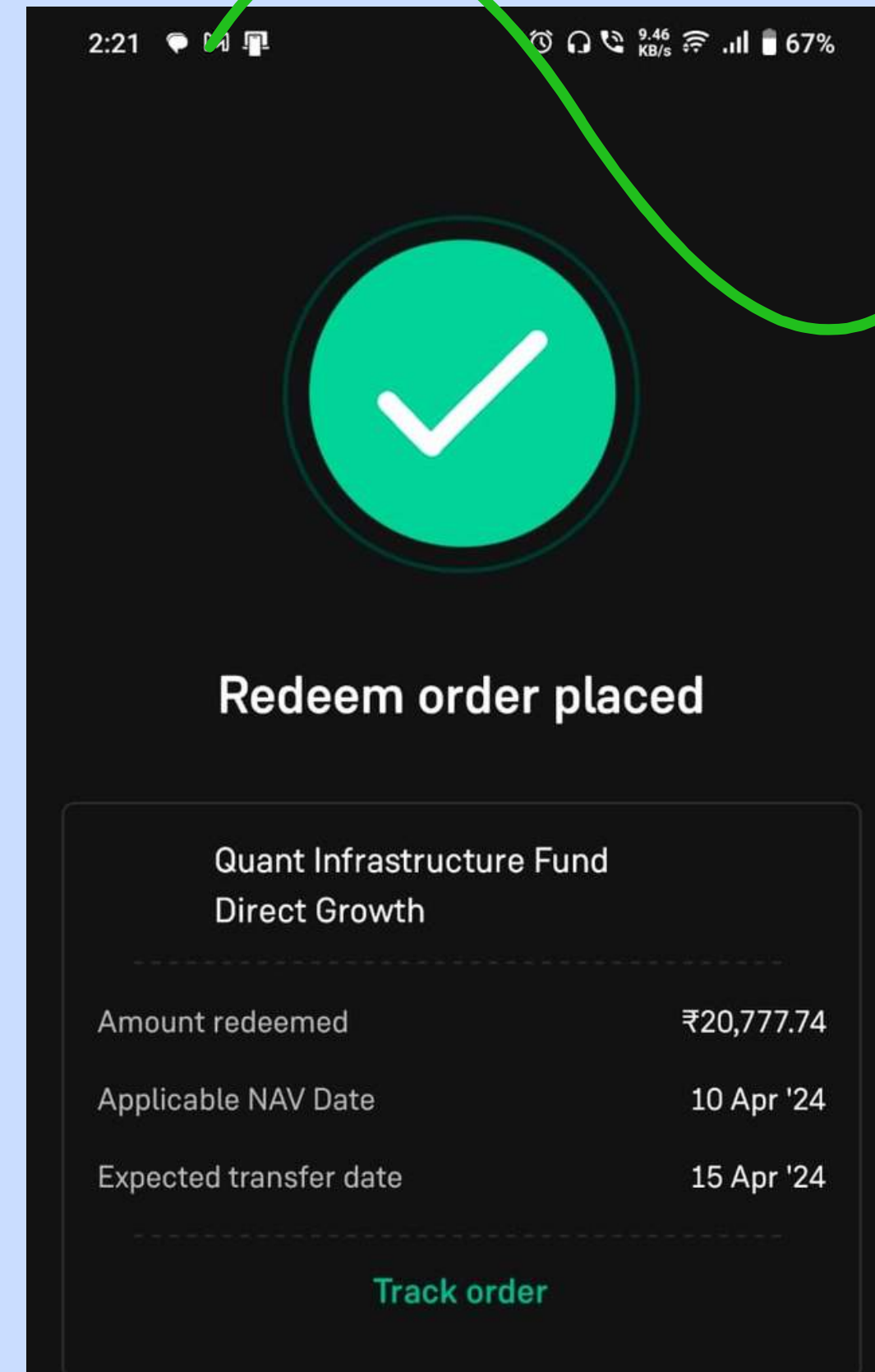
Figure 17: NAV calculated by our code

DEMONSTRATION

