

A REPORT ON ISD PROJECT

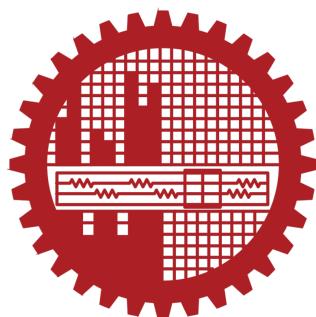
CSE 326

Soccer Alive

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Contents

1	Introduction	2
2	Motivation	2
3	Modules	3
4	Part 1:(BPMN)	3
5	Feedbacks(BPMN)	6
6	Part 2:(Mock UI)	7
7	Feedbacks(Mock UI)	10
8	Part 3:(Class Diagram)	11
9	Feedbacks(Class Diagram)	22
10	Part 4:(Entity Relationship Diagram)	23
11	Feedbacks(Entity Relationship Diagram)	29
12	Part 5:(Sequence Diagram)	30
13	Part 6:(Collaboration Diagram)	36
14	Feedbacks(Sequence and Collaboration Diagram)	40
15	Part 7:(Snippets of the Final Product(Soccer-Live))	41
16	The Helpful Websites	50

1 Introduction

This report briefly illustrates the infrastructure of our ISD project of the CSE-326 course.

We have built a website that gives live update about football data.

This report will reflect on all the components that we used in our project. We will be including all the feedbacks that we got from our respective teachers.

2 Motivation

While we, the non-players are enjoying football, the players are the coaches are doing very hard work to win the game. It was our interest to make their life a little easier by giving them details about their opponents and help them make a good strategy.

Moreover, the football enthusiasts like us can thoroughly enjoy the game updates from our website.

3 Modules

The modules we designed for this project are stated below:

- BPMN
- Mock UI
- Class Diagram
- Entity Relationship Diagram
- Sequence Diagram
- Collaboration Diagram

4 Part 1:(BPMN)

The pictures are given to show the modules and its designs.

USER MODULE

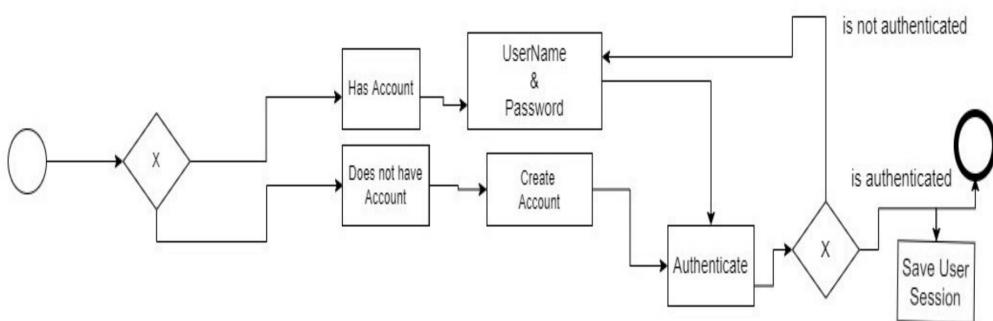


Figure 1: User Module

Visualization Module

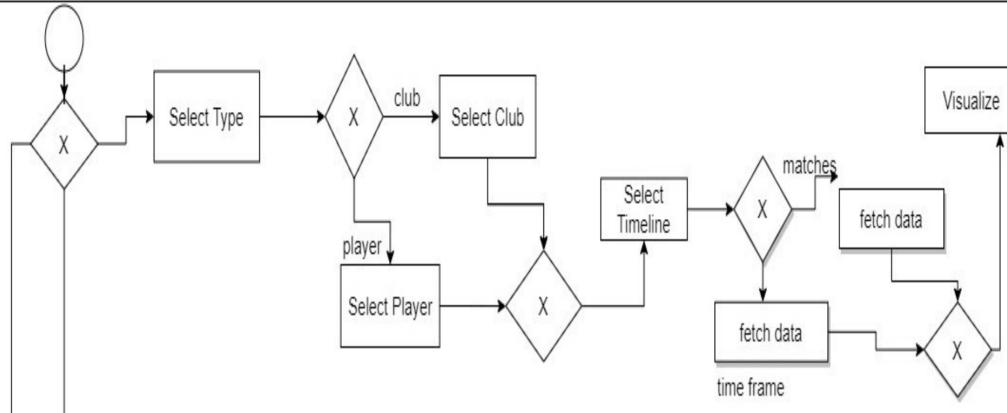


Figure 2: Visualisation Module

Data Module

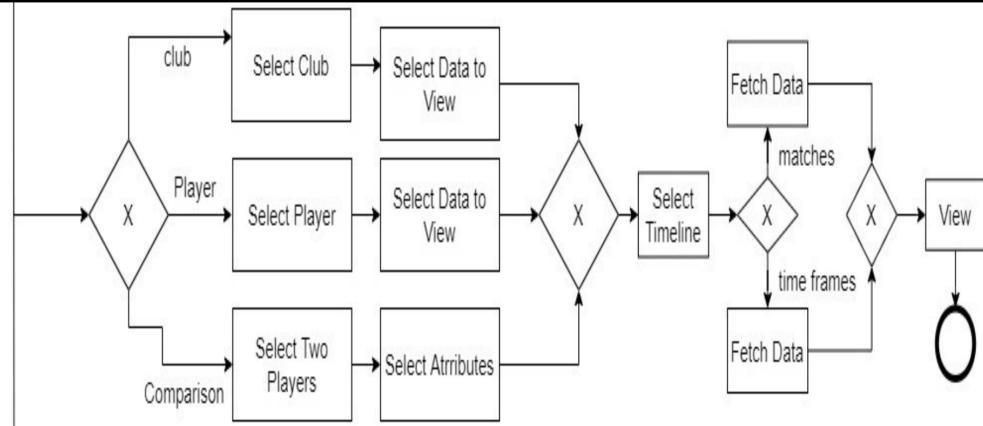


Figure 3: Data Module

Specialized Metrics Module

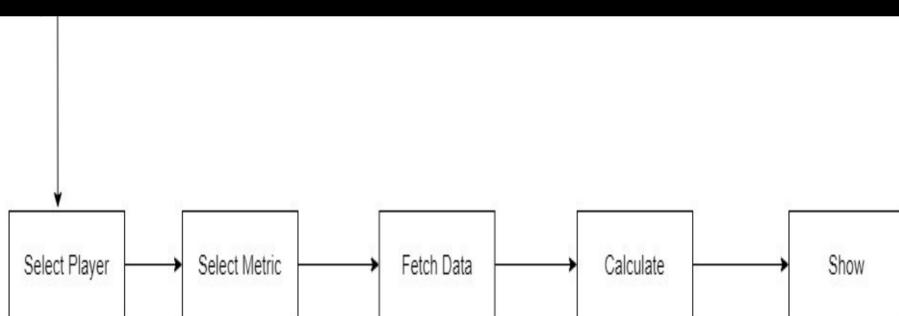


Figure 4: Specialized Metrics Module

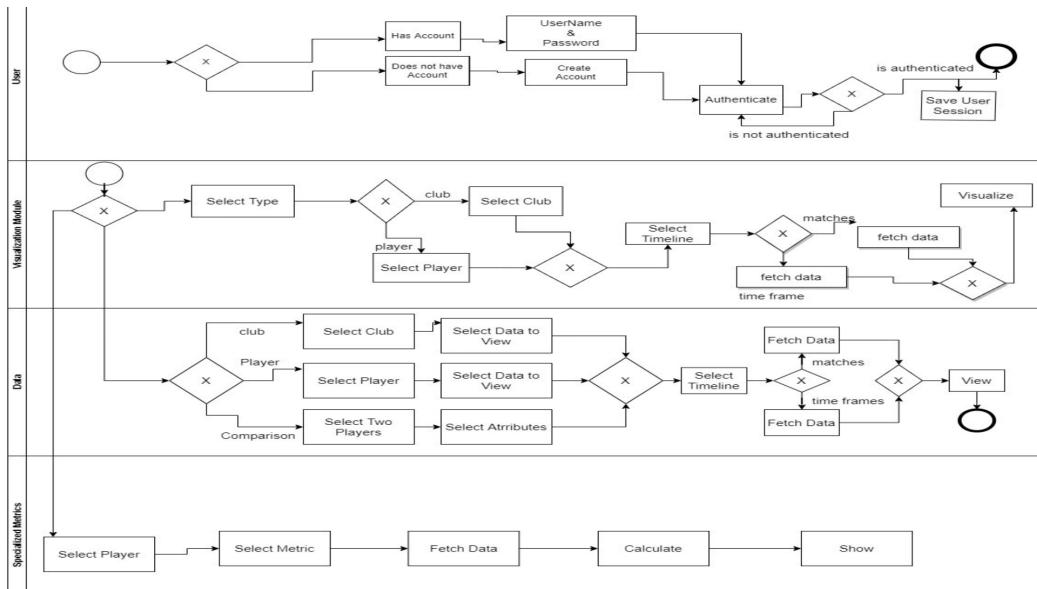


Figure 5: Full Module

5 Feedbacks(BPMN)

The feedbacks we got are stated below:

- We should update the user module so that admin can have more control over the website activities.
- We should add the matches length.
- We should add database entry.

The changes we did for that are stated below:

- Match length and database entries are added in the last update.

- Admin module was updated in order to give the admin more control over the website.

6 Part 2:(Mock UI)

The pictures are given to show the modules and its designs.



Figure 6: Login and Signup

Home UI

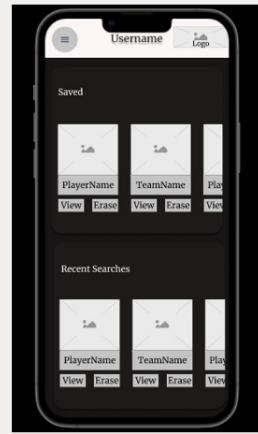


Figure 7: Home UI

Vizualisation Module

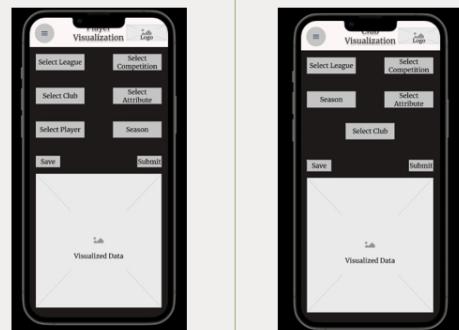


Figure 8: Vizualisation Module

Data Module

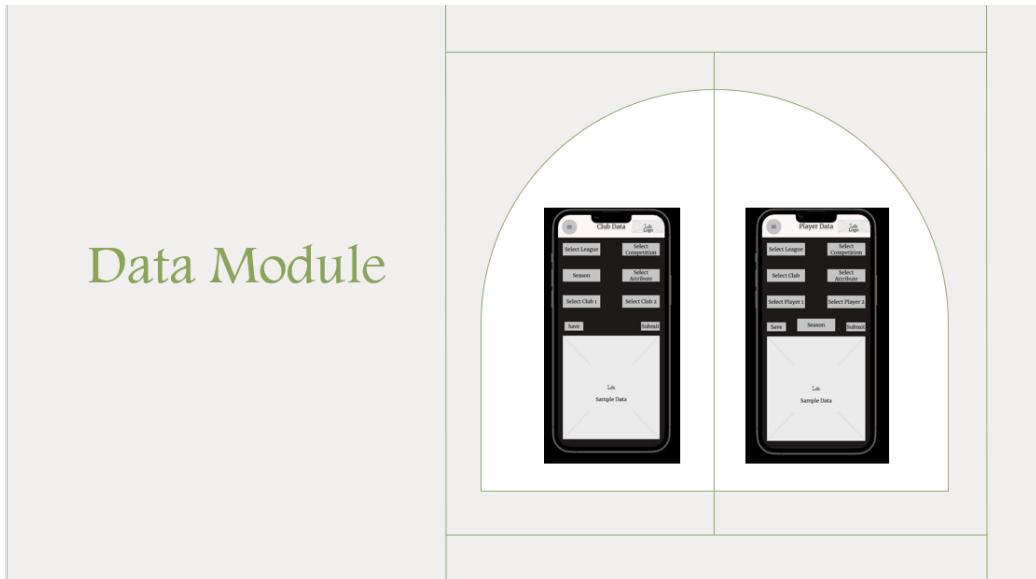


Figure 9: Data Module

Specialized Matrices

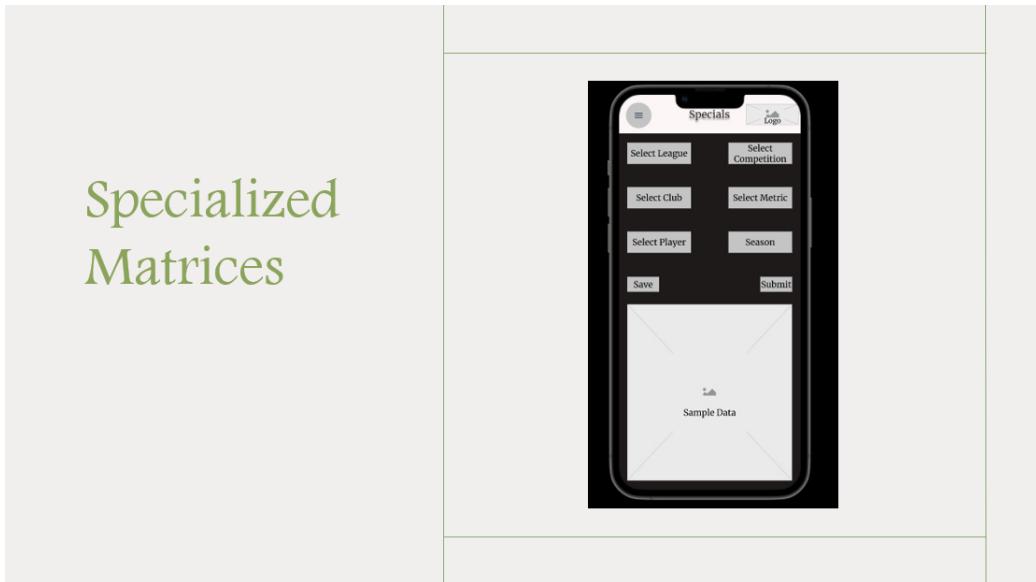


Figure 10: Specialized Metrics

7 Feedbacks(Mock UI)

The feedbacks we got are stated below:

