

COP290 Lab 3

Vikash Kumar Meena, Ujjwal Mathur, Aryansh Singh, Rajan Gupta

TOTAL POINTS

40.5 / 50

QUESTION 1

1 Database Design 4.5 / 5

- 0 pts All Correct
- 1 pts Un-normalized database
- 1 pts Improper use of constraints
- ✓ - 1 pts *Slow queries, not used pagination*
- 1 pts Extensibility

Other errors

- 0.5 pts Missing Foreign Keys
- 0.5 pts Small errors
- + 0.5 Point adjustment



QUESTION 2

2 Login 3 / 3

Password

- ✓ + 0.5 pts *min length/mix character requirement in password*
- ✓ + 0.5 pts *Re-enter password (Confirm Password Text Box)*
- ✓ + 0.5 pts *Password Encryption*

Email Authentication

- + 0 pts No Check
- + 0.5 pts Only regex check at frontend
- ✓ + 1 pts *Email Authentication using OTP or Forgot Password*

Duplicate username

+ 0 pts Allows duplicate users

+ 0.25 pts Disallowing duplicate username but don't show any error

✓ + 0.5 pts *Disallowing duplicate username and shows error*

+ 0 pts Registration didn't work

+ 0 pts Baadal VM Not working

+ 0 pts Baadal VM link not provided

QUESTION 3

3 ML API 1.75 / 2

Relevance of ML API

+ 0 pts Relevance: 0 marks incomplete

+ 0.5 pts Relevance: 0.5 marks some relevance

✓ + 1 pts *Relevance: 1 marks relevant*

Working of ML API

+ 0 pts Working: 0 marks incomplete

✓ + 0.5 pts *Working: 0.5 marks something works - issues like Not on Baadal etc*

+ 1 pts Working: 1 marks works completely

+ 0.25 Point adjustment

QUESTION 4

4 API Design 1.5 / 5

Working

✓ + 0 pts *Incomplete/Not working*

+ 0.5 pts It works!

Security

✓ + 0 pts Incomplete/major bugs - no authorization checked while editing profile etc

+ 0.5 pts Some bugs - most of the functionality is secure

+ 1 pts No visible vulnerabilities

API naming

+ 0 pts incomplete/completely wrong solution

+ 0.5 pts Decent naming notations are used.

Some notations are confusing.

✓ + 1 pts Good notations

Generality of API

+ 0 pts Incomplete/Completely incorrect

✓ + 0.5 pts Some APIs are repeated. Scope for condensation

+ 1 pts Modular design.

+ 1.5 pts Modular and well thought design

(Example: Pagination)

+ 0 pts Click here to replace this description.

GET, PUT, POST relevance

✓ + 0 pts Incomplete/Incorrect

+ 0.5 pts Multiple types of requests are used /type of requests used are not relevant

+ 1 pts Many types of request used and are relevant

💡 no api provided. website login/forgetpassword/signup everything throws error.

QUESTION 5

5 Frontend Design 4 / 5

Attractiveness

✓ + 0.5 pts **Visual appeal:** Does the website have an overall visually appealing look? This includes things like colors cheme, font choices, and use of images.

✓ + 0.5 pts **Consistency:** Are the design elements consistent throughout the website? For example, are the colors, font sizes, and button styles the same across all pages?

✓ + 0.5 pts **Accessibility:** Does the website use good contrast between text and background colors? Is the text easy to read and the font size appropriate? Are there any accessibility features such as alt text for images?

✓ + 0.5 pts **Use of white space:** Does the website use white space effectively to create a clean, uncluttered look? Or is it too sparse, leaving the website feeling empty, or too crowded, leaving the website feeling cluttered? Is Image rendering proper (Images are not stretched out, the aspect ratio of images is okay, etc)?

+ 0 pts Click here to replace this description.

+ 1 pts **Responsiveness** Can adjust to screen size. Does the website look good and function well on mobile devices? Is the layout optimized for smaller screens and touch input?

+ 1 pts **Layout and organization:** Is the layout of the website easy to navigate and well-organized? Are the important elements (e.g., navigation menu, search bar, calls-to-action) easy to find and use? Discoverability and navigation are obvious. Does ML API have a single button to translate the entire page (Clicking again and again to translate posts is bothersome)?

✓ + 1 pts **Immediate feedback** Does the website load quickly? Slow loading speeds can negatively impact the user experience and make the website feel unattractive. If you click a button, then how much time it takes to take action

✓ + 0 pts **Brand identity:** Does the website accurately reflect the brand's identity and personality? Is the design consistent with the brand's other marketing materials? Does it have a consistent logo?

+ 0 pts Baadal VM Not working. Baadal VM was not working when I checked.

+ 0 pts Baadal link not added in the google sheet

+ 1 Point adjustment

Layout and organization is not very good. I was not able to find log out button. So, cutting 0.5 marks. Some components are responsive thus giving more 0.5 marks

QUESTION 6

6 Code Cleanliness 3.25 / 5

+ 1 pts Hidden passwords and Configuration files

✓ + 1 pts static files in git ignore

✓ + 1 pts git commits (more than one commit using git commands by all team members)

+ 0 pts Private Github

DRY

✓ + 1 pts No repetition or extra functions

+ 0.75 pts Some repetition

+ 0 pts Lot of functions doing same task

Code Structure

✓ + 1 pts Proper Code Structure

✓ - 0.25 pts Typing not used

+ 0.5 pts Poor structure

- 0.5 Point adjustment

Few unnecessary files not mentioned in git ignore

QUESTION 7

7 Completeness 8.5 / 10

Key Features

✓ + 0.5 pts Feature 1 is present

✓ + 0.5 pts Feature 1 is working as expected

✓ + 0.5 pts Feature 2 is present

✓ + 0.5 pts Feature 2 is working as expected.

✓ + 0.5 pts Feature 3 is present

✓ + 0.5 pts Feature 3 is working as expected.

✓ + 0.5 pts Feature 4 is present

✓ + 0.5 pts Feature 4 is working as expected.

✓ + 0.5 pts User Profile is implemented

✓ + 0.5 pts User Profile is working as expected

+ 0 pts Missing Features

Error Handling / Software Quality Assurance (QA)

✓ + 1 pts No errors in the application.

✓ + 1 pts No QA issues found

+ 0 pts Error found

+ 0 pts QA issues found

Testing

✓ + 1.5 pts Unit Tests implemented with coverage >= 60%

+ 0.75 pts Unit Tests implemented with coverage >= 30%

+ 0 pts No Unit Tests implemented / coverage < 30%

CI/CD

+ 1.5 pts Able to run tests automatically when pushing to github

✓ + 0 pts *Test are not triggered automatically when pushing to github*

💬 Feature 1) - Live chart updates according to real time prices.

Feature 2) - Implemented chat feature using sockets.

Feature 3) - Tracking order/transaction history

Feature 4) - KYC feature for verifying users.

User Profile - User profile implemented and working as expected.

Errors - None

QA Issues - None

+ 1 pts Some unlisted choices / Given a generic answer

+ 0.5 pts Listed very few choices

+ 0.5 pts No specific choice or explanation provided

+ 0 pts Unanswered / Incorrect

Uniqueness

✓ + 1 pts *Catchy website idea - Overview*

✓ + 2 pts *Unique features*

+ 1.5 pts Partially distinctive

+ 1 pts Some unique elements

+ 0.5 pts Not answered properly.

+ 0 pts Unanswered / not distinctive

API Description

+ 1 pts APIs have been described in detail

+ 0.5 pts Only names etc are mentioned, have not mentioned their function

✓ + 0 pts *API description not given*

Challenges

✓ + 2 pts *Listed challenges*

+ 1 pts Listed some challenges

+ 0.5 pts Listed limitations / Expressed features as challenges

+ 0 pts Unanswered / Answered poorly

Limitations / Future work

✓ + 2 pts *Limitations noticed*

+ 1.5 pts Unnoticed limitations / Listed few limitations

+ 1 pts Only some limitations listed

+ 0.5 pts Poorly answered

+ 0 pts Unanswered / Poor answer

Sitemap and ML API

QUESTION 8

8 Presentation/Report 14 / 15

Presentation

✓ + 2 pts *Working demo*

+ 1.5 pts Some inconsistencies during demo

+ 1 pts Some features working

+ 0.5 pts Poorly prepared ppt

+ 0 pts Not working demo / Not present in demo

✓ + 1 pts *Descriptive presentation*

Design Choices

✓ + 2 pts *Correct*

+ 1.5 pts Some partially correct choices /

Partially generic answer

- + 1.5 pts Sitemap planned
- + 1 pts Sitemap incomplete, unexplained
- ✓ + 0.5 pts *Sitemap not given, explanation provided*
- + 0 pts Unanswered / Poorly answered
- ✓ + 0.5 pts *ML API choice*

Experience with LLM

- + 0 pts Correctly described
- + 0 pts Poor description
- ✓ + 0 pts *Not mentioned*
- + 1 *Point adjustment*

COP290 REPORT



Team Name:- Team_Akatsuki

Member 1:- Rajan Gupta (2018ME20710) (Git handle- rajangiitd)

Member 2:- Vikash Kumar Meena (2021CS10120)(Git handle- VikashMeena7781)

Member 3:- Ujjwal Mathur (2021CS10115)(Git handle- trymeuj)

Member 4:- Aryansh Kumar Singh (2021CS10113)(Git handle- AKSaryansh)

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IMPORTANT LINKS:-

Check Point 1 (Website Design Plan) link:-

https://docs.google.com/document/d/1_DDgdYqTAmIGYaHSjnzeorVtuOvwYG8phY87KS7M22A/edit

Check Point 2 link:-

https://docs.google.com/document/d/1Elmosz3amQ_Ss2Mi5DjuUVSAGyDW2CINJmztlKTmiHw/edit