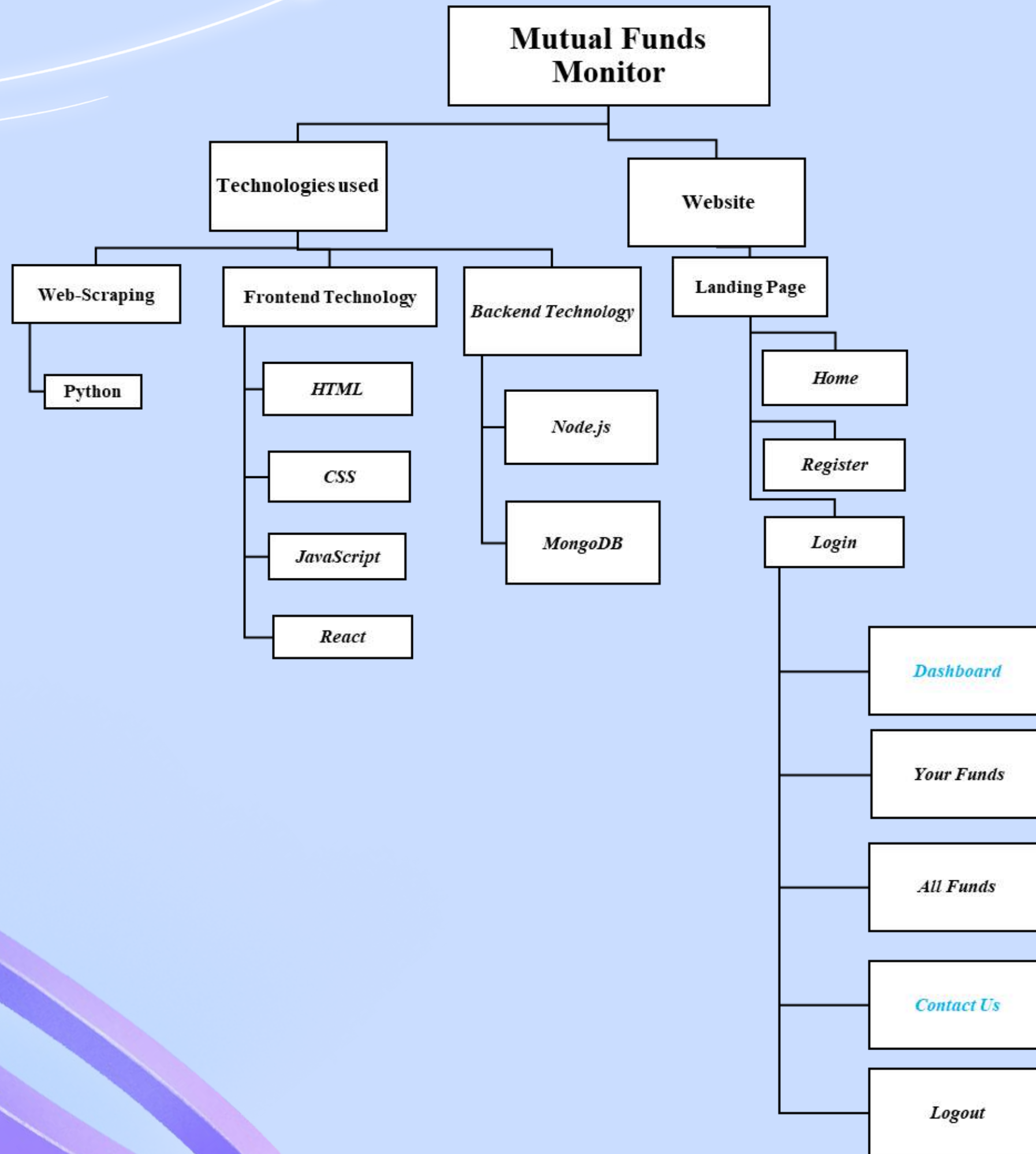
TOTAL PROFIT MADE = $20777.74 - 20000 = 777.74$