- We should increase scrolling for our users.
- We should decrease button push for our users.
- We should present our visual module gracefully and with some picture modifications.

The changes we did for that are stated below:

- We increased scrolling by filtering in our last update. Again, we only have button push usability while filtering by nation.
- We showed the picture of the field in our visual module in our last update.

8 Part 3:(Class Diagram)

The Class Diagrams are given below:

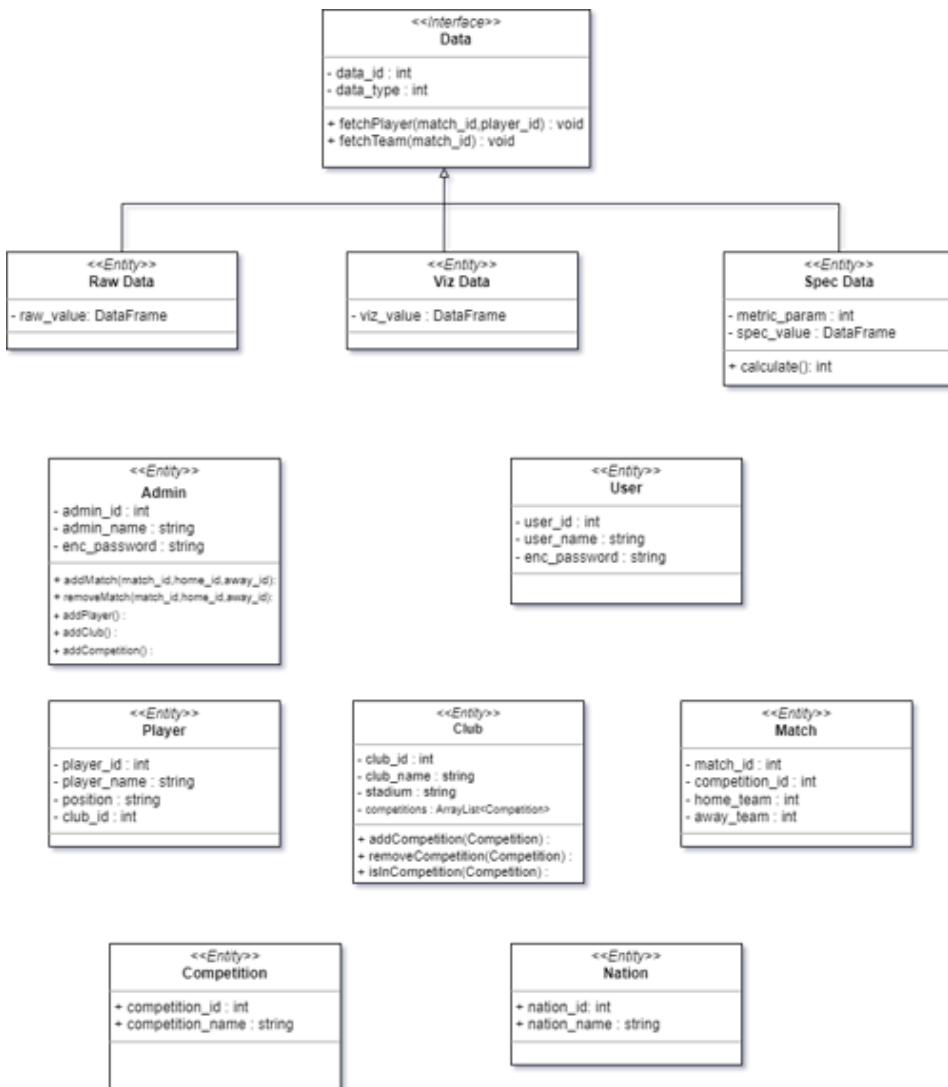


Figure 11: Entities