Frontend prototype designed on Figma link:-

https://www.figma.com/file/uyIUhYG9UMLUnElfNTasZ7/Team_Akatsuki-team-library?node-id=667%3A1323&t=HPJ2uVsUdfS0tkH4-1

Drive link having a pdf of final ER Diagram, coverage reports(both unit and integration) and yaml file:-

https://drive.google.com/drive/folders/1heUF36rBbUy0IKCo2pdcjSvbzYylJHC7?usp=share_link

Github Public link for the project:-

<https://github.com/rajangiitd/Coinfun>

Website is currently hosted at:-

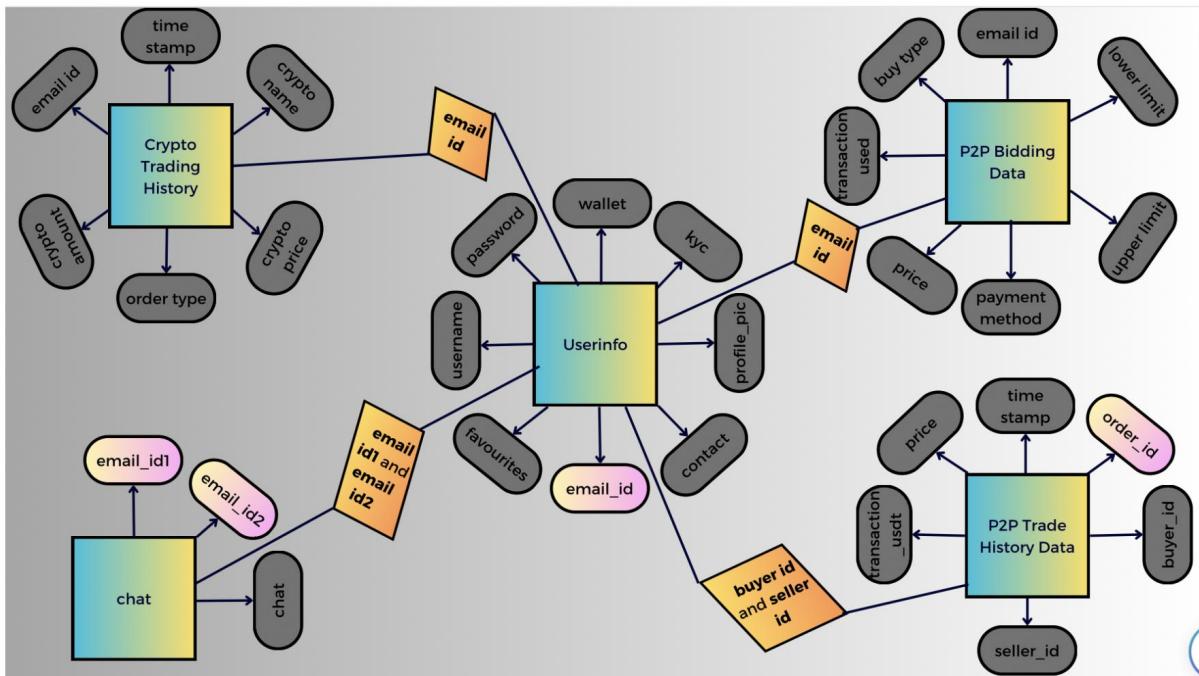
<http://10.17.50.54:10000/>

In case the link is found or gets broken,
please contact at- 9034304478 or me2180710@iitd.ac.in

About Database and Dataset:-

- The MySQL database has been created with schema available in database folder in the github repository.
- In order to fill the database with data, **self-written** 250+ lines of python code available in dataset_creation folder in the github repository has been used since data like details of wallets and order history of people in crypto exchanges are not available for free. The program **takes n as input** and **generate database with n Persons in a single click**.
- In order to test the database, some test accounts have also been created using the code present in same folder.
- The ER Diagram for the database is mostly self-explanatory. We have used email_id of user as primary key for userinfo table that stores information about profile of user and email_id has been used as foreign key in other tables to help speed up the SQL queries. There is only one assumption that is not directly visible from ER diagram that, in chat table, email_id1 is the email_id of person who is looking to buy and email_id2 is email id of person who is looking to sell.

ER DIAGRAM



- Each Table → Rectangle
- Attributes of Table → Ellipse
- Rhombus → Tables are related (foreign key)
- Name written in Rhombus → Name of Relation
- Pink color → Primary Key

What is Coinfun?

Coinfun is a **crypto trading exchange** that aims to provide experience of maximum possible features that real trading exchanges has to offer. The **idea behind choosing this project** was that it is a project that is capable of including countless features within it and can be expanded a lot, i.e. it is an **expandable** project.

In order to understand what it does, lets directly go to a quick go through through all the features of whole website.

The website was equipped with **OTP, Google translate, Google face-recognition(for kyc purpose) and cctx package API(used to download crypto prices)** which are disabled while hosting on Baadal.

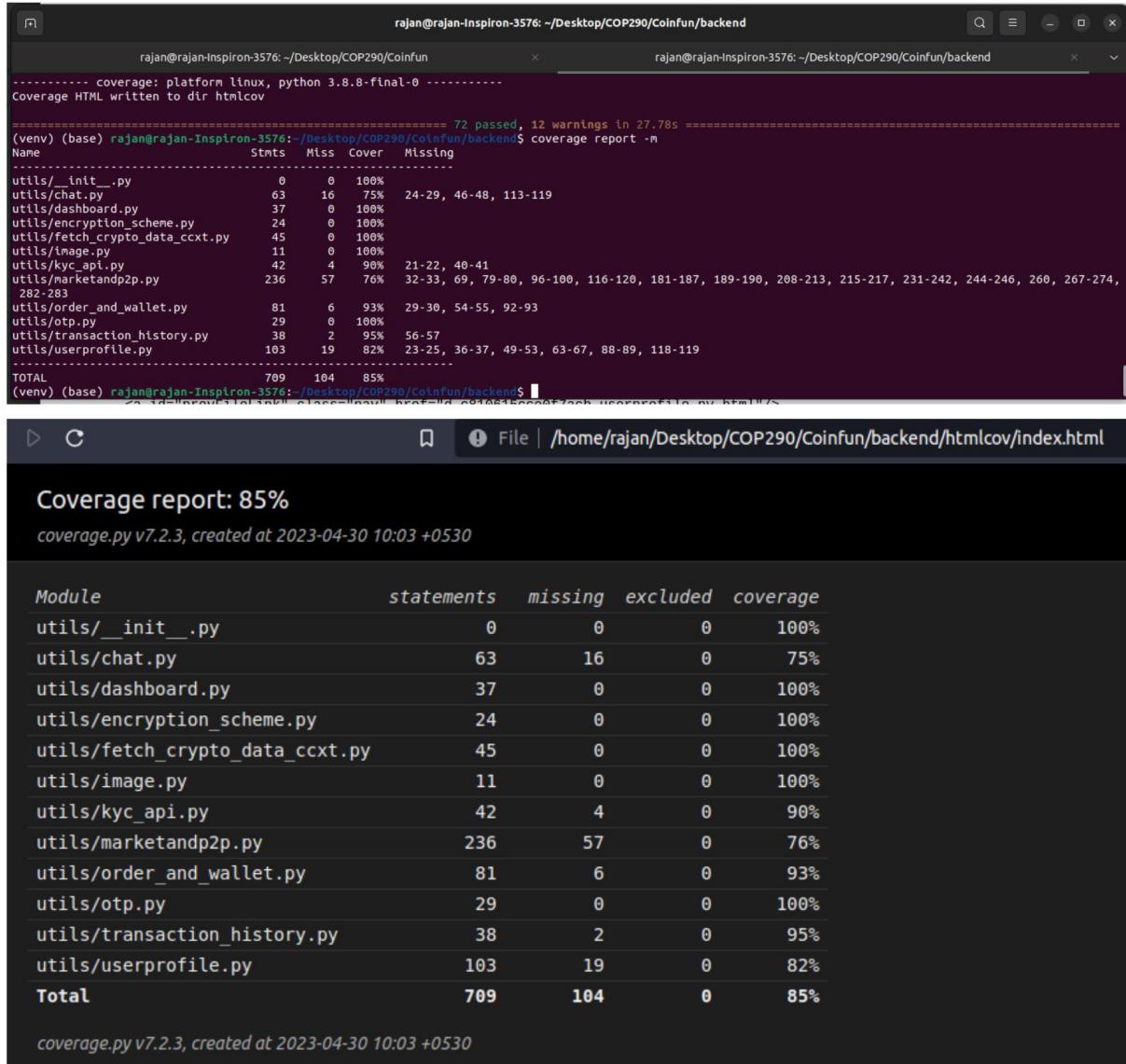
Changes done to host and “Guidelines” to use website on Baadal

- Since OTP has been disabled, in order to reset password, **filling any OTP** will work
- Since Face-recognition API has been disabled, **uploading any image** in png,jpg or jpeg will verify the user
- Since cctx package is now commented and won't be able to fetch crypto price data, charts and **prices will look static**, but one can still buy or sell crypto currencies.
- Google Translate API was implemented at frontend, so it may work or may not.
- Please **do not upload** image of more than 1 MB size while KYC or changing profile pic
- Since **change profile pic feature works without need to refresh** the page, the Change photo button works only when the image is in **correct format(png, jpg, or jpeg)**, else if file uploaded to change photo is not in correct format, nothing will happen
- Please **do not trade on P2P portal with high/limiting amount for release** as it may cause unexpected behaviour. For example:- If the ad on P2P portal shows 5000\$ Available, take a buy or sell with ~4950 max, since the libraries used are simple and doesn't involve high precision computation algorithms
- P2P portal in real exchanges do not allow all the users to post their ads, hence the feature of posting ads is not available. Hence in order to buy or sell USDT on a advertisement, which is posted by “personx”, One can login in the account of **“personx” with email = personx@gmail.com and password = “PersonxPersonx”**.
For eg, email= person15@gmail.com and password = “Person15Person15”
The ads on P2P portal were created when the database was created. On Baadal, ~50 such accounts have been created while creating fake data for website.
- While creating database, fake chats with about 3 messages were created between people. But since the old chat history didn't seem to work when hosted on Baadal, **old chats between people has been removed** (whose history are still available in Transaction History). **But new chats** that are created via frontend **works well**.
- Please **avoid opening website through mobile phone** to avoid unexpected behaviours.