ORDER PLACED ON 10-04-24

APPLICABLE NAV DATE - SAME AS THE DATE
OF ORDER PLACED

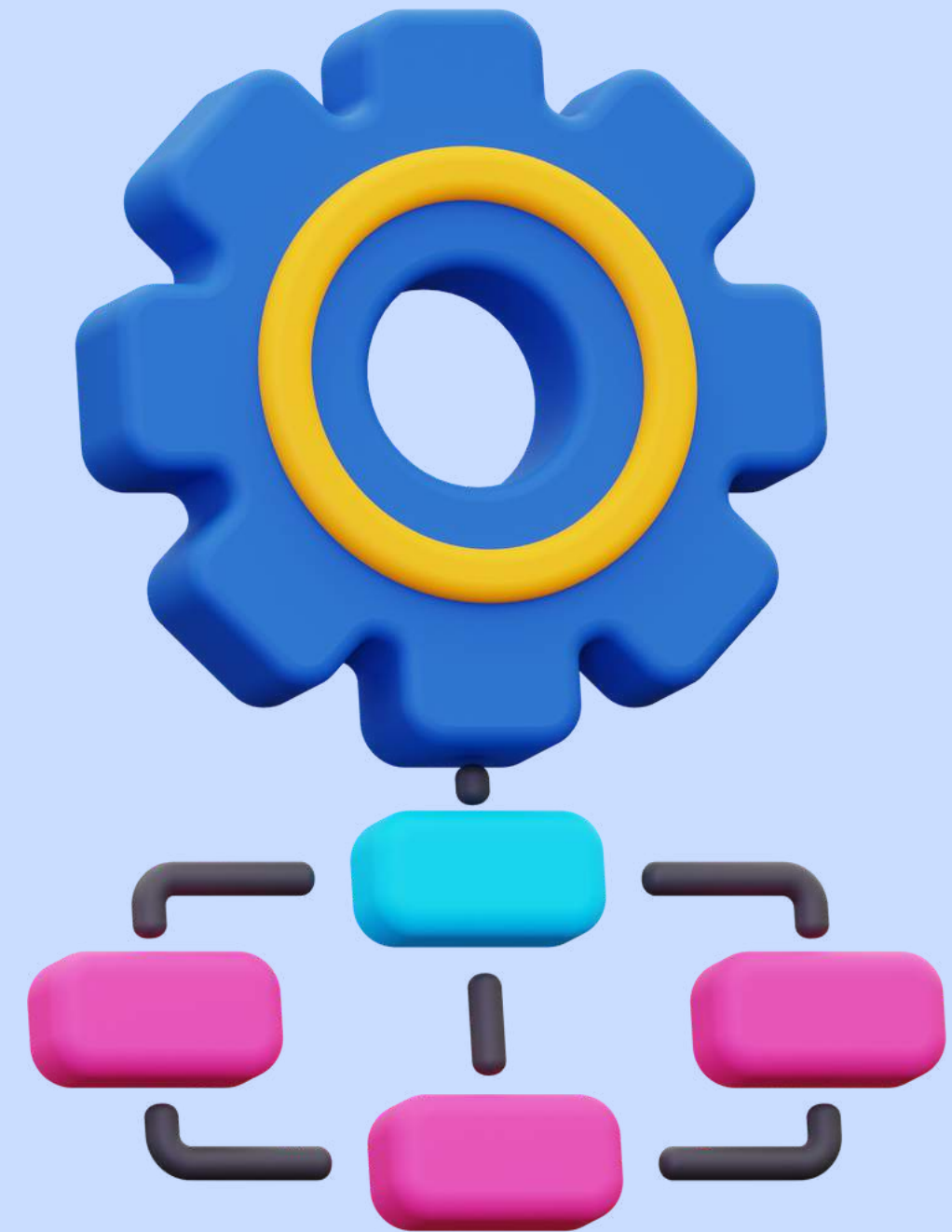


2:21



FLOWCHART

</> 7421





TECHNICAL ARCHITECTURE



TECHNOLOGY STACK OVERVIEW

FRONTEND:

RESPONSIBLE FOR USER INTERFACE AND INTERACTION.

COMPONENTS: HTML, CSS, JAVASCRIPT, REACT.JS.

DEPLOYMENT: HOSTED ON WEB SERVERS OR SERVED FROM BACKEND.



BACKEND:

CORE PROCESSING UNIT HANDLING BUSINESS LOGIC AND DATA.

COMPONENTS: PYTHON FOR WEB SCRAPING, NODE.JS FRAMEWORK.

DEPLOYMENT: CLOUD PLATFORMS (E.G., AWS, AZURE) OR ON-PREMISES SERVERS.



DATABASE:

STORES AND MANAGES APPLICATION DATA.

COMPONENTS: MONGODB WITH REACT.JS AND NODE.JS.

DEPLOYMENT: CLOUD-BASED SERVICES OR DEDICATED SERVERS.