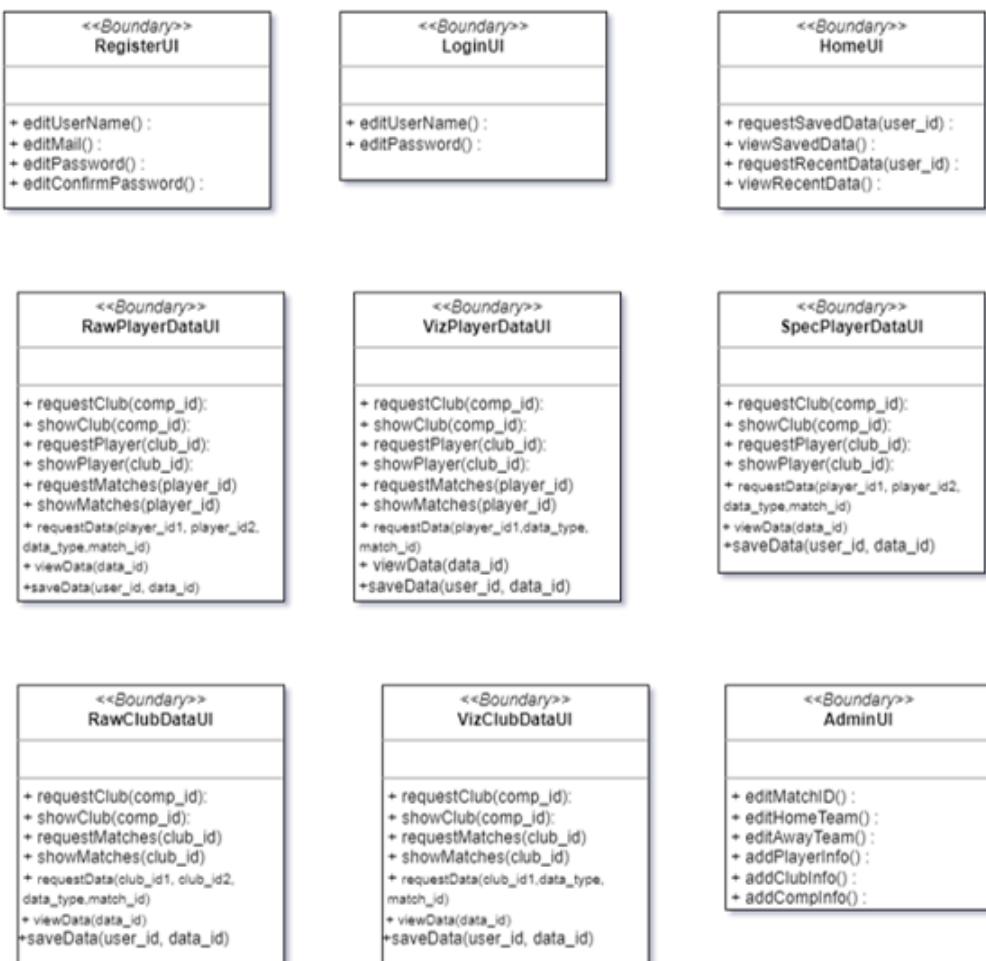


Figure 12: Viewing Boundary Classes

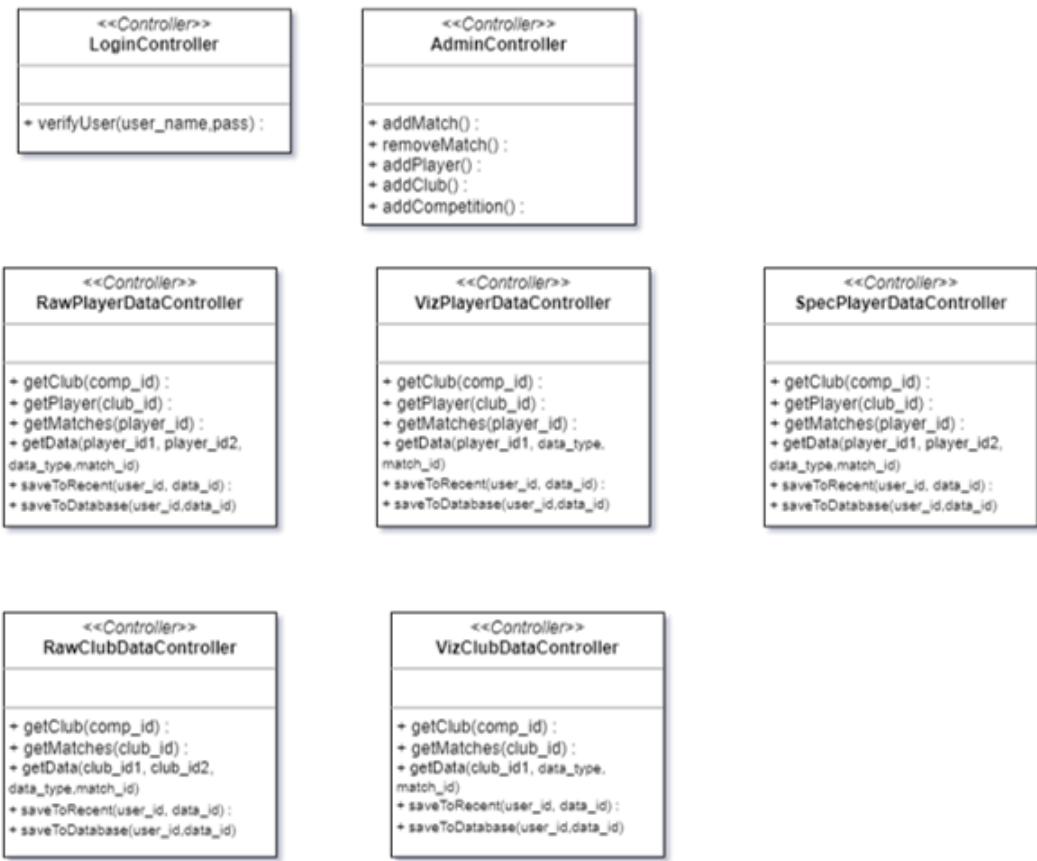


Figure 13: Viewing Controller Classes

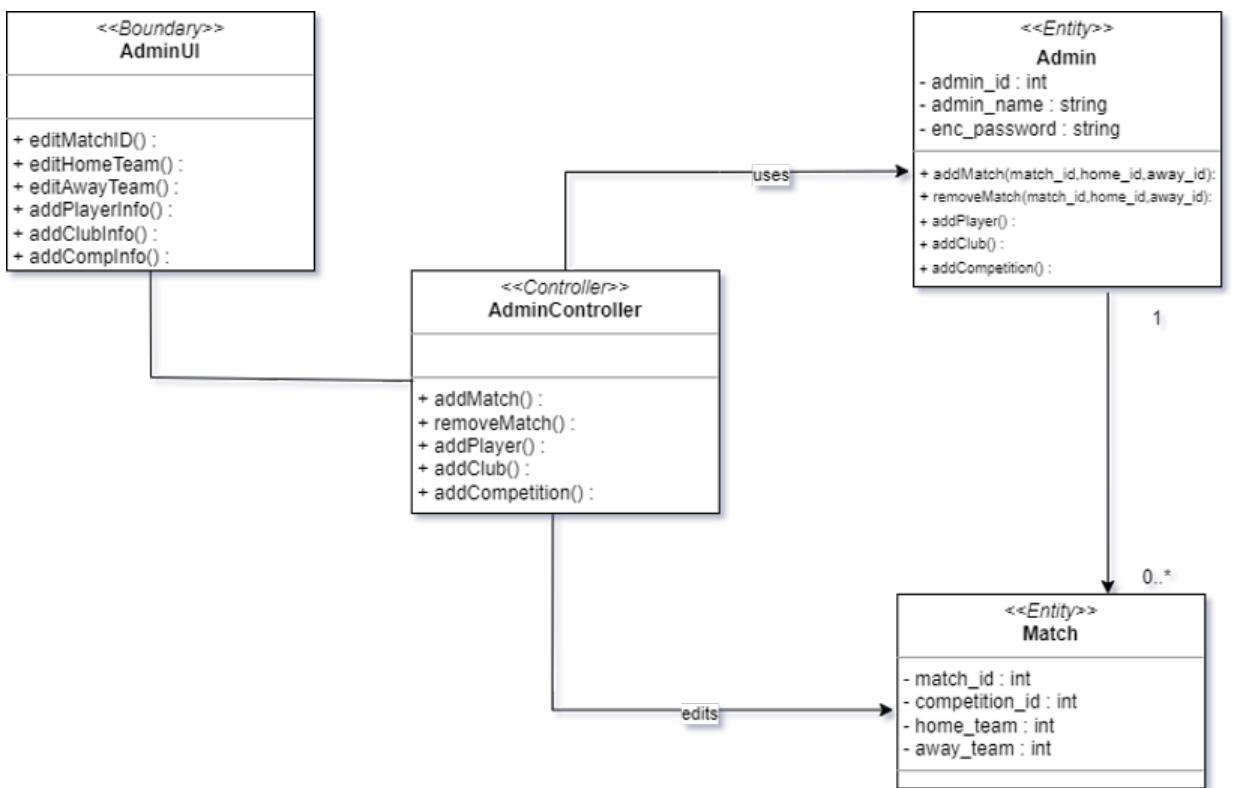


Figure 14: The Admin Section

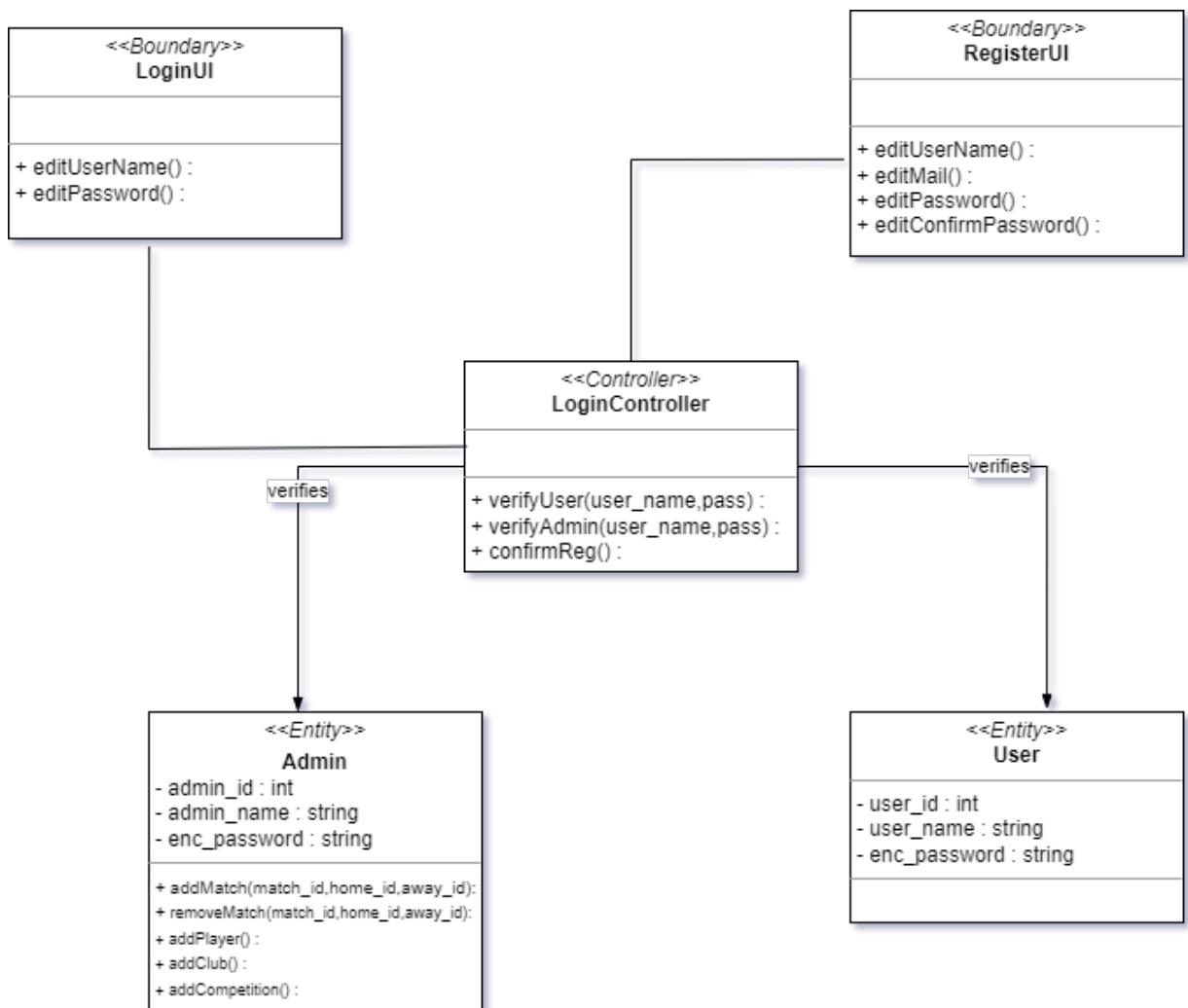


Figure 15: The login Section

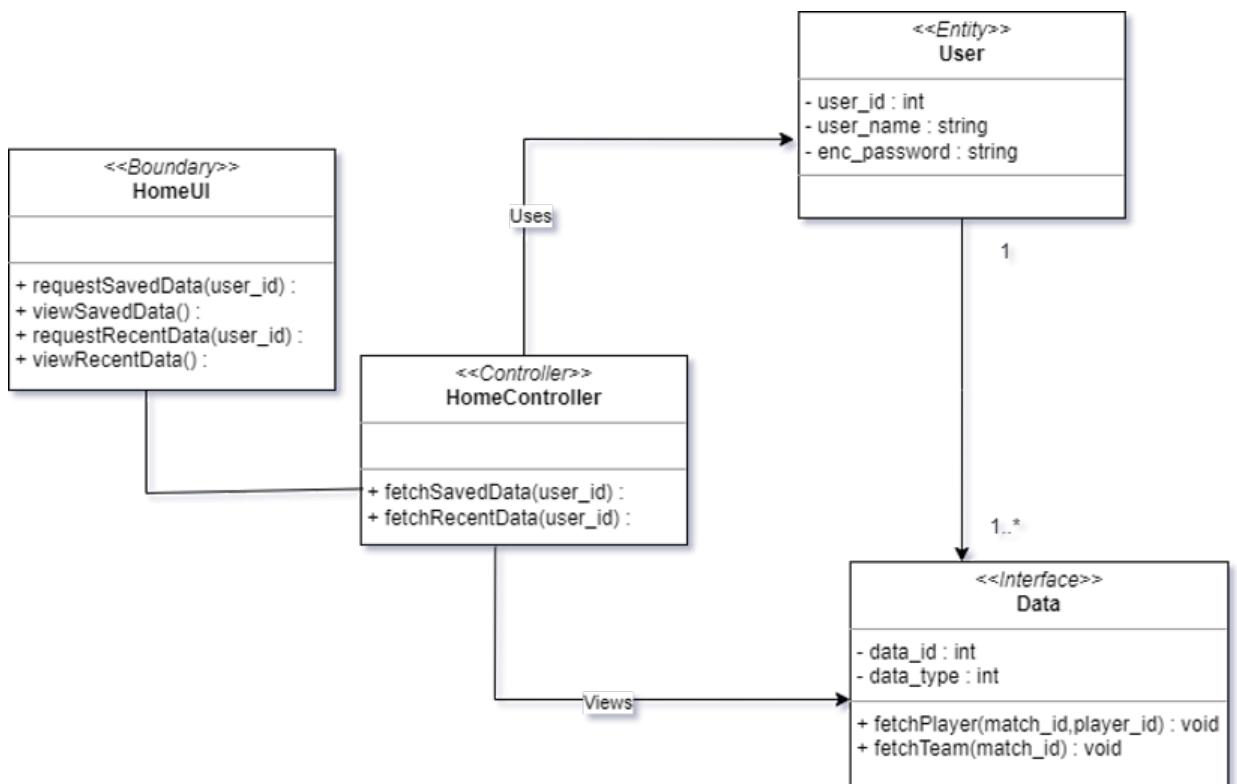


Figure 16: The Home Page Section

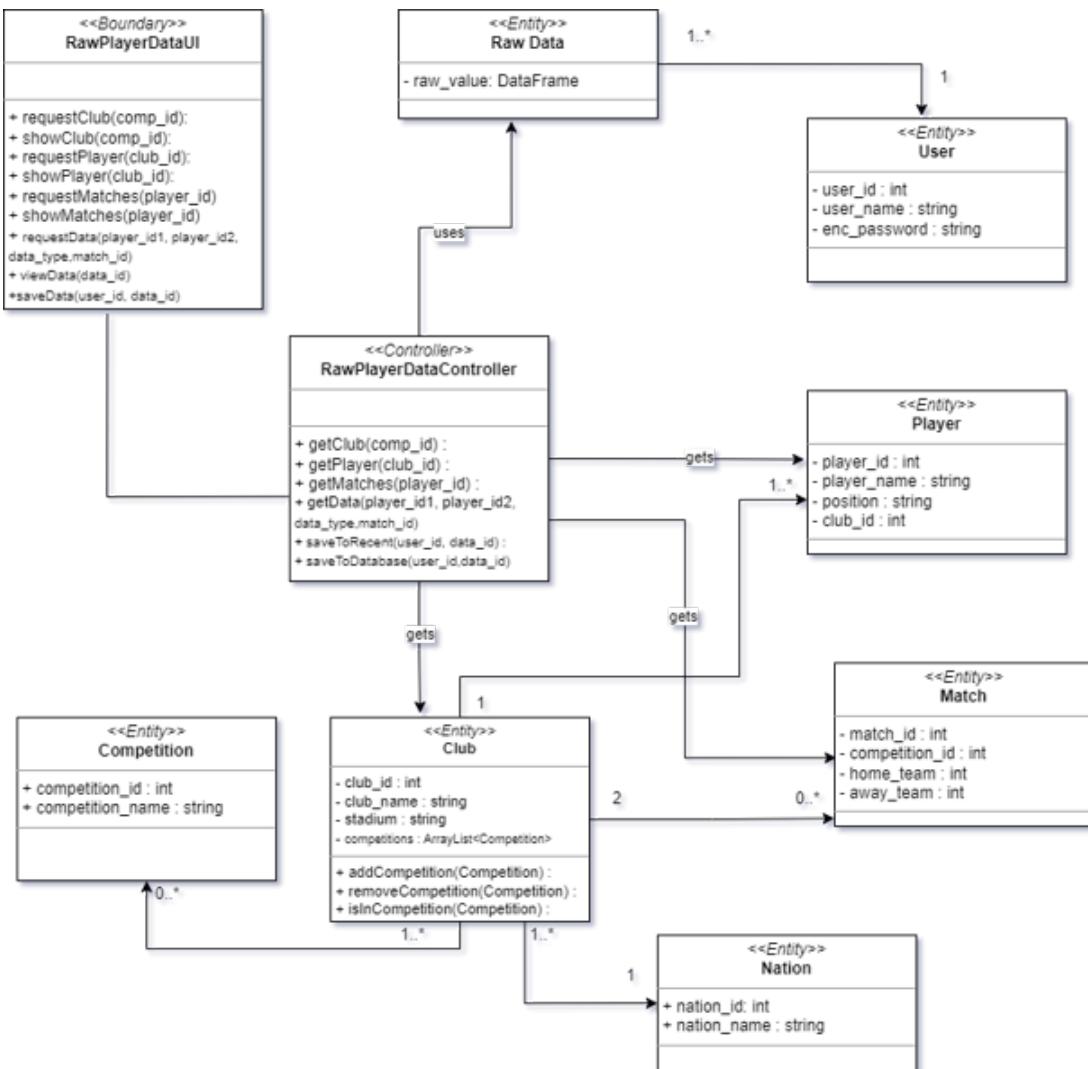


Figure 17: Raw data for Player

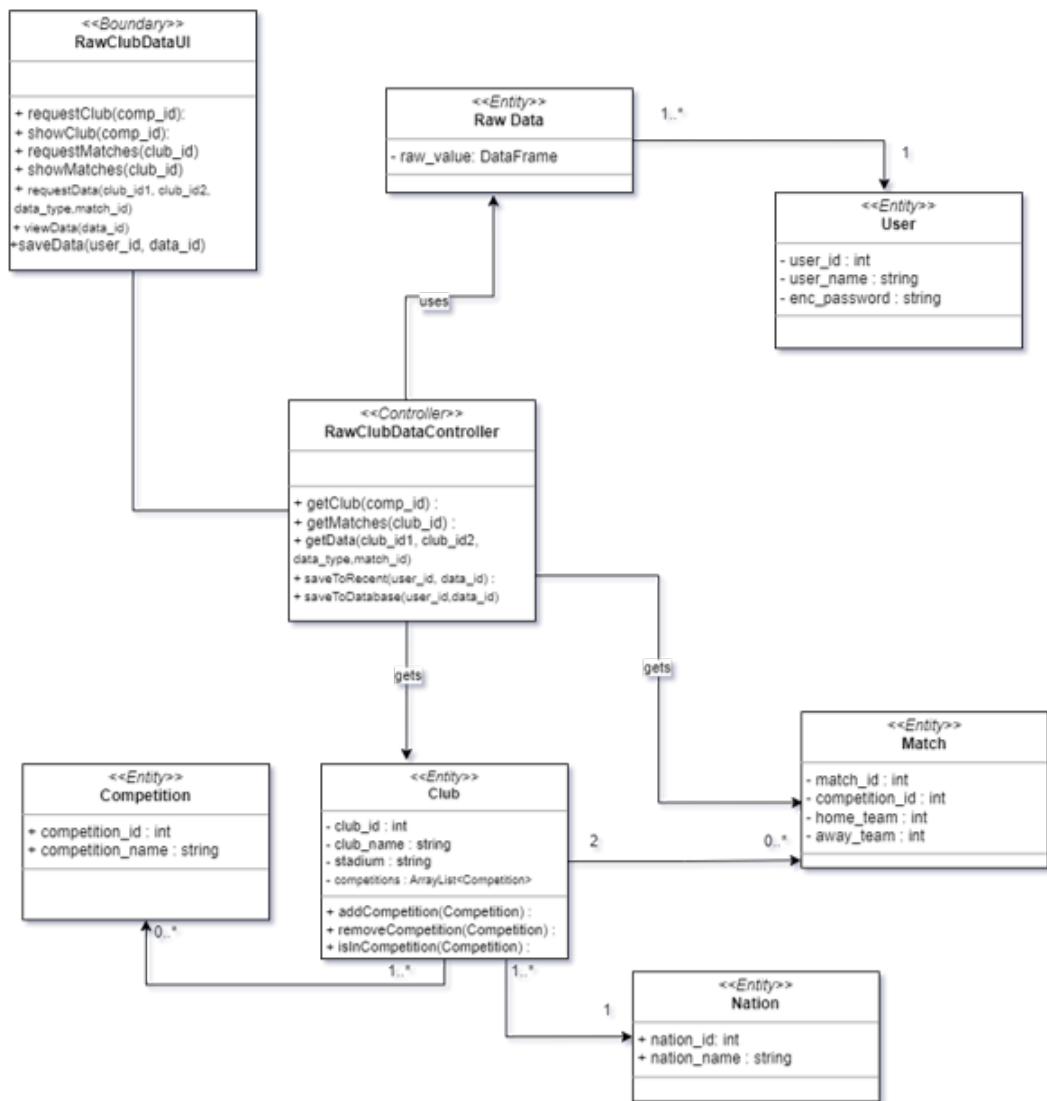


Figure 18: Raw data for Clubs

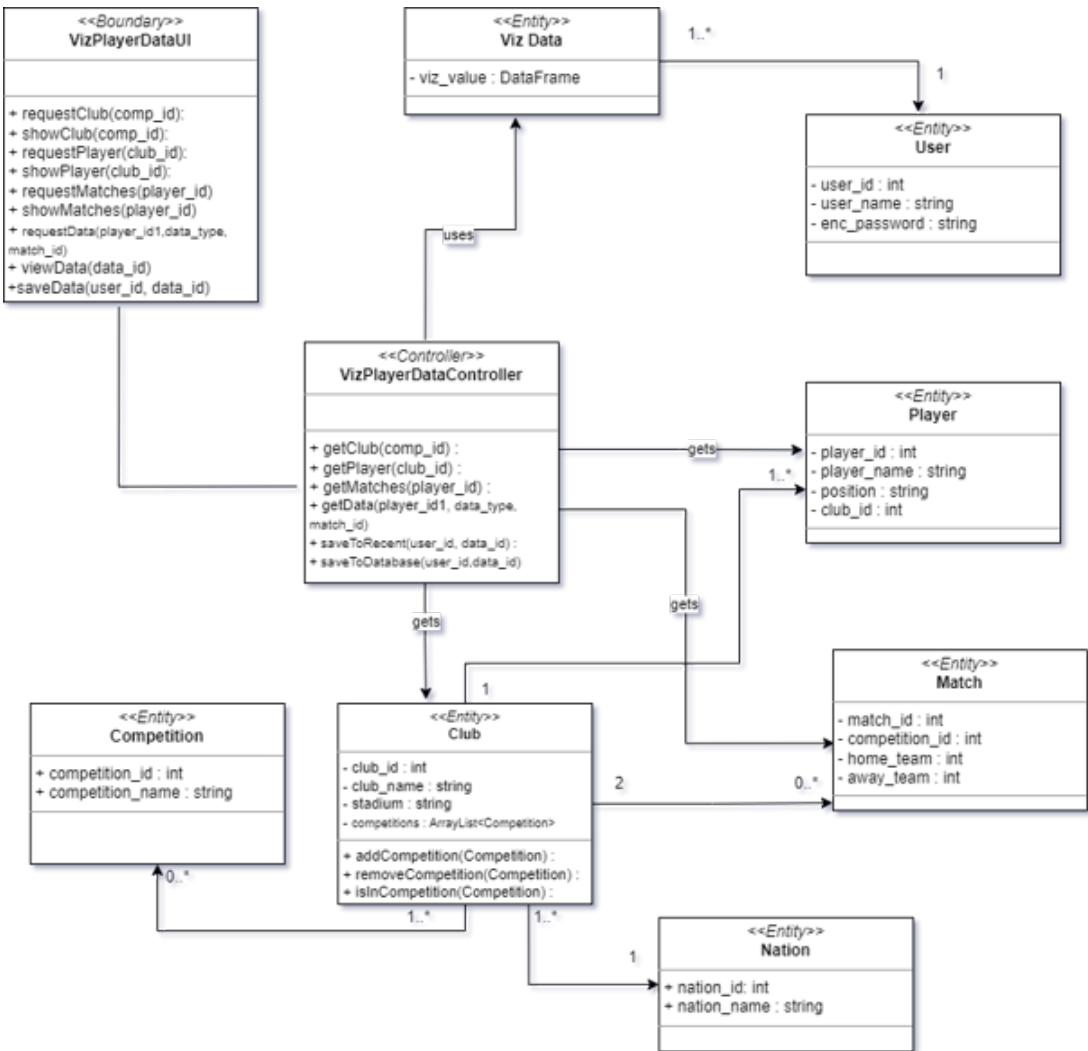