TESTING AND COVERAGE

In backend folder, there are approx 11 python modules that are testing using both unit and integration tests. All the tests are present in the tests folder in backend folder.

The test coverage report for unit tests(**72/72 Unit Tests pass**) with **85% coverage** is as below



rajan@rajan-Inspiron-3576: ~/Desktop/COP290/Coinfun

```
----- coverage: platform linux, python 3.8.8-final-0 -----
Coverage HTML written to dir htmlcov
```

```
(venv) (base) rajan@rajan-Inspiron-3576:~/Desktop/COP290/Coinfun/backend$ coverage report -m
Name          Status  Miss  Cover  Missing
utils/_init_.py      0     0   100%
utils/chat.py        63    16    75%  24-29, 46-48, 113-119
utils/dashboard.py   37     0   100%
utils/encryption_scheme.py 24     0   100%
utils/fetch_crypto_data_ccxt.py 45     0   100%
utils/image.py       11     0   100%
utils/kyc_api.py    42     4   90%  21-22, 40-41
utils/marketandp2p.py 236    57    76%  32-33, 69, 79-80, 96-100, 116-120, 181-187, 189-190, 208-213, 215-217, 231-242, 244-246, 260, 267-274,
282-283
utils/order_and_wallet.py 81     6   93%  29-30, 54-55, 92-93
utils/otp.py         29     0   100%
utils/transaction_history.py 38     2   95%  56-57
utils/userprofile.py 103    19    82%  23-25, 36-37, 49-53, 63-67, 88-89, 118-119
TOTAL              709   104    85%
```

File | /home/rajan/Desktop/COP290/Coinfun/backend/htmlcov/index.html

Coverage report: 85%

coverage.py v7.2.3, created at 2023-04-30 10:03 +0530

Module	statements	missing	excluded	coverage
utils/_init_.py	0	0	0	100%
utils/chat.py	63	16	0	75%
utils/dashboard.py	37	0	0	100%
utils/encryption_scheme.py	24	0	0	100%
utils/fetch_crypto_data_ccxt.py	45	0	0	100%
utils/image.py	11	0	0	100%
utils/kyc_api.py	42	4	0	90%
utils/marketandp2p.py	236	57	0	76%
utils/order_and_wallet.py	81	6	0	93%
utils/otp.py	29	0	0	100%
utils/transaction_history.py	38	2	0	95%
utils/userprofile.py	103	19	0	82%
Total	709	104	0	85%

coverage.py v7.2.3, created at 2023-04-30 10:03 +0530

We can see that most of the lines that are missing are generally exception blocks that can come true in cases when sql connection or internet or API stop working etc. gets break type things happen.

The test coverage report for **integration tests(16/16 Integration Tests pass)** with **64% coverage** is as below

```
rajan@rajan-Inspiron-3576: ~/Desktop/COP290/Coinfun/backend
rajan@rajan-Inspiron-3576: ~/Desktop/COP290/Coinfun
-- Docs: https://docs.pytest.org/en/stable/how-to/capture-warnings.html
===== 16 passed, 12 warnings in 29.83s =====
=====
(venv) (base) rajan@rajan-Inspiron-3576:~/Desktop/COP290/Coinfun/backend$ coverage report -m
Name           Stmts  Miss  Cover  Missing
-----
utils/_init_.py      0     0   100%
utils/chat.py       63    21    67%  28, 24-29, 45-51, 113-119
utils/dashboard.py   37     3    92%  49-51
utils/encryption_scheme.py 24     3    88%  13, 15-16
utils/fetch_crypto_data_ccxt.py 45     6    87%  28-29, 38-39, 63-64
utils/image.py       11     3    73%  6, 14-15
utils/kyc_api.py     42     7    83%  28-24, 40-41
utils/marketandp2p.py 236   108    54%  28-30, 32-33, 44-45, 54-60, 69, 77, 79-80, 96-100, 116-120, 188-192, 195-220, 223-249, 252-286
utils/order_and_wallet.py 81     59    27%  9, 28-30, 42-52, 54-55, 60-95
utils/otp.py          29     2    93%  14-15
utils/transaction_history.py 38     21    45%  6, 31-54, 56-57
utils/userprofile.py   103   22    79%  23-25, 36-37, 49-53, 63-67, 87-91, 118-119
-----
TOTAL              709   255    64%
(venv) (base) rajan@rajan-Inspiron-3576:~/Desktop/COP290/Coinfun/backend$ cd ..
```

```
Coverage report: 64%
coverage.py v7.2.3, created at 2023-04-30 09:45 +0530

Module           statements  missing  excluded  coverage
utils/_init_.py      0     0     0   100%
utils/chat.py       63    21     0    67%
utils/dashboard.py   37     3     0    92%
utils/encryption_scheme.py 24     3     0    88%
utils/fetch_crypto_data_ccxt.py 45     6     0    87%
utils/image.py       11     3     0    73%
utils/kyc_api.py     42     7     0    83%
utils/marketandp2p.py 236   108     0    54%
utils/order_and_wallet.py 81     59     0    27%
utils/otp.py          29     2     0    93%
utils/transaction_history.py 38     21     0    45%
utils/userprofile.py   103   22     0    79%
Total              709   255     0    64%
coverage.py v7.2.3, created at 2023-04-30 09:45 +0530
```

REGISTRATION PORTAL

Trying register with **pre-existing account** ?

Register	
Username:	<input type="text" value="Rajan"/>
Email:	<input type="text" value="person1@gmail.com"/>
Password:	<input type="password" value="*****"/>
Confirm Password:	<input type="password" value="*****"/>
Phone Number:	<input type="text" value="9999999999"/>
<input type="button" value="Register"/>	

Register	
Username:	<input type="text"/>
Email:	<input type="text"/>
Password:	<input type="password"/>
Confirm Password:	<input type="password"/>
Phone Number:	<input type="text"/>
Email Account already exists!	
<input type="button" value="Register"/>	

Trying register with **bad username?** Like **only special characters?**

Register	
Username:	<input type="text" value="@@@@@@@"/>
Email:	<input type="text" value="rajang2000@gmail.com"/>
Password:	<input type="password" value="*****"/>
Confirm Password:	<input type="password" value="*****"/>
Phone Number:	<input type="text" value="9999999999"/>
<input type="button" value="Register"/>	

Register	
Username:	<input type="text"/>
Email:	<input type="text"/>
Password:	<input type="password"/>
Confirm Password:	<input type="password"/>
Phone Number:	<input type="text"/>
Username must contain only characters and numbers!	
<input type="button" value="Register"/>	

Trying register with **weak password like 123?**

Register	
Username:	<input type="text" value="Rajan"/>
Email:	<input type="text" value="rajang2000@gmail.com"/>
Password:	<input type="password" value="..."/>
Confirm Password:	<input type="password" value="..."/>
Phone Number:	<input type="text" value="9999999999"/>
<input type="button" value="Register"/>	

Register	
Username:	<input type="text"/>
Email:	<input type="text"/>
Password:	<input type="password"/>
Confirm Password:	<input type="password"/>
Phone Number:	<input type="text"/>
Please enter a valid password, it should contain atleast 1 capital and 1 small alphabets and atleast 1 digit with length between 8-25	
<input type="button" value="Register"/>	

Trying register with different password data in fields?
i.e. **Password!=Confirm Password**

Register	
Username:	<input type="text" value="Rajan"/>
Email:	<input type="text" value="rajang2000@gmail.com"/>
Password:	<input type="password" value="...."/>
Confirm Password:	<input type="password" value="....."/>
Phone Number:	<input type="text" value="9999999999"/>
<input type="button" value="Register"/>	

Register	
Username:	<input type="text"/>
Email:	<input type="text"/>
Password:	<input type="password"/>
Confirm Password:	<input type="password"/>
Phone Number:	<input type="text"/>
Your password does not matches the confirm password !	
<input type="button" value="Register"/>	

Trying register with **invalid length of phone number?**

Register

Username:

Email:

Password:

Confirm Password:

Phone Number:

Register

Register

Username:

Email:

Password:

Confirm Password:

Phone Number:

! Please match the format requested.

Register

Now let's successfully register

When someone registers, the website downloads the **real-time** crypto currency prices data from bybit exchange using internet. (**disabled during baadal hosting**, but was **shown during presentation**). On registration, one is directed to Dashboard

- Each **new register is given 10000\$ fake-USDT(USD Tokens)** for trading on Coinfun. Information table columns about crypto currencies in self-explanatory,
- Here USDT(queued in P2P order) means that this number of USDT are set of selling in the Person to Person (P2P) trade portal.
- In real exchanges, P2P portal allows users to buy/sell USDT with help of real currency like rupees. (more explanation later in report).