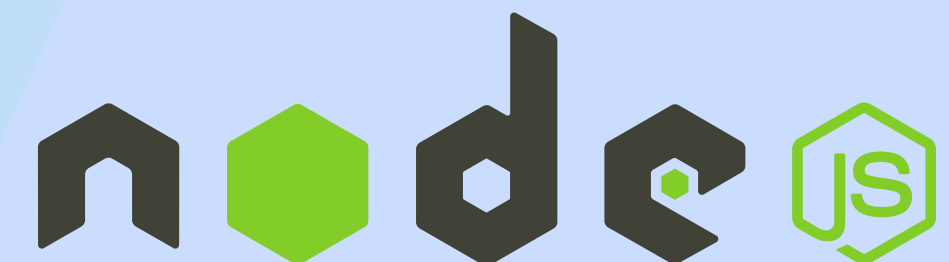


PYTHON IDE:

USED FOR WRITING AND DEBUGGING PYTHON CODE.

COMPONENTS: PYCHARM.

USAGE: WRITING AND DEBUGGING WEB SCRAPING CODE.



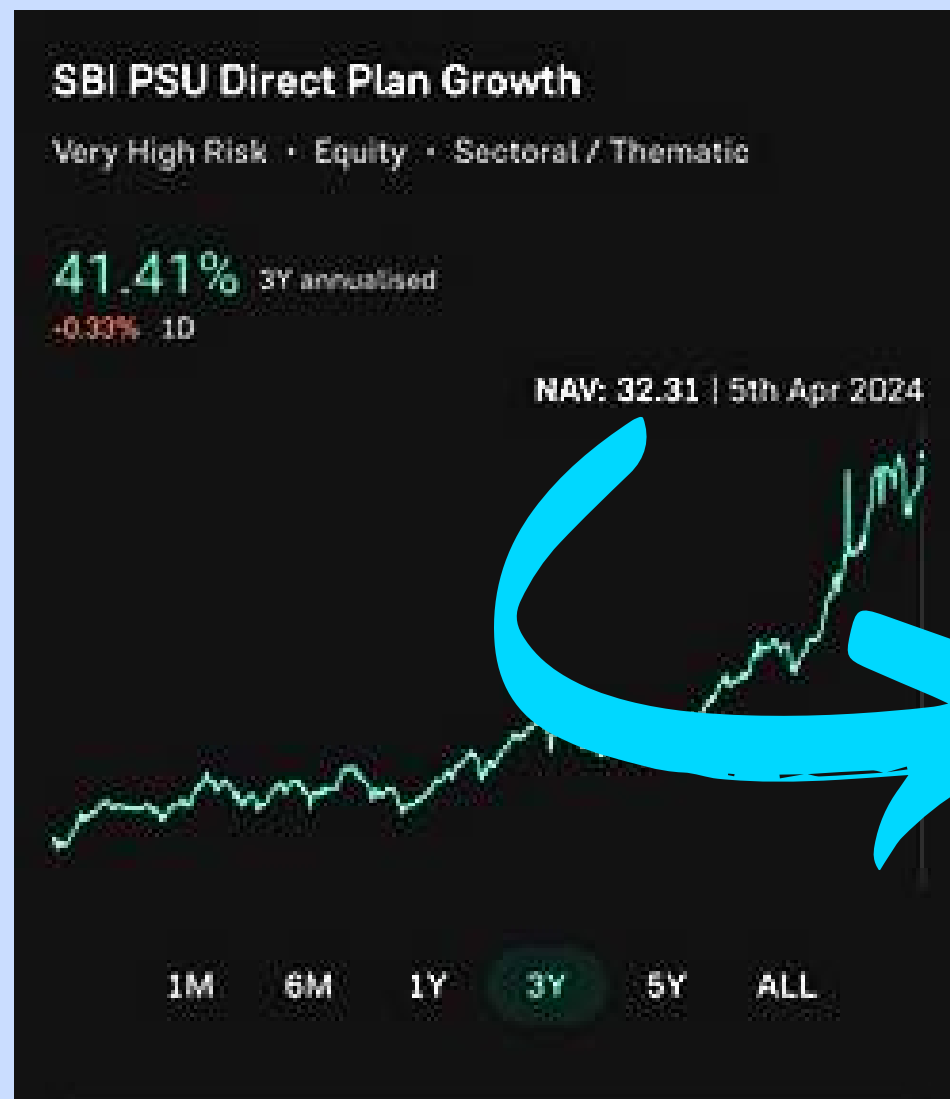
RESULTS AND ACHIEVEMENTS



RESULTS AND ACHIEVEMENTS

- Our real-time calculation engine accurately predicts NAV values, mirroring those updated on official websites precisely. This achievement underscores the reliability and precision of our code, instilling confidence in investors by providing them with consistent and dependable information for informed decision-making.
- As previously demonstrated, our project has yielded impressive results, exemplified by the profitable returns generated within a mere 5-day span. This accomplishment stands as a testament to the effectiveness and efficiency of our solution in maximizing investment opportunities and delivering tangible benefits to our users.

RESULTS AND ACHIEVEMENTS



32.30
32.31

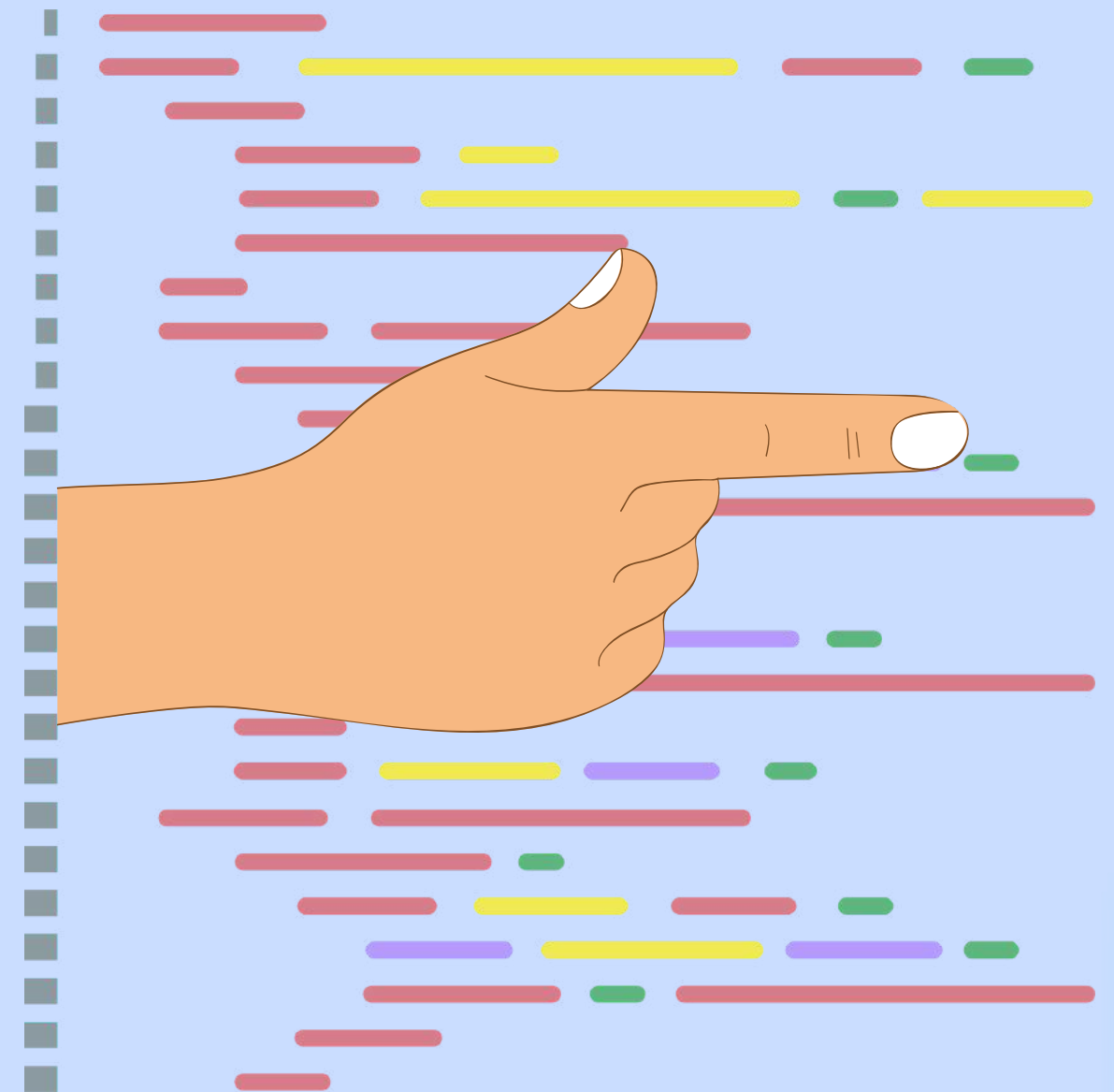
```
# Target value of stock at regular interval of time
# interval = 30
for i in range(2):
    current_nav = float>Last_day_closed) + ((float>Last_day_closed)*current_MF_status(stock_search_company_name))
    print(current_MF_status(stock_search_company_name))
    # print(current_nav)
    print(f>Last day NAV: {float>Last_day_closed):.2f}, Percentage increase: {float>Last_day_closed):.2f} % & Current NAV: {current_nav:.2f}
    # time.sleep(interval)
```