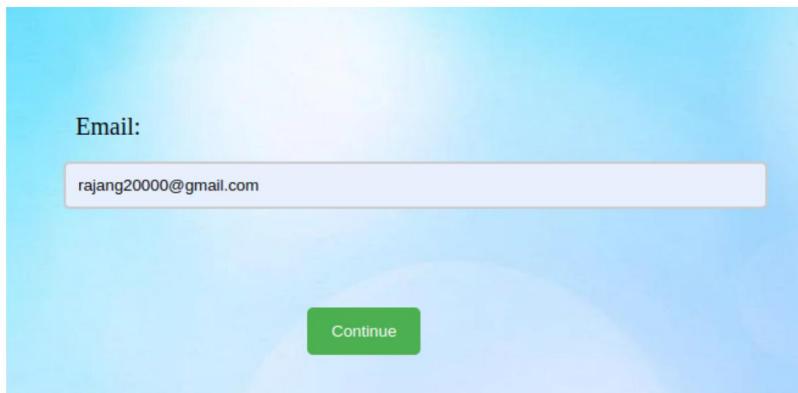
The screenshot shows the Coinfun dashboard. At the top, there are navigation tabs: Dashboard, Market, P2P, and Logout. Below the tabs is a sidebar with links: Change Password, Order History, Transaction History, and User Profile. The main area is titled "Rajan" and features a "Wallet OverView" section with a yellow button. Below this is a "Holdings" table with the following data:

Name	Amount	Price	Estimated Balance
BTC	0.0	29340.76 \$	0.0 \$
ETH	0.0	1910.77 \$	0.0 \$
BNB	0.0	323.68 \$	0.0 \$
DOGE	0.0	0.08 \$	0.0 \$
XRP	0.0	0.48 \$	0.0 \$
MATIC	0.0	1.02 \$	0.0 \$
ADA	0.0	0.41 \$	0.0 \$
SOL	0.0	23.66 \$	0.0 \$
USDT	10000.0	1.0 \$	10000.0 \$
USDT(queued in P2P order)	0.0	1.0 \$	0.0 \$

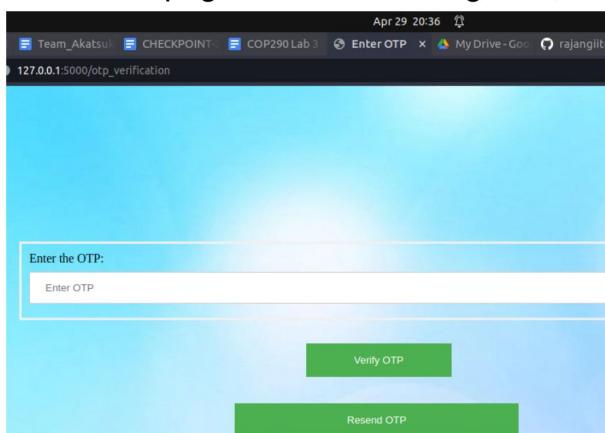
Now logout

The screenshot shows the Coinfun login page. The title is "Login". It has two input fields: "Email:" and "Password:". Below the password field is a link "Forgot your password? Reset Password". At the bottom left is a green "Login" button, and at the bottom right is a link "New User? Register".

Forgot password for your email account?



You are **allowed to reset password using OTP verification and OTP API** sends you a email with 6 digit OTP. (OTP is **disabled on baadal hosting** but was shown working during presentation). And the user is directed to the otp verification page. Due to disabling OTP, any OTP will work.

A screenshot of a Gmail inbox. The search bar at the top says "Search mail". A single email message is visible in the list, titled "Your Coinfun Verification OTP" with the "Inbox" label. The message is from "coinfunnoreply@gmail.com" and was sent "8:36 PM (1 minute ago)". The body of the email reads:

Hello,

Your OTP is 107906.

If you did not request an OTP, please ignore this email. Also, please do not share this OTP with anyone, as it can be used to access your Coinfun account. Please be aware that trading involves risk, and you could lose money. Before making any trades, please read our risk disclaimer.

Thank you,
Coinfun Team

Risk Warning: Digital asset prices are subject to high market risk and price volatility. The value of your investment can go down or up, and you may not get back the amount invested. You are solely responsible for your investment decisions and Coinfun is not liable for any losses you may incur. Past performance is not a reliable predictor of future performance. You should only invest in products you are familiar with and where you understand the risks. You should carefully consider your investment experience, financial situation, investment objectives and risk tolerance and consult an independent financial adviser prior to making any investment. This material should not be construed as financial advice.

This is an automated email. Please do not reply to this email.

At the bottom of the email are two buttons: "Reply" and "Forward".

There is also a **resend OTP** button feature if OTP is not received.

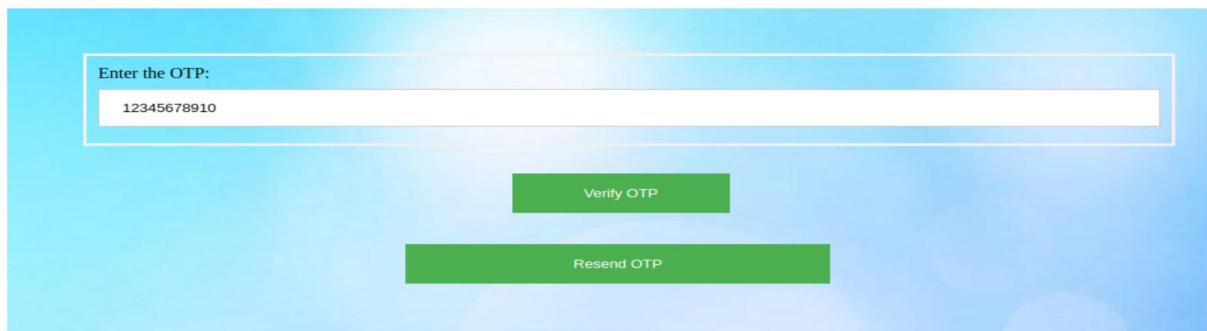
Your Coinfun Verification OTP Inbox x ⋮ ⚡ 🖍️ 📁

 **coinfunnoreply@gmail.com** 8:36 PM (3 minutes ago) ⭐
Hello, Your OTP is 107906. If you did not request an OTP, please ignore this email. Also, please do not share this OTP with anyone, as it can be used to access your account.

 **coinfunnoreply@gmail.com** 8:40 PM (0 minutes ago) ⭐ ↗ ⋮
to ▾
Hello,
Your OTP is 878727.
...

Reply Forward

Trying filling **wrong OTP**?



Enter the OTP:
12345678910

Verify OTP

Resend OTP



Invalid OTP. Please try again.

Enter the OTP:
Enter OTP

Verify OTP

Resend OTP

After we fill correct OTP, we are directed to **Reset Password page** where we can reset and it brings us back to login page so that we can login again

Change Password

Use the form below to change your password

Enter your new Password

✖ 8 Characters Long
✖ One Uppercase Letter
✖ One Lowercase Letter
✖ One Number

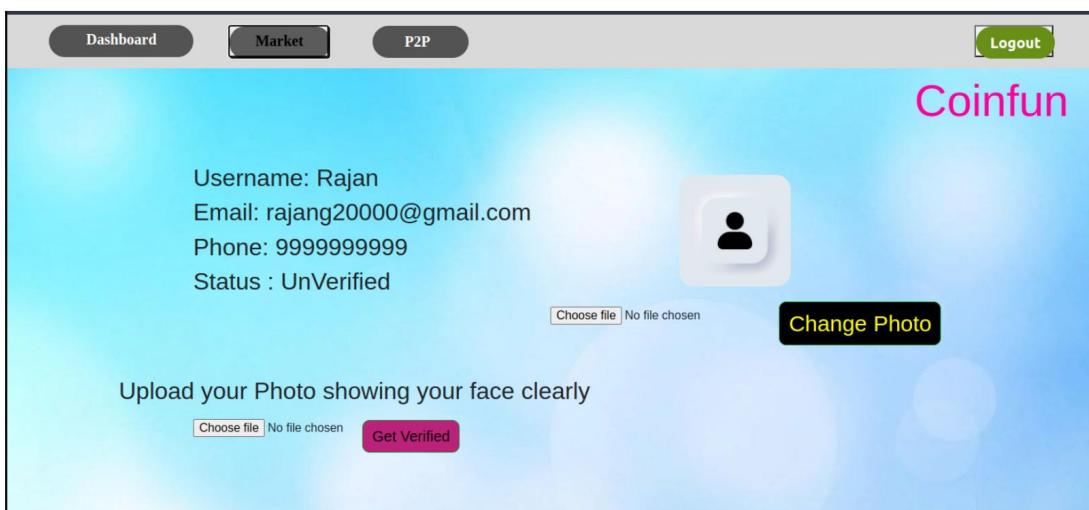
Enter new password again

✖ Passwords Match

Change Password

Now lets login again and come back to dashboard and go to userinfo tab

KYC FEATURE [On user-info page]



The Status shows **unverified for users whose kyc is not done**. In real exchanges, the kyc is done using government id(like pancard) verification.
We implemented the **kyc feature that asks user to upload his/her photo** showing the face clearly. Kyc is done **only one-time** to get verified.
It uses **google face-recognition API** and was **shown as working** during presentation. (disabled on baadal due to internet problem)

Uploading face invalid file? Like file.txt

The left screenshot shows the user's profile information: Username: Rajan, Email: rajang2000@gmail.com, Phone: 9999999999, Status: UnVerified. Below it is a placeholder for a profile photo with the text "Upload your Photo showing your face clearly". A "Choose file" button shows "file.txt" and a "Get Verified" button.

The right screenshot shows the same profile information. The placeholder photo area now displays a small placeholder icon. A "Choose file" button shows "No file chosen" and a "Change Photo" button. Below the placeholder is the instruction "Upload your Photo showing your face clearly" and a note "Only png, jpg or jpeg format are allowed".

Uploading a invalid photo like a blank image with no faces?

The left screenshot shows the user's profile information: Username: Rajan, Email: rajang2000@gmail.com, Phone: 9999999999, Status: UnVerified. Below it is a placeholder for a profile photo with the text "Upload your Photo showing your face clearly". A "Choose file" button shows "blank.jpg" and a "Get Verified" button.