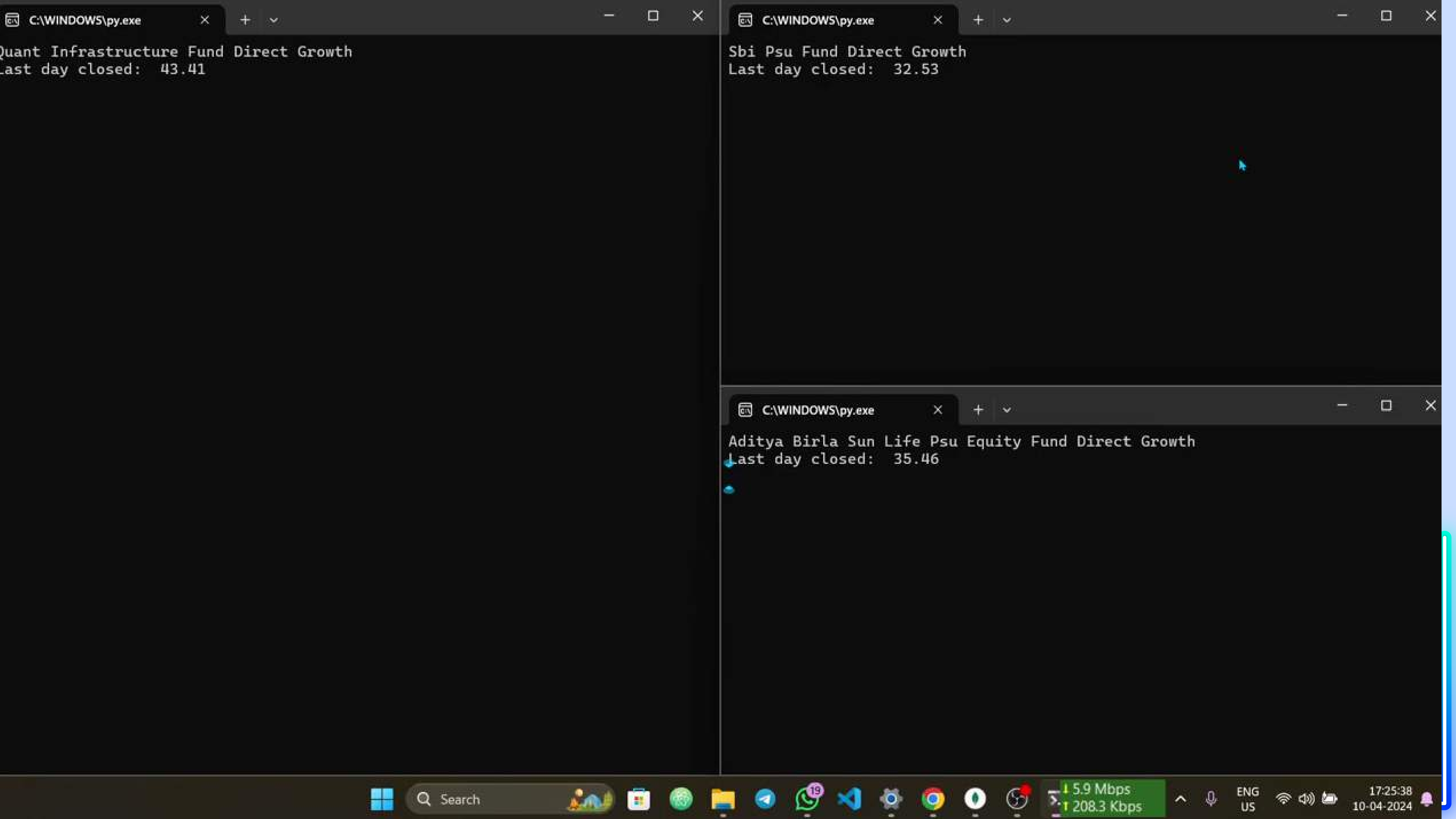
Last day NAV: 32.07, Percentage increase: 0.70 % & Current NAV: 32.30
Last day NAV: 32.07, Percentage increase: 0.70 % & Current NAV: 32.30

Official Website's screenshot for
SBI after 12am

NAV shown at 3:30 pm through
our Code at 3:30 pm

Let us illustrate how our code operates to calculate mutual fund prices in real-time.

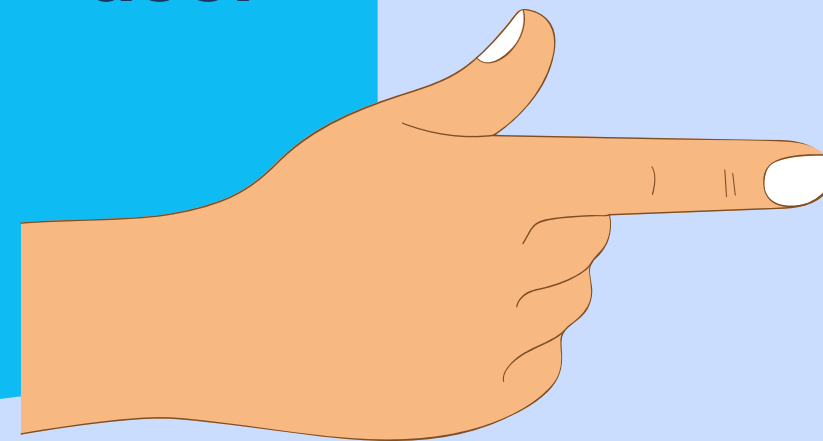




RESULTS AND ACHIEVEMENTS

- **Successfully developed the frontend of the website.**
- **Prioritized intuitive design and user-friendly navigation for enhanced user experience.**
- **Implemented the login feature to authenticate users securely.**
- **Ensured seamless integration of the login functionality within the frontend.**


Let us illustrate how all the functionalities of “MUTUAL FUNDS MONITOR” are being handled by our webpage on the front-end in a user-friendly manner.



Mutual Funds Monitor

Home Register Login




Mutual Funds Monitor
Revolutionizing Mutual Fund Investment with Real-Time Monitoring






Track market prices of mutual funds effortlessly with Mutual Funds Monitor,
Say goodbye to traditional investment methods and embrace the future of portfolio management !

[Get Started](#)

It's no where.





But only here.

Ready to Get Started?

Finance simplified, in your language.

Sign up now and start monitoring market prices of mutual funds in real-time with Mutual Funds Monitor!

[Get Started](#)

Made with ❤ by Mukul Anand & Akanksha

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A close-up photograph of a blue, textured paper being torn. A jagged hole has been made in the paper, revealing a white surface underneath. The word "CONCLUSION" is printed in a black, serif, italicized font on the white surface. The blue paper is slightly curled on the left side, and the edges of the tear are rough and uneven.