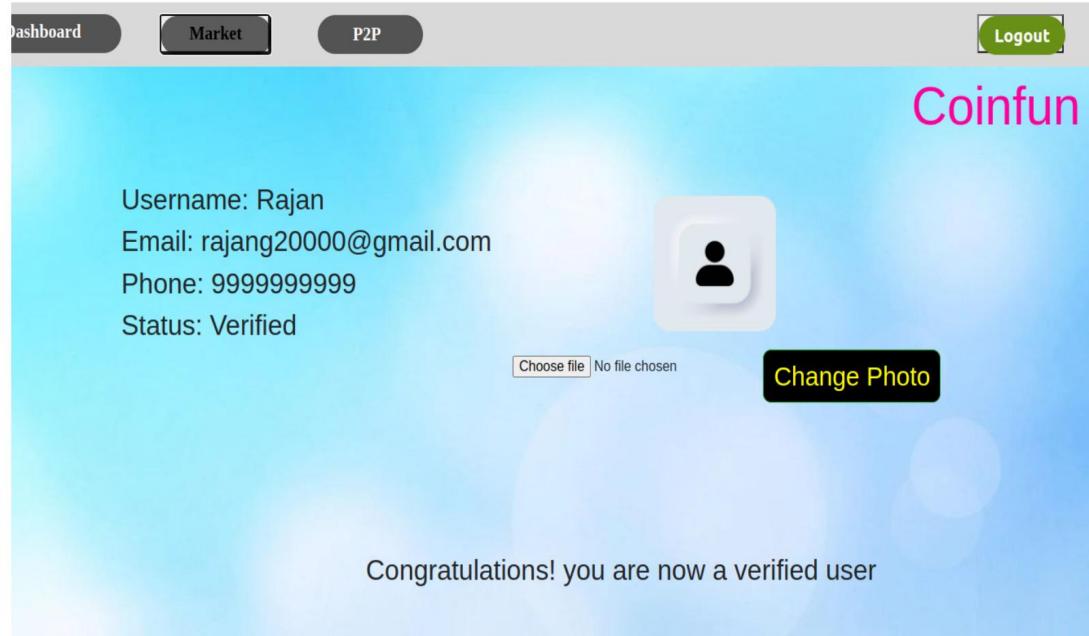
The right screenshot shows the same profile information. The placeholder photo area displays a small placeholder icon. A "Choose file" button shows "No file chosen" and a "Get Verified" button. Below the placeholder is the message "You couldn't be verified. Please Try Again !".

Uploading a correct photo but with many human faces (not valid for kyc)

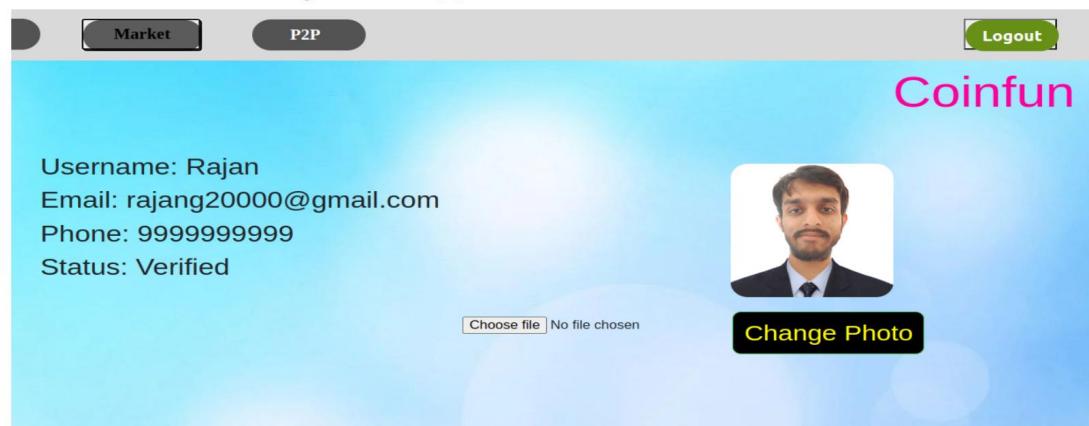
The left screenshot shows the user's profile information: Username: Rajan, Email: rajang2000@gmail.com, Phone: 9999999999, Status: UnVerified. Below it is a placeholder for a profile photo with the text "Upload your Photo showing your face clearly". A "Choose file" button shows "many_faces.jpg" and a "Get Verified" button.

The right screenshot shows the same profile information. The placeholder photo area displays a small placeholder icon. A "Choose file" button shows "No file chosen" and a "Get Verified" button. Below the placeholder is the message "You couldn't be verified. Please Try Again !".

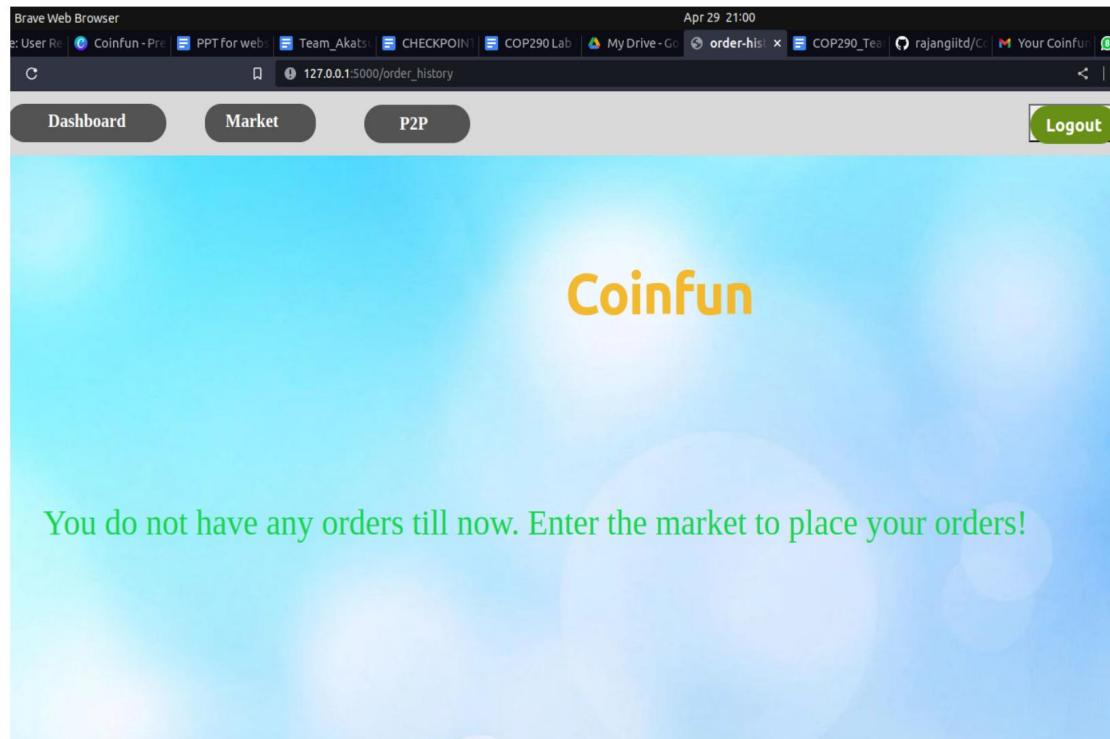
Uploading a **correct photo i.e. having 1 face** makes the user verified forever.



Change profile picture (works without refreshing the page) and accepts png, jpg and jpeg format images. If a wrong format file is chosen, Change Photo button will not work, i.e. nothing will happen.



Now coming back to dashboard and going to **order history** tab(that shows history of crypto order trades done) which is **empty** right now for a **new user**.



- In dashboard, there is a **change password** option available too that allows users to change password directly if the **user remembers the current password**.
- Trying **Entering wrong current password?**

Two side-by-side screenshots of a password change form. Both screenshots show fields for "Enter Current Password", "Enter New Password", and "Confirm New Password", each containing several dots as placeholder text. A green "Submit" button is at the bottom of both. The left screenshot shows the form without any errors. The right screenshot shows the same form with a purple error message at the bottom: "The current entered password does not matches the existing password".

- Trying **creating a weak new password?**

Enter Current Password

Enter New Password

Confirm New Password

Submit

Enter Current Password

Enter New Password

Confirm New Password

Submit

Please enter a valid password, it should contain atleast 1 capital and 1 small alphabets and atleast 1 digit with length between 8-25

- Trying entering mismatching new passwords?
i.e. Password!=Confirm Password

Enter Current Password

Enter New Password

Confirm New Password
**

Submit

Enter Current Password

Enter New Password

Confirm New Password

Submit

The new password does not matches the confirm new password !

- Lets Now Change the password with a **acceptable new password**

Enter Current Password

Enter New Password

Confirm New Password

Submit

Enter Current Password

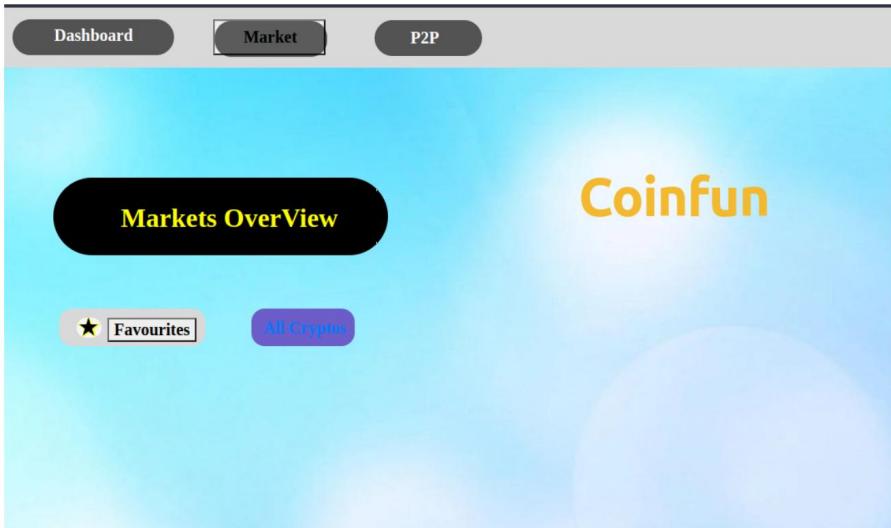
Enter New Password

Confirm New Password

Submit

PASSWORD UPDATED SUCCESSFULLY

- **Market Page** that shows all the crypto currencies available on Coinfun exchange and **allows the user to enjoy marking them favourites feature**
- **No favourites marked?**