CONCLUSION

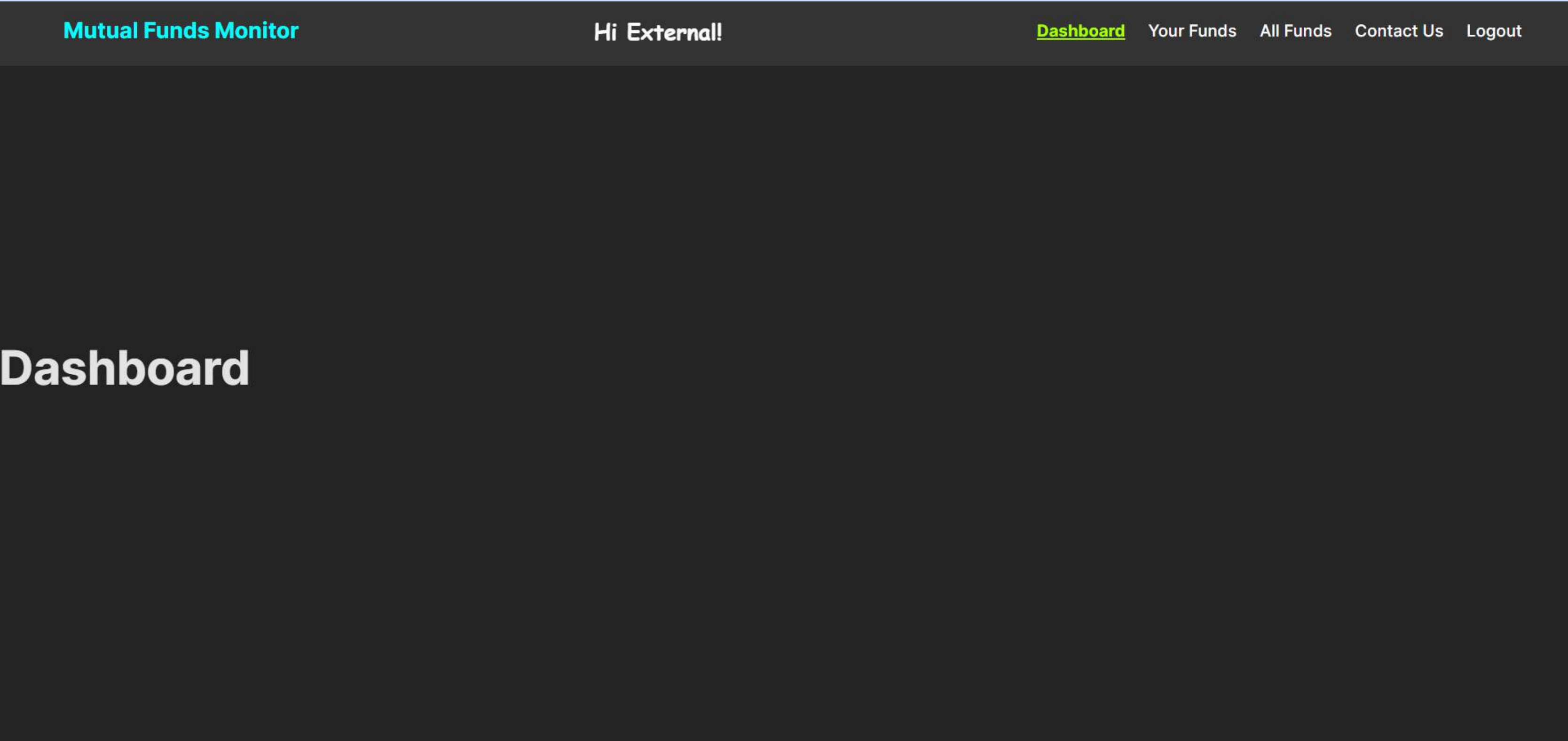
CONCLUSION

- Our project addresses a critical need for real-time mutual fund price tracking and provides investors with timely insights and actionable information, thus marking a significant leap in the financial technology space.
- Designed for simplicity and functionality, our platform prioritizes user experience, ensuring accessibility for investors of all levels.
- We faced a number of difficulties over the project's journey, such as integration problems, data accuracy issues, and technological complexity.
- Overcoming challenges taught us invaluable lessons in resilience, adaptability, and collaboration, strengthening our project's foundation.



FUTURE WORKS

FUTURE WORKS



FUTURE WORKS



REFERENCES

[HTTPS://NODEJS.ORG/DOCS/LATEST/API/](https://nodejs.org/docs/latest/api/)

[HTTPS://LEGACY.REACTJS.ORG/DOCS/GETTING-STARTED.HTML](https://legacy.reactjs.org/docs/getting-started.html)

[HTTPS://GROWW.IN/](https://groww.in/)

[HTTPS://WWW.GOOGLE.COM/FINANCE/?HL=EN](https://www.google.com/finance/?hl=en)

[HTTPS://WWW.ANGELONE.IN/](https://www.angelone.in/)

[HTTPS://UPSTOX.COM/](https://upstox.com/)

[HTTPS://WWW.MONGODB.COM/](https://www.mongodb.com/)

THERE ARE 10_2 TYPES OF PEOPLE IN THIS WORLD ... THOSE WHO UNDERSTAND
BINARY AND THOSE WHO DON'T. IF YOU GET IT, YOU ARE THE FIRST ONE.