- When mark favourite buttons are clicked, they **covert to mark unfavourite without manual refresh**. Lets mark favourite on 3 currency like BTC, DOGE, XRP

Name	Price	24h Change	24h Low	24h High	24h Turnover	Favourites
BTC	0.98	29315.7	29029.21	29437.51	103115091.07536076	Mark Unfavourite
ETH	1.62	1909.25	1877.08	1917.8	55952167.6065305	Mark Favourite
BNB	0.46	323.0395	320.934	324.9614	1449374.886580784	Mark Unfavourite
DOGE	1.91	0.08113	0.0796	0.08141	2855184.304738	Mark Favourite
XRP	2.61	0.4795	0.4673	0.4868	12771194.756597	Mark Unfavourite
MATIC	3.1	1.0175	0.9869	1.0229	3093700.750575	Mark Favourite
ADA	1.48	0.4058	0.3999	0.4077	1251658.88734	Mark Favourite
SOL	5.97	23.59	22.23	23.88	12491492.56282	Mark Favourite

Coinfun

Markets OverView

Favourites All Crypos

Name	Price	24h Change	24h High	24h Low	24h Turnover
BTC	29315.7	0.98	29437.51	29029.21	103115091.07536076
BNB	323.0395	0.46	324.9614	320.934	1449374.886580784
XRP	0.4795	2.61	0.4868	0.4673	12771194.756597

Now lets unfavourite DOGE,XRP and add ADA to keep 2 currencies in favourites

Coinfun

Markets OverView

Favourites All Crypos

Name	Price	24h Change	24h Low	24h High	24h Turnover	Favourites
BTC	0.98	29315.7	29029.21	29437.51	103115091.07536076	Mark Unfavourite
ETH	1.62	1909.25	1877.08	1917.8	55952167.6065305	Mark Favourite
BNB	0.46	323.0395	320.934	324.9614	1449374.886580784	Mark Favourite
DOGE	1.91	0.08113	0.0796	0.08141	2855184.304738	Mark Favourite
XRP	2.61	0.4795	0.4673	0.4868	12771194.756597	Mark Favourite
MATIC	3.1	1.0175	0.9869	1.0229	3093700.750575	Mark Favourite
ADA	1.48	0.4058	0.3999	0.4077	1251658.88734	Mark Unfavourite
SOL	5.97	23.59	22.23	23.88	12491492.56282	Mark Favourite

Coinfun

Markets OverView

Favourites All Crypos

Name	Price	24h Change	24h High	24h Low	24h Turnover
BTC	29315.7	0.98	29437.51	29029.21	103115091.07536076
ADA	0.4058	1.48	0.4077	0.3999	1251658.88734

TRADING PAGE

- Now in All cryptos tab, if we click on name of crypto currency, we can go to the trading page of that crypto currency that show the candlesticks chart of crypto currency for different time-frames and other details of the crypto currency. It allows the user to buy and sell the crypto at market prize. Whenever a user clicks on BUY or SELL, Coinfun re-fetches the real-time data using **cctx package** before making the trade and updates the charts also.
- There is a separate Refresh button on the page if someone wish to see the updated current prizes and charts.
- Whenever someone wish to change the timeframe of chart, Coinfun downloads the currency data again and replots the charts.
- **It was shown during presentation clearly that charts and details are working. (This feature of updating the charts and prizes is disabled on baadal due to internet issue and hence the prizes will remain static, but trades can still be taken).**



- Lets buy BTC with 1000\$



It is clearly visible that the prize dropped when buy was clicked and all values along with chart has been updated.

- Lets SELL BTC equal to 400\$ worth.



- Make a **invalid order** like sell BTC of worth 5000\$ (we have ~600\$ worth BTC in wallet)



- The page has also been enabled with **Google Translate API** to translate the “whole page” and currency information to any available desired language. (Since it was implemented in frontend, website hosted on baadal **may work or maynot** due to proxy issue)
- Lets try Hindi



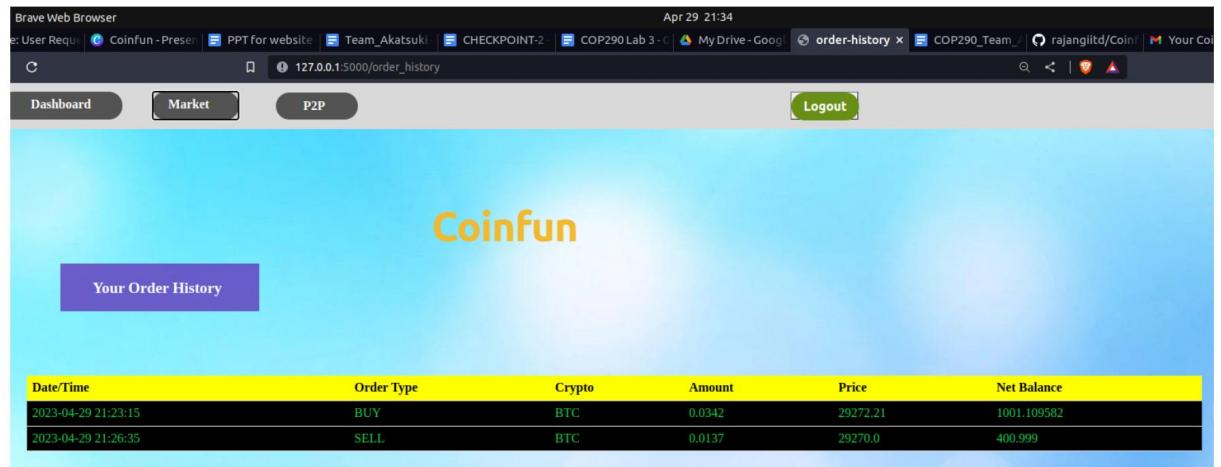
- Lets try some Bhojpuri



- Now we can come back to English and can check the dashboard to see our wallet and know that it has also been updating with trades (~600\$ worth BTC and 9400 USDT available).



- We can verify order history also that it has been recording our trades along with time stamp



The screenshot shows a web browser window for 'Brave Web Browser' with the URL '127.0.0.1:5000/order_history'. The page title is 'Your Order History' under the 'Coinfun' logo. It displays a table of two recent trades:

Date/Time	Order Type	Crypto	Amount	Price	Net Balance
2023-04-29 21:23:15	BUY	BTC	0.0342	29272.21	1001.109582
2023-04-29 21:26:35	SELL	BTC	0.0137	29270.0	400.999

P2P portal (Person to Person trade portal)

- P2P portal is a portal where a **USDT holder can sell USDT to some buyer in exchange with real currencies like rupees**. The job of a real exchange is just that when the seller of USDT confirms that yes I have received real money by clicking “release” button, then the exchange transfers the USDT from seller into the bank account of buyer. And yes, even in real exchanges, the buyer of USDT is supposed to pay first!
- The **exchange has no involvement on how the two person exchanging their real money**, like by paytm, UPI, credit card, etc. The **role of exchange is just to help the clients** come in touch with each other or help them **chat together**.
- All the **chats in P2P portal are assumed to be small**.(i.e. People aren't suppose to use it for gossiping for 1000s of messages)
- When we click on P2P from top, we enters a portal of Buy through P2P, we can switch to sell side by clicking on Sell button.

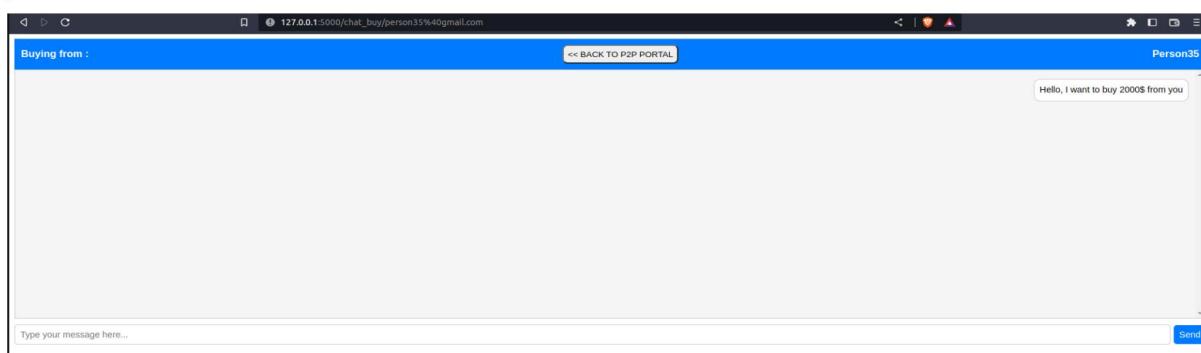
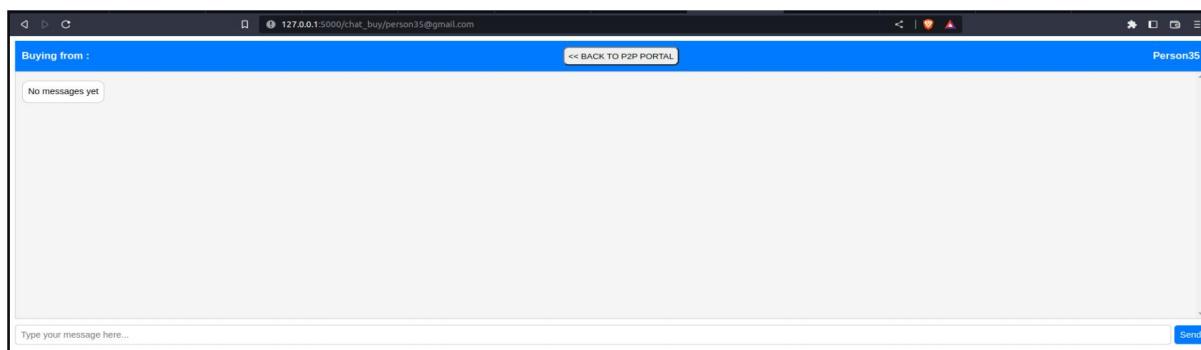
The screenshot shows a web browser window for the URL 127.0.0.1:5000/p2p_buy. The interface includes a navigation bar with 'Dashboard', 'Market', 'P2P' (which is highlighted), and 'Logout'. A 'Get Notifications' button is also present. The main content area features the 'Coinfun' logo and a 'P2P' button. Below this, there are two buttons: 'Buy' (in pink) and 'Sell' (in purple). A table lists six advertisers with their details:

Advertiser	Price	Limit/Available	Payment	Trade
Person16	90.98 INR	Available: 4906.15 USDT Limit: 286260.45-446381.62 Rs	Bank Transfer	<button>Buy</button>
Person20	92.44 INR	Available: 2011.3000000000002 USDT Limit: 109792.08-185915.46 Rs	Credit Card	<button>Buy</button>
Person45	93.18 INR	Available: 6505.04 USDT Limit: 366099.47-606153.18 Rs	UPI	<button>Buy</button>
Person32	93.25 INR	Available: 6610.17 USDT Limit: 345061.49-616387.31 Rs	Credit Card	<button>Buy</button>
Person26	93.76 INR	Available: 8631.16 USDT Limit: 509815.9-809232.76 Rs	UPI	<button>Buy</button>
Person35	94.99 INR	Available: 4796.6 USDT Limit: 333666.39-455625.34 Rs	IMPS	<button>Buy</button>

- Quick Demo On How to Use

Lets make a Buy through P2P, Let's assume I like IMPS method to send my Rs only and hence i **click on Buy button** for Person35 who is offering to sell at price of 94.99 Rs per USDT. The max number of USDT which we can see is visible as 4796.6.

Limit is range that shows that what is the minimum amount of Rs that Person 35 wants to get from trade comfortable (for eg. he won't like to answer a user who wants to buy 0.5 USDT and waste his time) and the upper limit is trivial (he have finite USDT to sell).



Now we are in chat with Person35.

Now from other device/browser, **Person35 can make a login and come to P2P portal**, in order to see if someone has messaged him, he can click on **Get Notifications** button.

Advertiser	Price	Limit/Available	Payment	Trade
Person16	90.98 INR	Available: 4906.15 USDT Limit: 286260.45-446381.62 Rs	Bank Transfer	<input type="button" value="Buy"/>
Person20	92.44 INR	Available: 2011.300000000002 USDT Limit: 109792.08-185915.46 Rs	Credit Card	<input type="button" value="Buy"/>
Person45	93.18 INR	Available: 6505.04 USDT Limit: 366099.47-606153.18 Rs	UPI	<input type="button" value="Buy"/>
Person32	93.25 INR	Available: 6610.17 USDT Limit: 345061.49-616387.31 Rs	Credit Card	<input type="button" value="Buy"/>
Person26	93.76 INR	Available: 8631.16 USDT Limit: 509815.9-809232.76 Rs	UPI	<input type="button" value="Buy"/>
Person35	94.99 INR	Available: 4796.6 USDT Limit: 234662.39-455535.34 Rs	IMPS	<input type="button" value="Buy"/>

The screenshot shows a web application interface for 'Coinfun'. At the top, there are navigation buttons for 'Dashboard', 'Market', 'P2P', and 'Logout'. Below the header, the 'Coinfun' logo is displayed. A purple button labeled 'Chat Notifications' is visible. The main content area features a table with two rows. The first row has a yellow header bar with 'Client' and 'Action' columns. The second row contains two entries: 'person27@gmail.com Person27' with a 'SELL' button, and 'rajang20000@gmail.com Rajan' with a 'SELL' button.

Client	Action
person27@gmail.com Person27	<button>SELL</button>
rajang20000@gmail.com Rajan	<button>SELL</button>

Now rajang20000@gmail.com is appearing here with a Sell label showing that we can Sell USDT to him and by clicking **Sell** we can also enter the chat. In order to see new messages, we need to refresh the page.

Now after doing enough talk with client, **Person35 can enter 2000 in the release box and click release**. Now since trade is over, seller is directed to P2P portal again.

The buyer can exit chat and go back to P2P portal by Back To P2P Portal button.

The screenshot shows a chat interface between a buyer and a seller. The buyer's messages are on the left, and the seller's messages are on the right. The buyer says 'Hello, I want to buy 2000\$ from you'. The seller responds with 'Hey! How are you, just the EXACT money through IMPS to me, when I will have received, I will receive honestly'. The buyer replies 'Ok, I am trusting you, sending money to you, thanks'. The seller confirms with 'Hey I have received, I am releasing 2000\$ to u, thanks buddy!'. The buyer waits with 'Ok, i am waiting.' The bottom of the screen shows a text input field 'Type your message here...' and a 'Send' button.

Now coming back to P2P portal buy page, we can see that the **ad** of Person35 has got updated from portal.

The screenshot shows the Coinfun P2P buy page. At the top, there are navigation tabs: Dashboard, Market, P2P, and Logout. Below the tabs, the word "P2P" is prominently displayed in a yellow button. The main content area features a large blue background with the "Coinfun" logo in yellow. There are two buttons at the top: "Buy" (grey) and "Sell" (purple). A "Get Notifications" button is located in the top right corner. The central part of the page displays a table of ads:

Advertiser	Price	Limit/Available	Payment	Trade
Person16	90.98 INR	Available: 4906.15 USDT Limit: 286260.45-446381.62 Rs	Bank Transfer	<button>Buy</button>
Person20	92.44 INR	Available: 2011.300000000002 USDT Limit: 109792.08-185915.46 Rs	Credit Card	<button>Buy</button>
Person45	93.18 INR	Available: 6505.04 USDT Limit: 366099.47-606153.18 Rs	UPI	<button>Buy</button>
Person32	93.25 INR	Available: 6610.17 USDT Limit: 345061.49-616387.31 Rs	Credit Card	<button>Buy</button>
Person26	93.76 INR	Available: 8631.16 USDT Limit: 509815.9-809232.76 Rs	UPI	<button>Buy</button>
Person35	94.99 INR	Available: 2796.600000000004 USDT Limit: 143687.93-265646.88 Rs	IMPS	<button>Buy</button>
Person7	95.03 INR	Available: 7600.71 USDT	Credit Card	<button>Buy</button>

We can go to Dashboard and check the **transaction history now, that stores P2P transactions** and it shows we have bought from Person35 along with other details including time when trade was done.

The screenshot shows the Coinfun dashboard. At the top, there are navigation tabs: Dashboard, Market, P2P, and Logout. Below the tabs, the word "Dashboard" is highlighted in a yellow button. The main content area features a large blue background with the "Coinfun" logo in yellow. A purple button labeled "Your Transaction History" is visible. The central part of the page displays a table of transaction history:

Date/Time	Order Id	Order Type	Client	Amount (USDT)	Price	Net Balance
2023-04-29 22:49:38	104	Buy	Person35 Person35@gmail.com	2000.0	94.989	189978.0

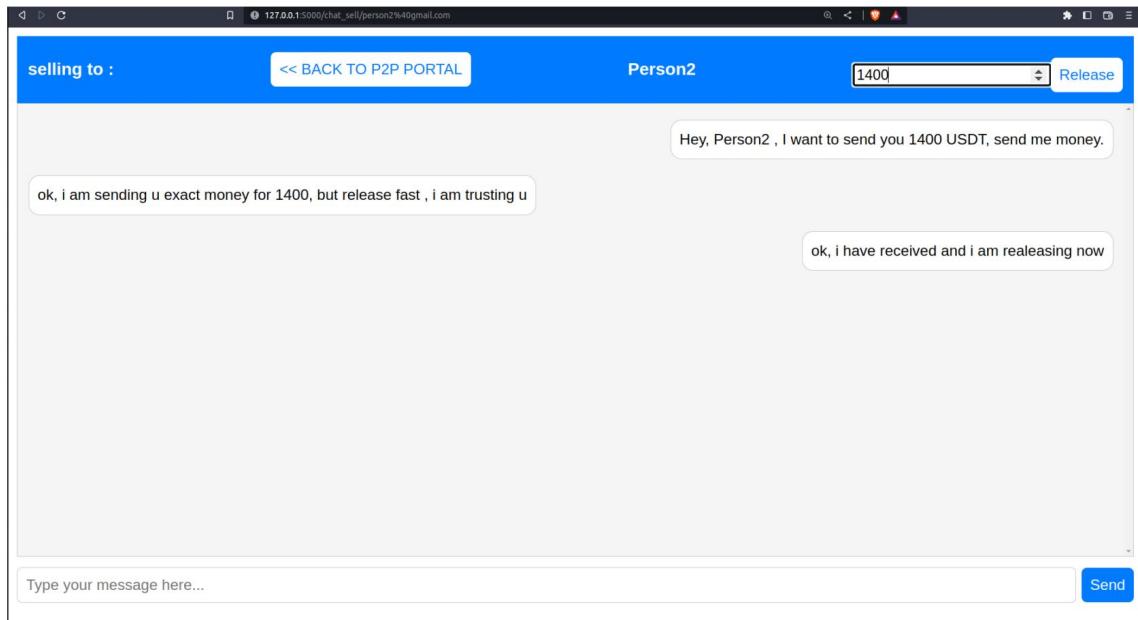
We can see our updated wallet also ($9400+2000=11400$ USDT)

Wallet OverView			
Holdings	Estimated Balance = 11999.663 \$		
Name	Amount	Price	Estimated Balance
BTC	0.0205	29257.22 \$	599.663 \$
ETH	0.0	1904.61 \$	0.0 \$
BNB	0.0	323.38 \$	0.0 \$
DOGE	0.0	0.08 \$	0.0 \$
XRP	0.0	0.48 \$	0.0 \$
MATIC	0.0	1.01 \$	0.0 \$
ADA	0.0	0.4 \$	0.0 \$
SOL	0.0	23.37 \$	0.0 \$
USDT	11400.0	1.0 \$	11400.0 \$
USDT(queued in P2P order)	0.0	1.0 \$	0.0 \$

Lets now **make an attempt to Sell** from our account, since we have 11400 USDT, we can **come back to P2P Sell portal** to sell 1400\$

P2P					
Coinfun					
Buy		Sell		Get Notifications	
Advertiser	Price	Limit/Available	Payment	Trade	
Person2	89.39 INR	Available: 7500.373268013622 USDT Limit: 344325.12-670436.21 Rs	UPI	<input type="button" value="Sell"/>	
Person19	89.39 INR	Available: 6655.7919899299895 USDT Limit: 430013.94-594976.77 Rs	IMPS	<input type="button" value="Sell"/>	
Person24	88.8 INR	Available: 3630.117044650556 USDT Limit: 184286.84-322372.54 Rs	UPI	<input type="button" value="Sell"/>	
Person14	88.04 INR	Available: 4945.991854944284 USDT Limit: 229239.88-435433.11 Rs	Credit Card	<input type="button" value="Sell"/>	
Person8	86.83 INR	Available: 5428.423882329446 USDT Limit: 322305.25-471254.69 Rs	Bank Transfer	<input type="button" value="Sell"/>	

Suppose we started liking UPI and since Person2 offers us best price, we will sell to Person2 who will check his Get notifications and enter chat with us(after we have sent the first message). After enough chat, we can type **1400** and click **release**.



Now, we can see that the all values of Person2's ad on P2P sell portal is now updated.

Advertiser	Price	Limit/Available	Payment	Trade
Person2	89.39 INR	Available: 6100.373268013622 USDT Limit: 219183.25-545294.34 Rs	UPI	<button>Sell</button>
Person19	89.39 INR	Available: 6655.7919899299895 USDT Limit: 430013.94-594976.77 Rs	IMPS	<button>Sell</button>
Person24	88.8 INR	Available: 3630.117044650556 USDT Limit: 184286.84-322372.54 Rs	UPI	<button>Sell</button>
Person14	88.04 INR	Available: 4945.991854944284 USDT Limit: 229239.88-435433.11 Rs	Credit Card	<button>Sell</button>
Person8	86.83 INR	Available: 5428.423882329446 USDT	Bank Transfer	<button>Sell</button>

We can also check our **transaction history** and **wallet(10000 USDT now)** on dashboard

The screenshot shows the Coinfun dashboard interface. At the top, there are three tabs: Dashboard, Market, and P2P. On the right, there is a Logout button. The main area features the Coinfun logo. Below it, a purple button labeled "Your Transaction History" is visible. A table displays two recent transactions:

Date/Time	Order Id	Order Type	Client	Amount (USDT)	Price	Net Balance
2023-04-29 22:49:38	104	Buy	Person35 Person35@gmail.com	2000.0	94.989	189978.0
2023-04-29 23:29:26	105	Sell	Person2 person2@gmail.com	1400.0	89.387	125141.8

Below this, another purple button labeled "Wallet OverView" is shown. To its left is a placeholder for a user profile picture with the name "Rajan". A table titled "Holdings" shows the current balance for various cryptocurrencies:

Name	Amount	Price	Estimated Balance
BTC	0.0205	29168.15 \$	597.837 \$
ETH	0.0	1895.75 \$	0.0 \$
BNB	0.0	321.78 \$	0.0 \$
DOGE	0.0	0.08 \$	0.0 \$
XRP	0.0	0.48 \$	0.0 \$
MATIC	0.0	1.01 \$	0.0 \$
ADA	0.0	0.4 \$	0.0 \$
SOL	0.0	23.19 \$	0.0 \$
USDT	10000.0	1.0 \$	10000.0 \$
USDT(queued in P2P order)	0.0	1.0 \$	0.0 \$

The total estimated balance is listed as 10597.837 \$. The background of the dashboard has a blue gradient.

WRAPING UP THE WEBSITE TOUR

We can now, end this by selling remaining BTC in market page.



We can notice now BTC prize is 29165 whereas above it was ~29270.

We can now logout and end our interaction with the website.

THANKYOU,

Challenges Faced:

There were many challenges faced during the project. Let us discuss about some major ones.

- **Fake Data:-** To create the database with fake data, a python generator was developed capable of filling up the database with single click, and which can produce sensible transaction histories and chat conversations between people. It was necessary to make it because working with baadal was confusing.
- **Race Condition:-** It was noticed that our SQL queries like change profile pic, mark this crypto as favourite etc. are working i.e. queries are successful and we are committing the DB also, but old data was coming to frontend when fetched. Although it was working as expected sometimes, but not all the times.
Then after many hours and hours of hit and trials, there was a **intuition** that said that something like following is happening:-

Query1- reads, Query2- updates db, Query1- send to frontend, Query2-commits now.

Hence to overcome this, whenever the exception is thrown by SQL query, we need to write db.rollback() explicitly and inside each function, we need to make a db.cursor() and close the cursor just before the function returns, to keep things in order.

- **Crypto Data fetching:-** Obtaining real-time cryptocurrency data of upto 1-min timeframe for free proved challenging. Additionally, the IIT-D wifi didn't allow access to popular crypto websites like Binance and Kucoin. To overcome this, various APIs and their documentation was explored until the cctx package proved successful in providing the data and write them to files.
- **Crypto Data updates:-** Another challenge was to how to plot the charts capable of changing in real-time. Question was, what if, data is in download phase and its being written in files, and the frontend is trying to read the files at same time happens. Then a solution came in mind to use locks, but then it was thought that basically, the process is to download first, and then read and plot is the procedure. So we implemented buttons in trade page, which will call the functions in correct order and prevent such situations like two programs wants to access same memory.
- **MySQL connection breaking:-** It seems that when there is no query is done to the Database, the connection breaks after 8 hours of wait time. In order to solve it:-
 - A code that sends a ping every hour was tried, but this method failed.
 - Now, the wait_time parameter has been updated to 1 crore seconds (not a recommended or good practice) but hopefully website won't stop now.
- **P2P Chat Portal:-** Making a P2P chat portal was a real challenge. There were many cases to handle like, if the VIP user(who can post ads) is releasing USDT or simple user is selling USDT and then updating the ads, histories and wallet of people in parallel. It was hard to debug the integration of all the things together, so in order to simplify the process, we decided to built it step by step and removed the image part, to make text messages part properly functional.

Limitations/Future Work:-

One of the feature of this project is- that it can be expanded as much as the developers want and there is no limitations. But let's list a few limitations as well as future work:-

- A procedure can be designed to allow the users to become a VIP user (like complete 25 P2P transactions) and then allow such users to post ad on P2P portal. Else after some time, the website will run out of ads.
- A filter can be implemented on P2P portal, because if we have 500 ads on P2P portal, the user may wish to see only UPI ads.
- Notifications can be implemented in the website so that whenever someone has texted us, we can receive a notification.
- Currently we have only 8 cryptocurrencies on the website, it can be extended to 50+ cryptocurrencies as well. For this purpose, we tried from start to write a re-usable and extendable code.
- If we assume that, we can make a large number of API calls using cctx to download data, some concepts of advance parallel programming can be used to make the charts changeable(dynamic) without any manual intervention.
- The KYC which is based on google-face recognition API can be made more strong and formal like real-KYCs. It will require kind of using object recognition APIs to recognize whether the id uploaded by user is a government id and then some face matching API that will check if the image uploaded by user matches with face on government id.
- Many more time-frames can be coded, like currently we allow 4 different time frames, but other time frames like 5min, weekly, monthly charts also can be added.
- User profile things like username, phone number which are not primary keys in database can be made changeable so that users may change them as per their wish.
- Other type of trading orders like limit order, stoploss can be implemented in the website. But this task will involve usage of complex data structures and algorithms that will be supposed to handle queues of pending orders.

Contributions and feedback on use of AI models :-

Name	Contribution and Feedback
Rajan (10 Tokens)	<ul style="list-style-type: none"> • Project high level design, Figma pencil sketches of all pages. • Schema of database and creation of fake data using python. • All the unit and integration tests with coverage report using pytest. • Involved debugging in all the backend modules. • Created as well as debugged the OTP, Google Face-Recognition based KYC, crypto data downloading cctx package API. • Involved in integration of Frontend with Backend • Hosted the website on Baadal • Final Report <p>Feedback on AI use:- I took help from chatgpt whenever it was possible. It was effective in writing SQL queries, suggesting correct github commands as well as suggesting correct commands while installation of packages that were needed.</p>
Vikas (10 Tokens)	<ul style="list-style-type: none"> • Contributed in the design of the entire website frontend prototype on figma • Involved in Frontend and Backend Integration • Integration of Google Translate API • Contributions in the html and css files of entire website • Did debugging of Frontend <p>Feedback on AI use:- Used chatgpt to explore various options and attributes in the front end files, and tried to find out bugs in the code(although it didn't help much in finding bugs).</p>
Aryansh (10 Tokens)	<ul style="list-style-type: none"> • Yaml file • Wrote several backend modules and was the first who made the whole app file from scratch • Involved in the Frontend and Backend Integration • Made the ER diagram of schema
Ujjwal (10 Tokens)	<ul style="list-style-type: none"> • Contributed in design of frontend prototype on figma of entire website • Contributed in making and debugging html and css files of all the pages • Used jinja templating to help in backend-frontend integration • Involved in integration of Google Translate API • Created and Narrated videos in Checkpoint 2 and 3 <p>Feedback on AI use:- Used chatgpt to explore various options and attributes in the front end files, and tried to find out bugs in the code(although it didn't help much in finding bugs).</p>