Figure 19: Visualization Data for Player

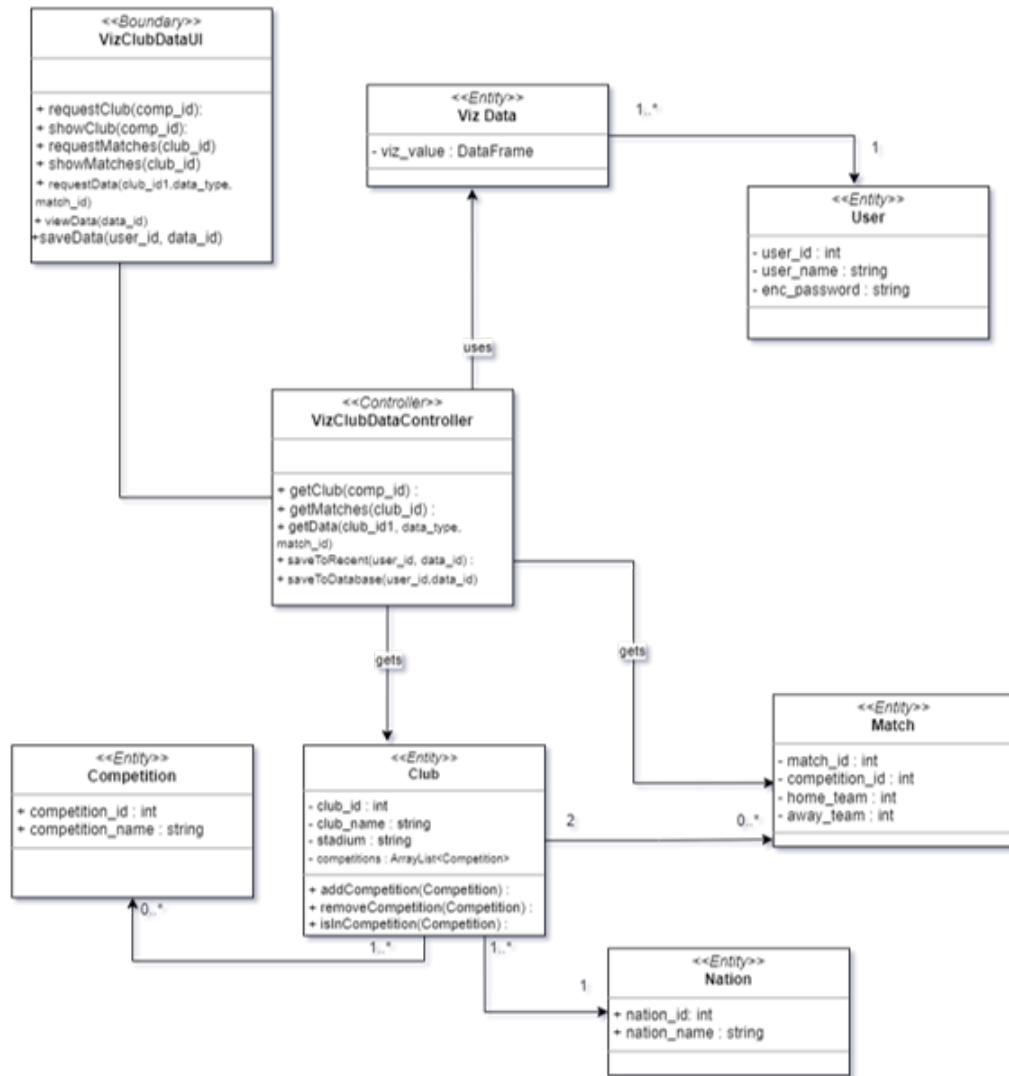


Figure 20: Visualization data for Club

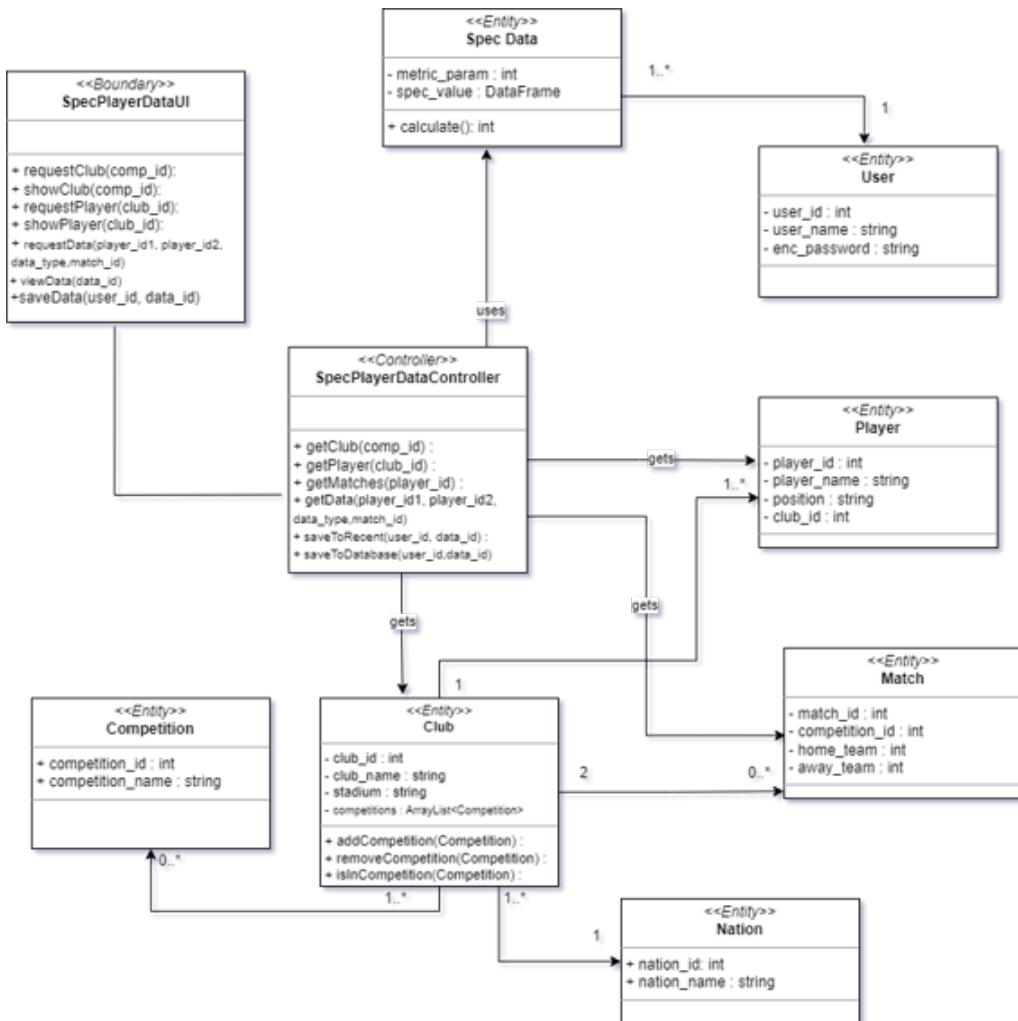


Figure 21: Specialization data for Club

9 Feedbacks(Class Diagram)

The feedbacks we got are stated below:

- How we will store the data in our data classes ,
- How we will optimize the storing process.

The changes we did for that are stated below:

- We are storing data in JSON format as it gives much flexibility for both storing and optimizing data.

10 Part 4:(Entity Relationship Diagram)

The ER diagrams are given below:

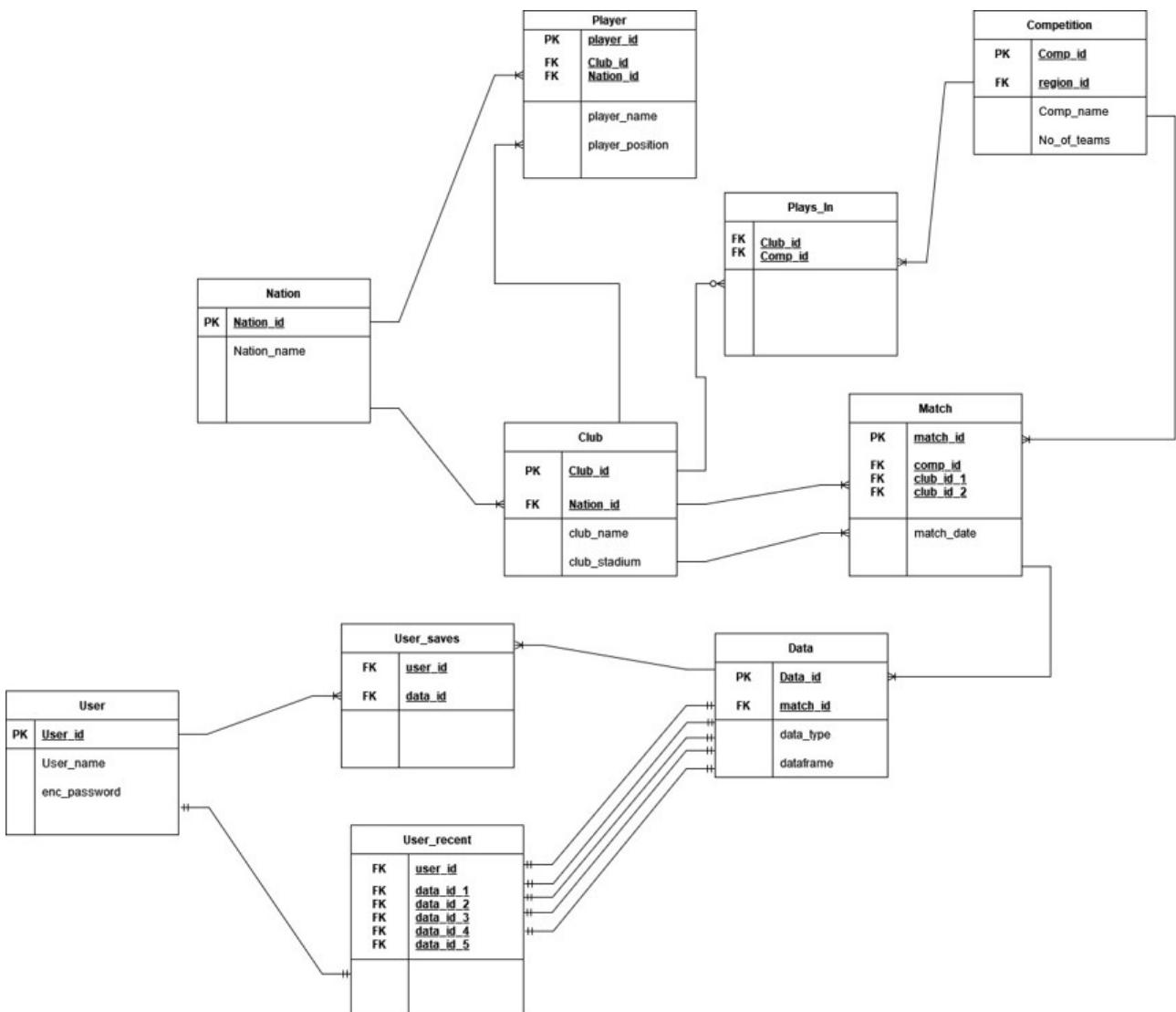


Figure 22: ER Diagram of Soccer Alive

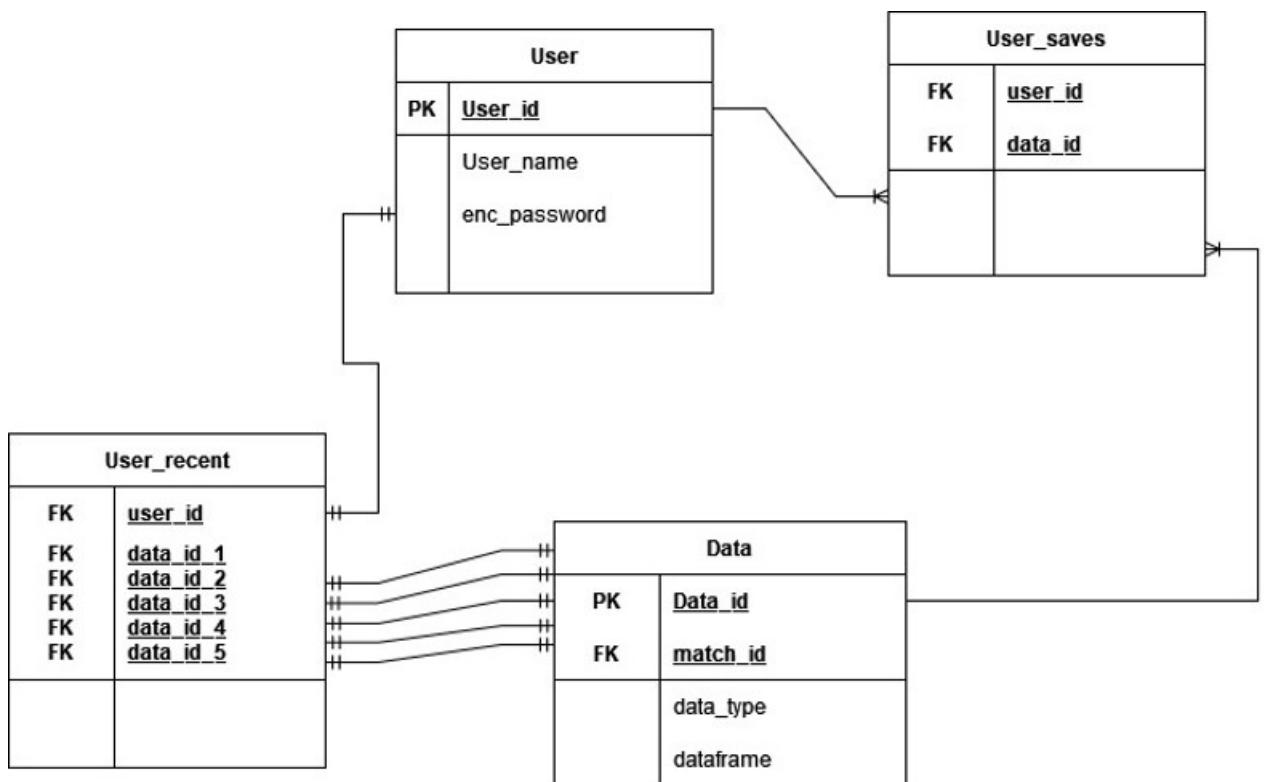


Figure 23: ER diagram for User section

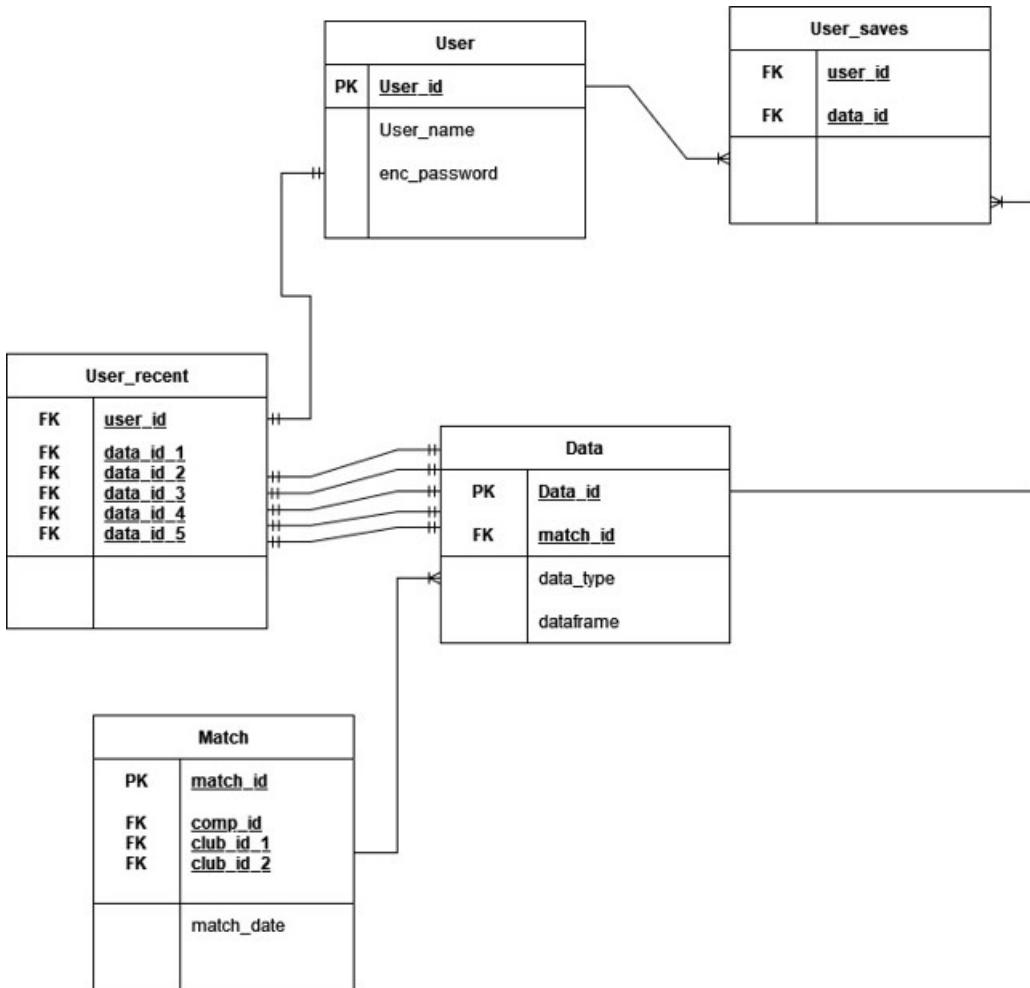


Figure 24: ER Diagram of Data section

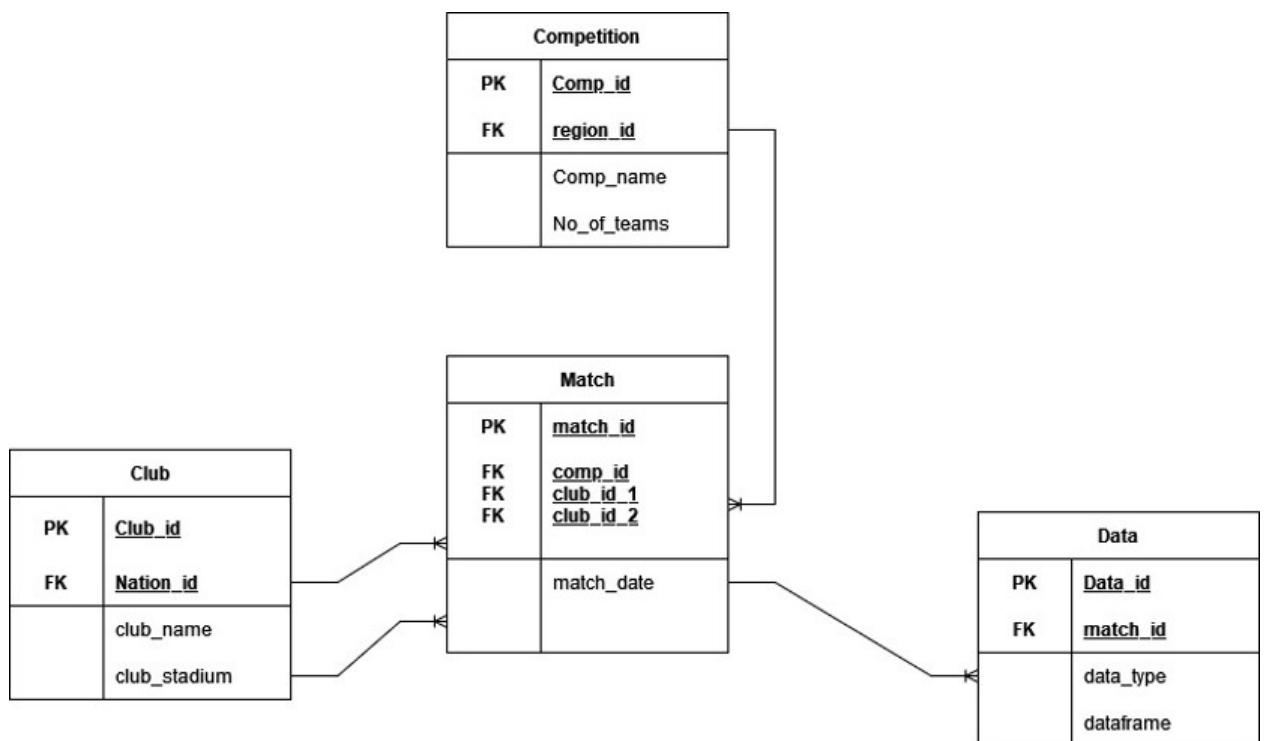


Figure 25: ER Diagram of Match section

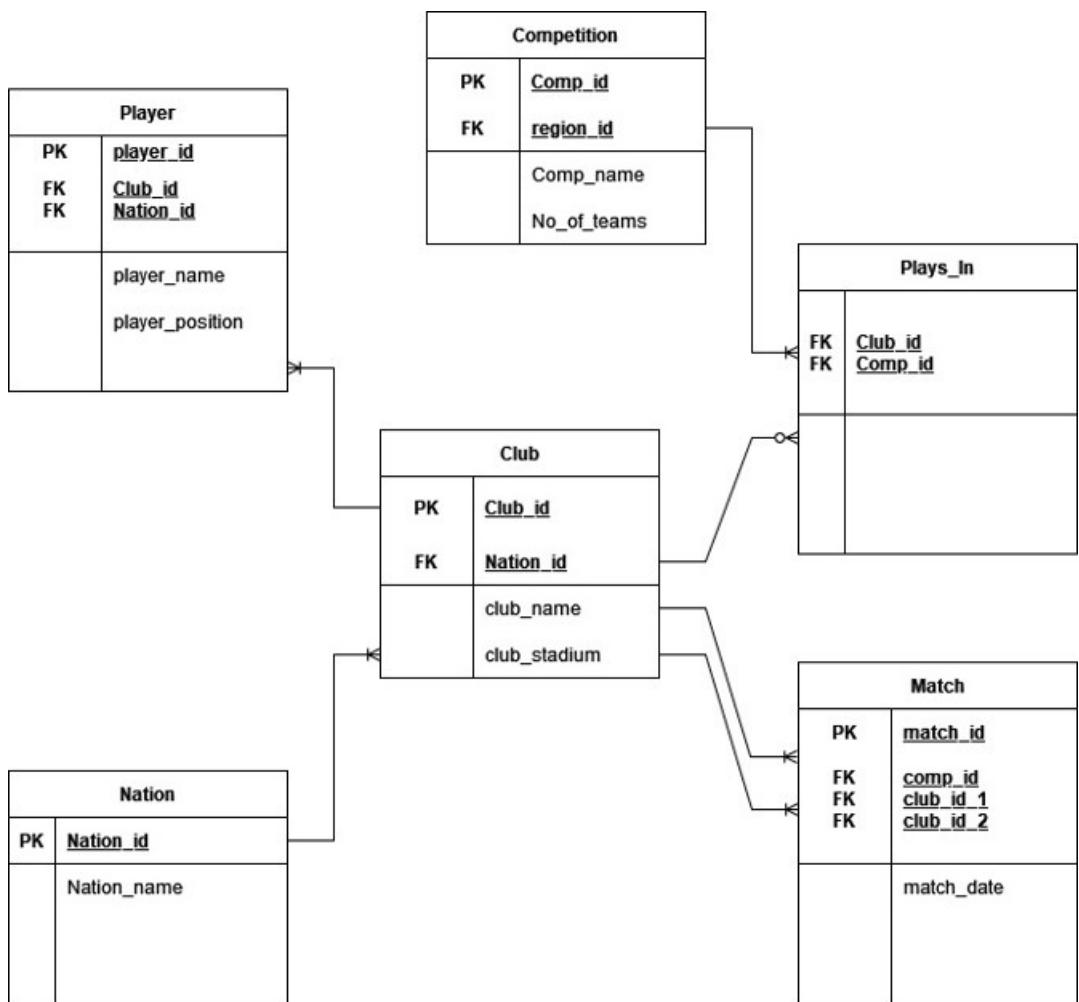


Figure 26: ER Diagram of Club section

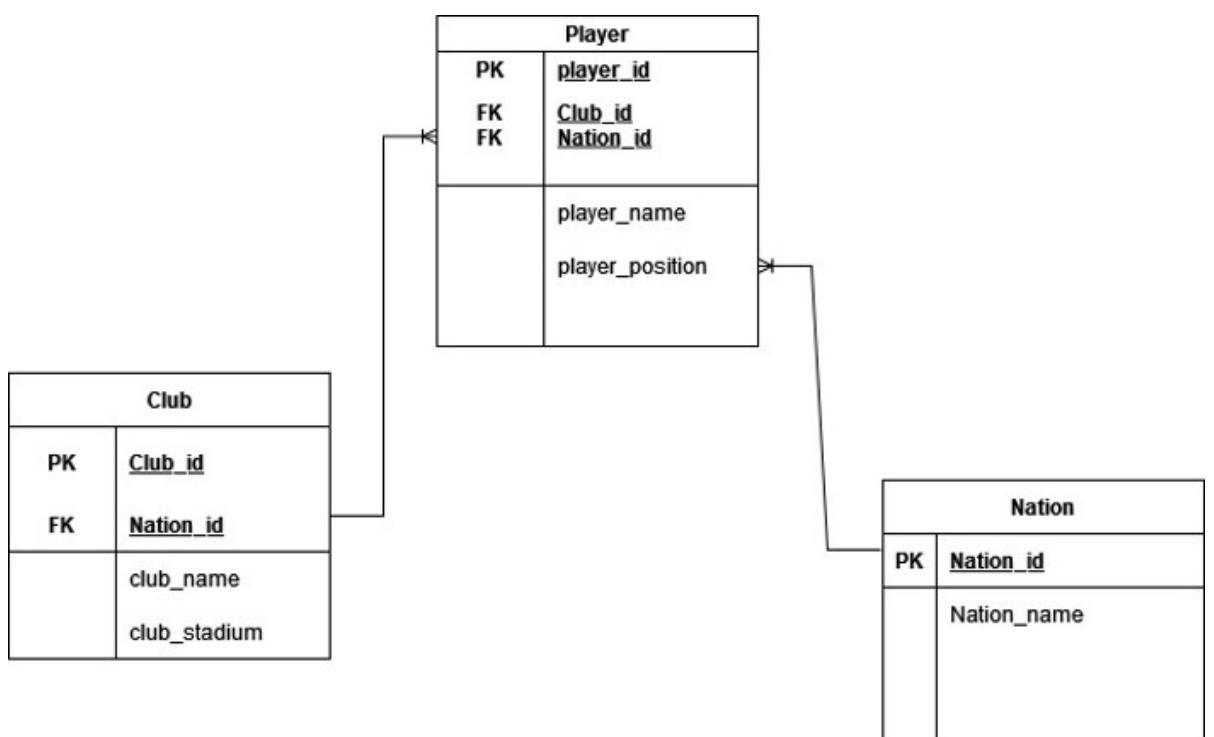


Figure 27: ER Diagram of Player section

11 Feedbacks(Entity Relationship Diagram)

The feedbacks we got are stated below:

- We don't need the recent searches ,
- Visualization data should be stored individually rather than JSON format for the sake of user.

The changes we did for that are stated below:

- We haven't implemented recent search history.
- For every match user's visualization data are now being stored as a image in the database rather than using JSON format.

12 Part 5:(Sequence Diagram)

The Sequence diagrams are given below:

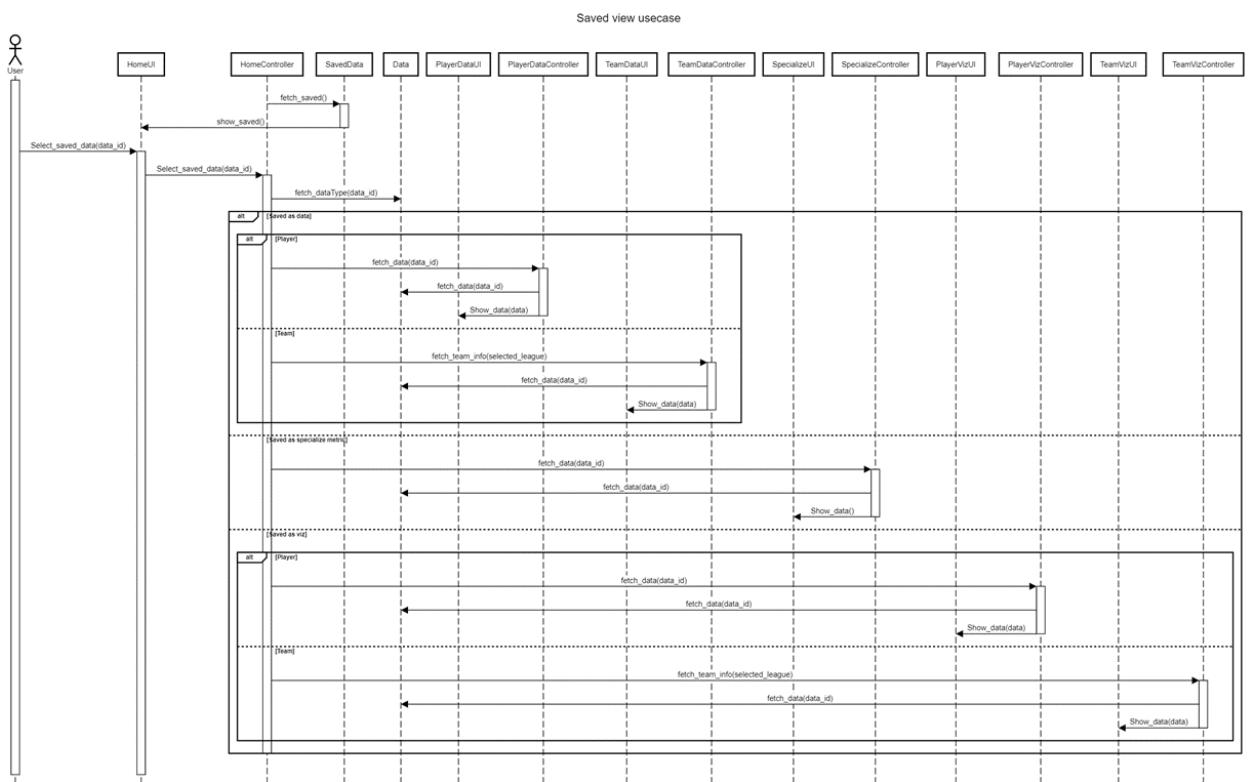


Figure 28: Viewing saved Data

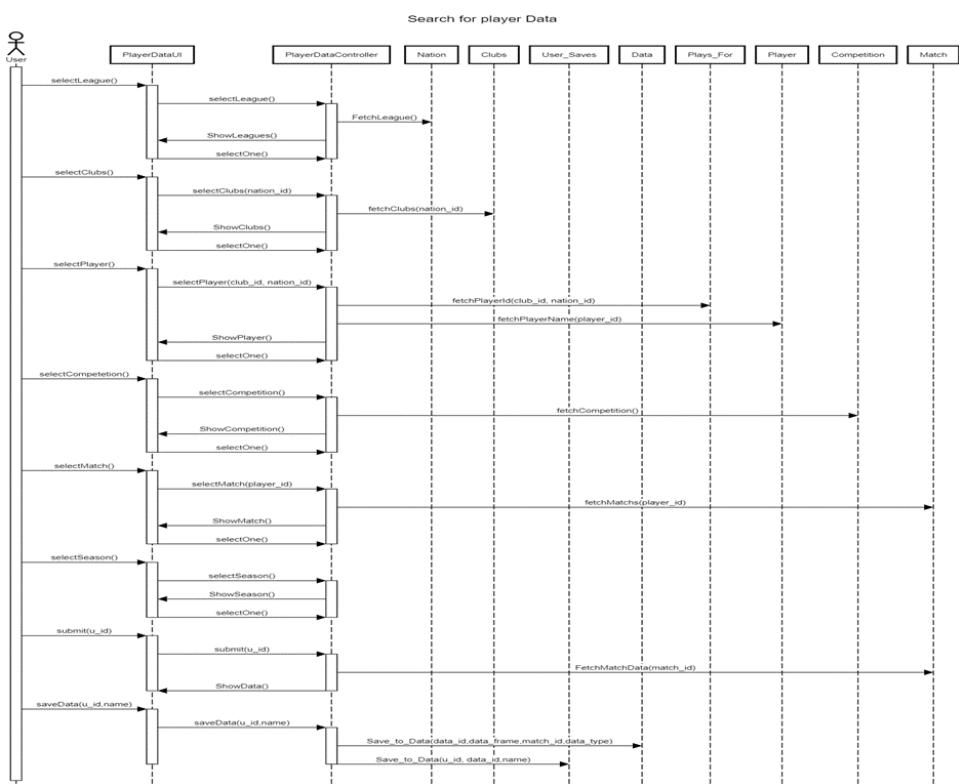


Figure 29: Search and save a player data

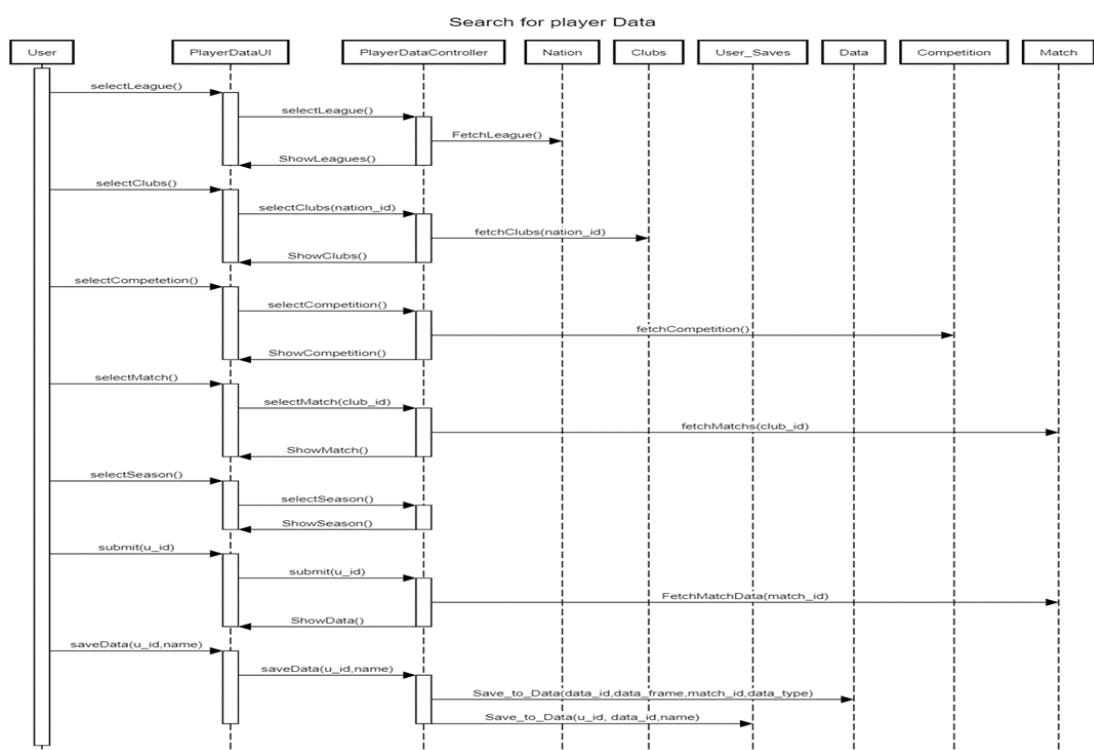


Figure 30: Search and save a team data

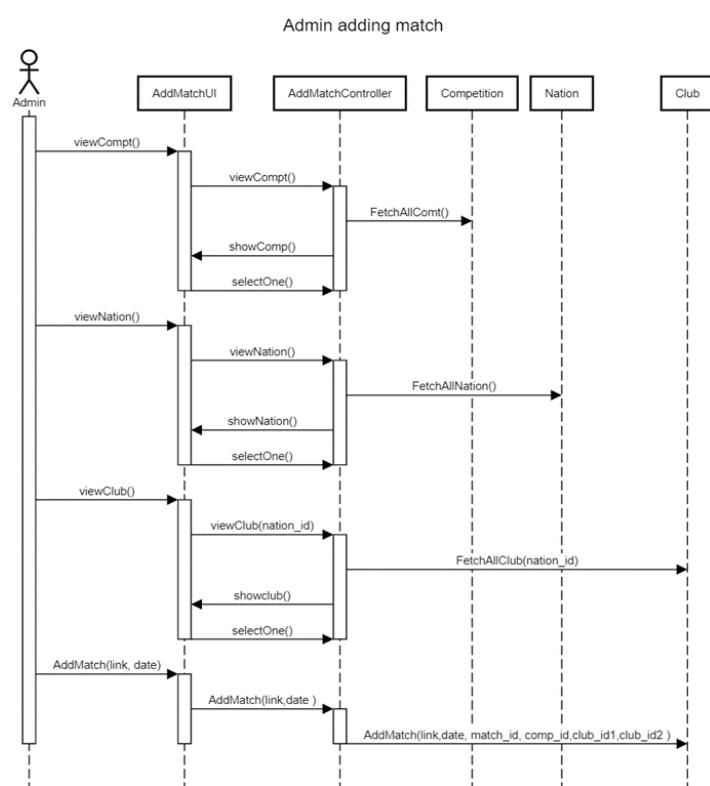


Figure 31: Add match

Admin add player

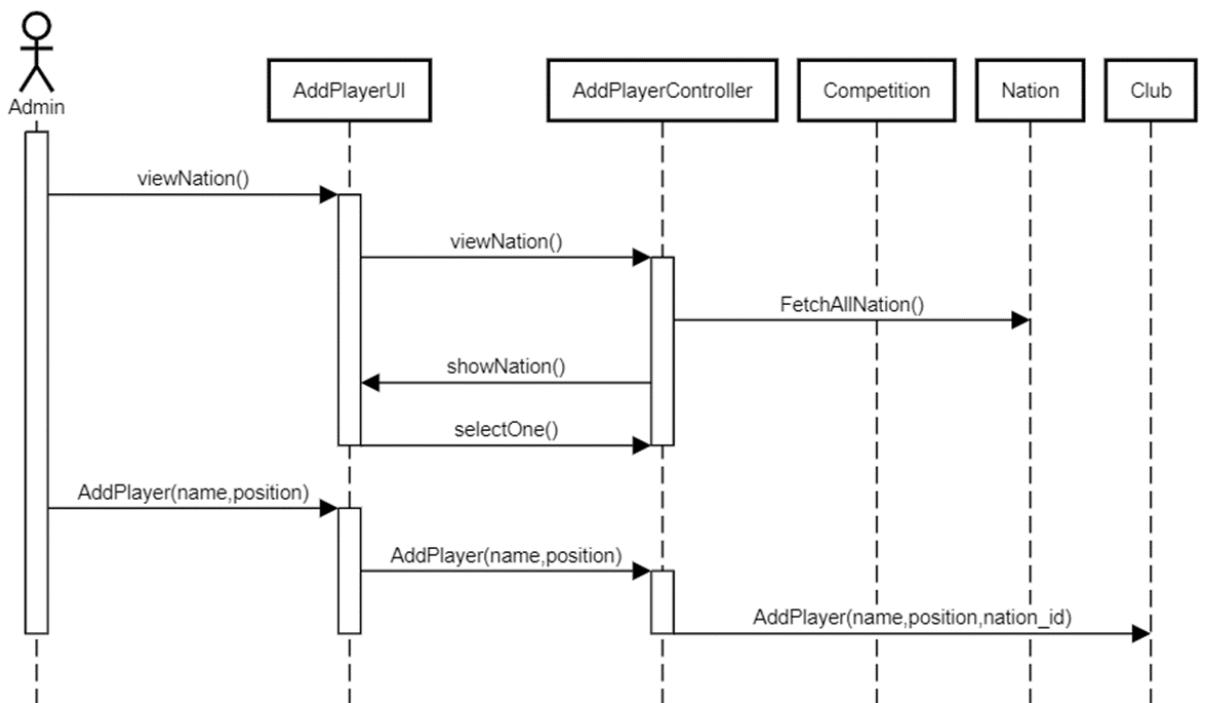


Figure 32: Add player

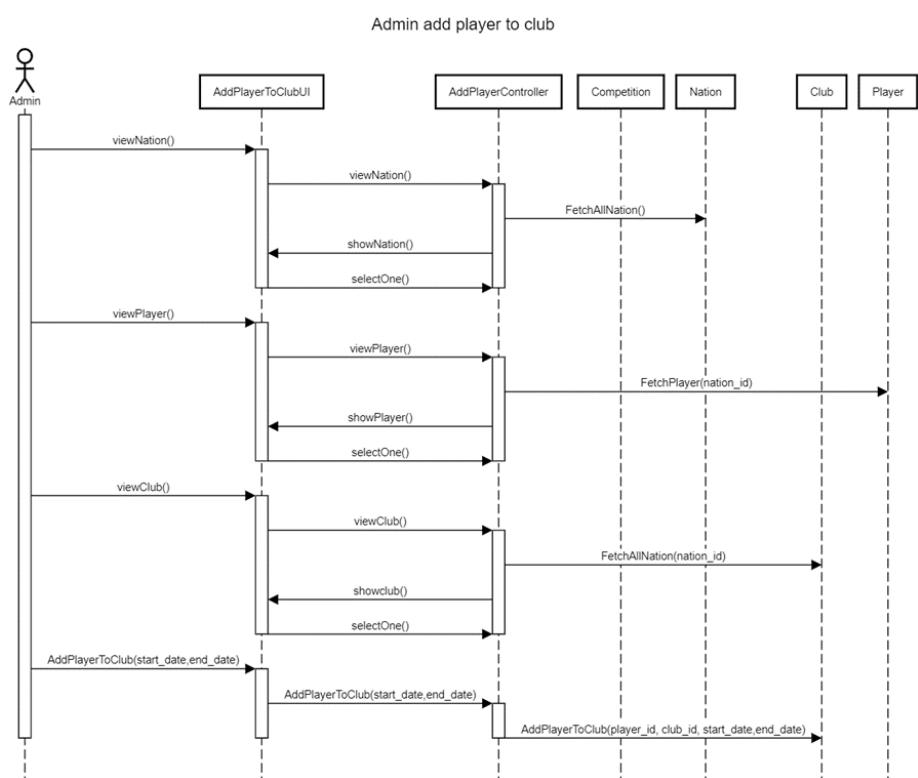


Figure 33: Add player to club

13 Part 6:(Collaboration Diagram)

Collaboration diagrams are:

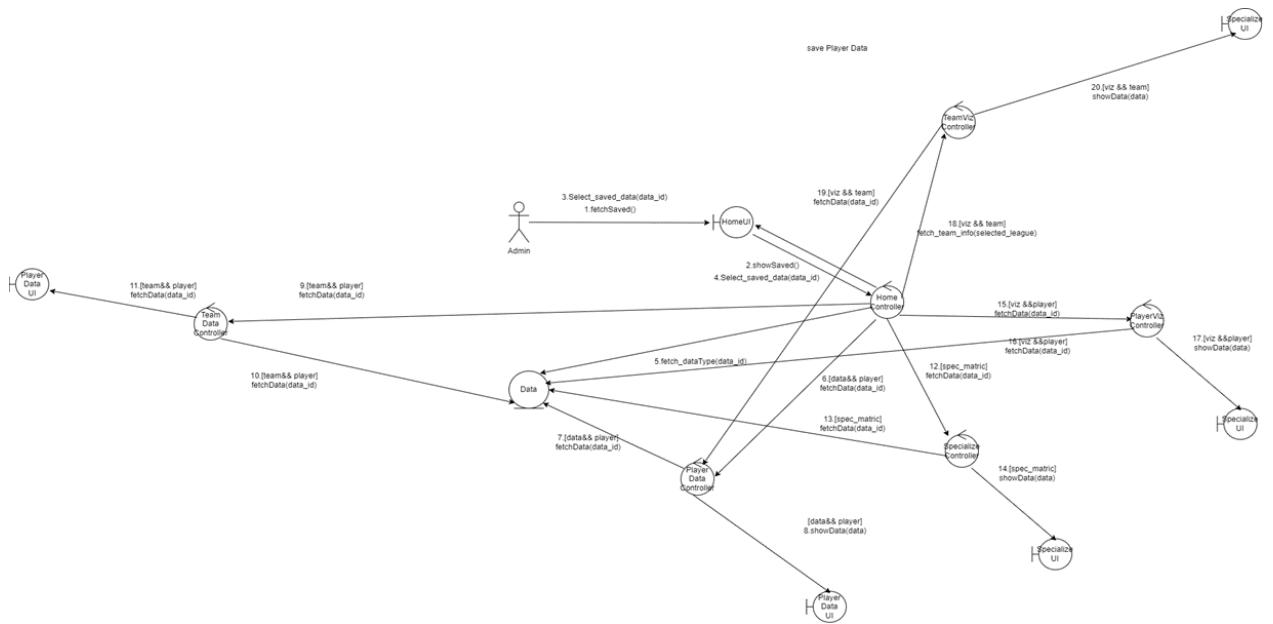


Figure 34: Viewing saved Data

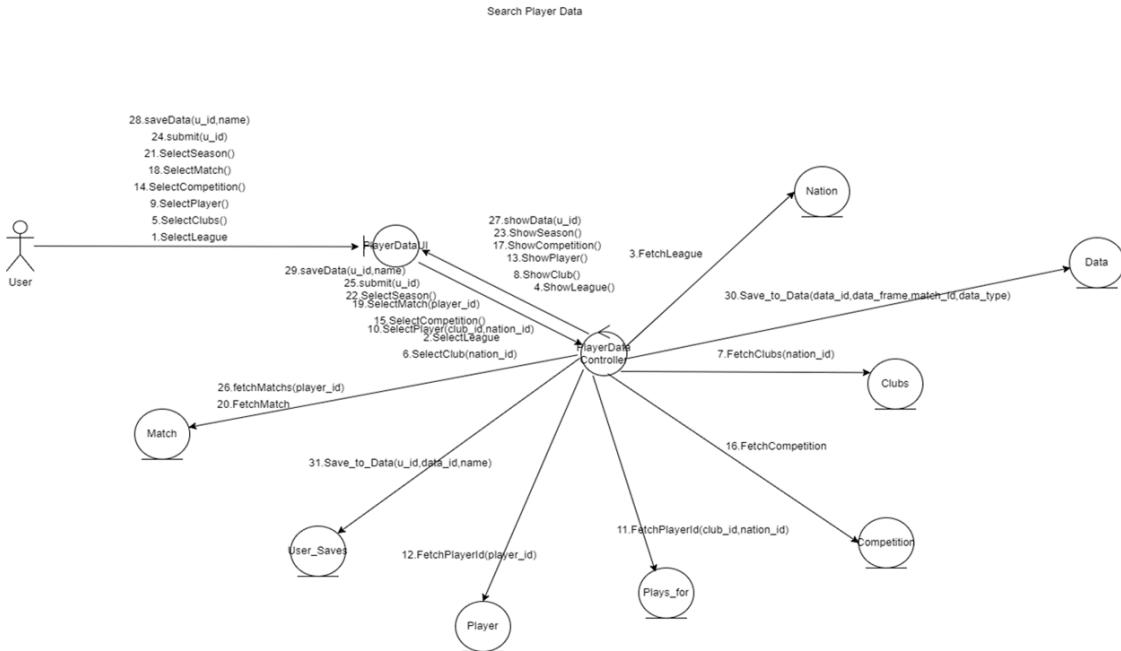


Figure 35: Search and save a player data

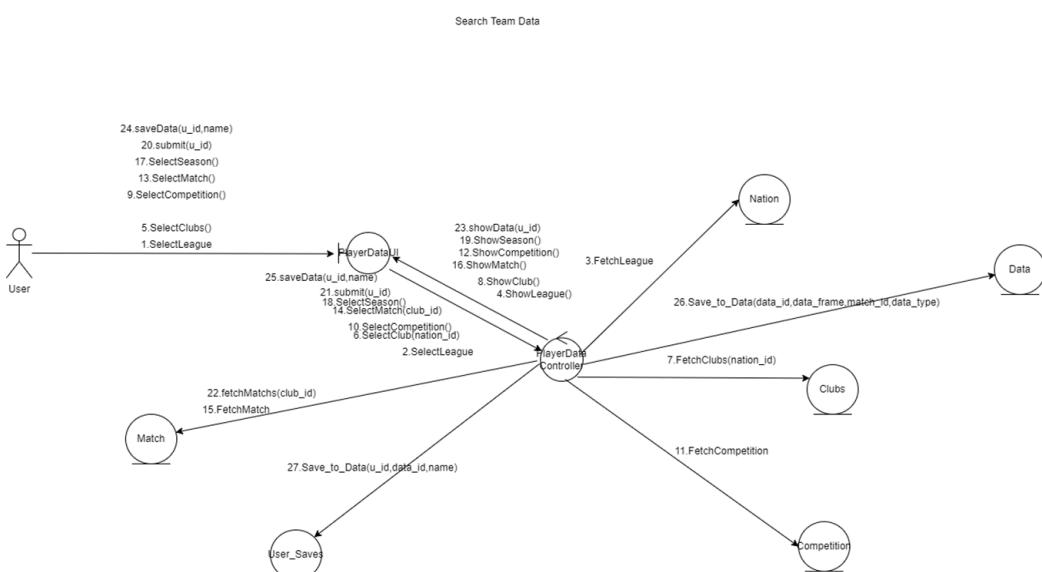


Figure 36: Search and save a team data

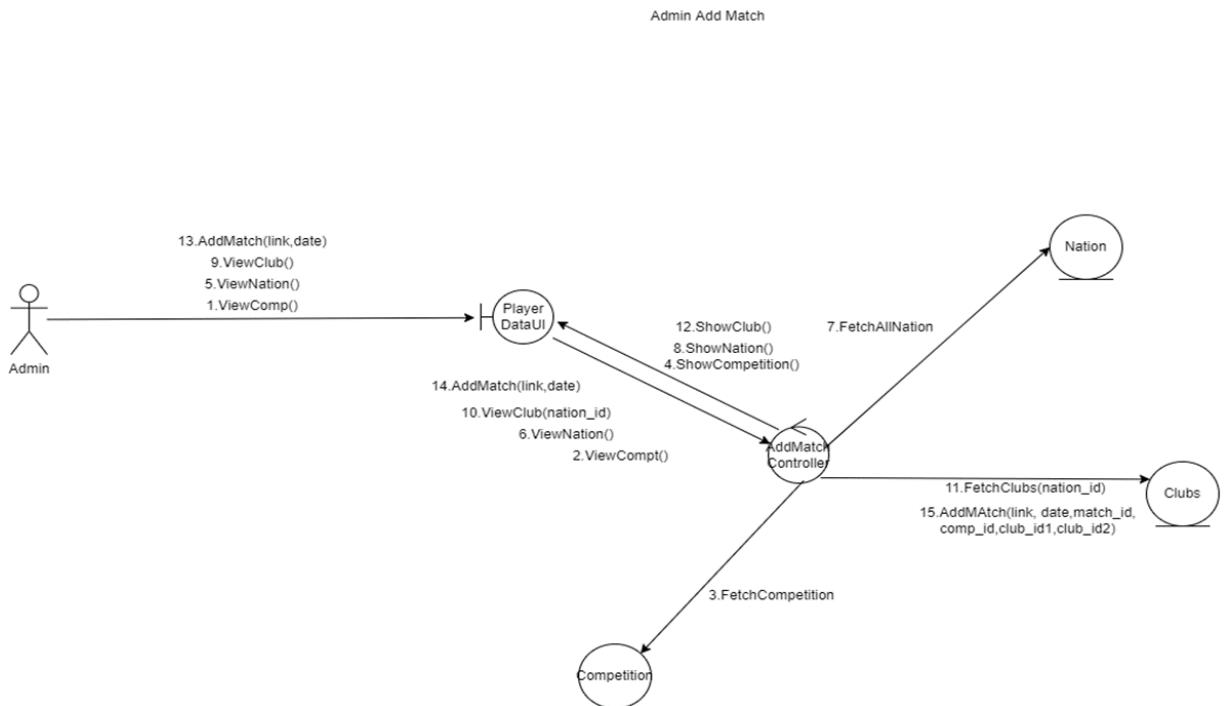


Figure 37: Add match

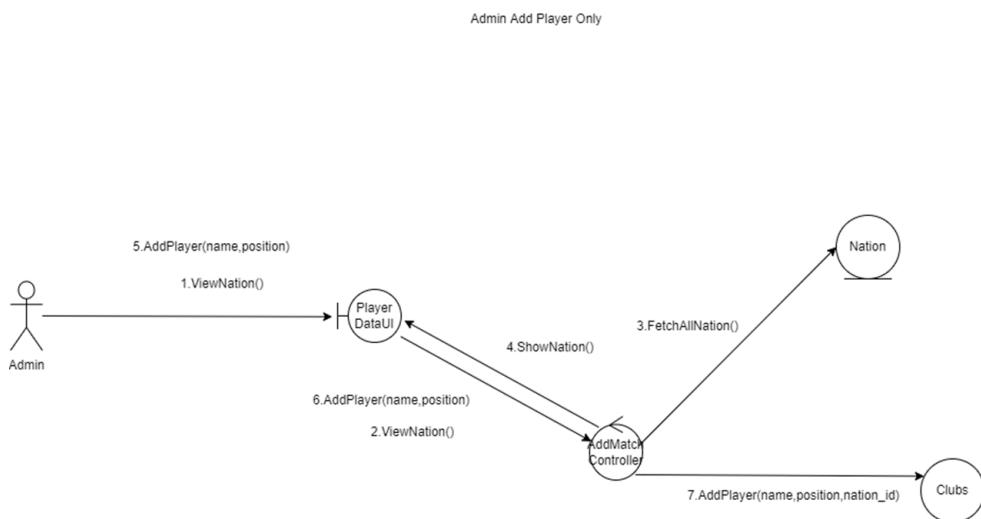


Figure 38: Add player

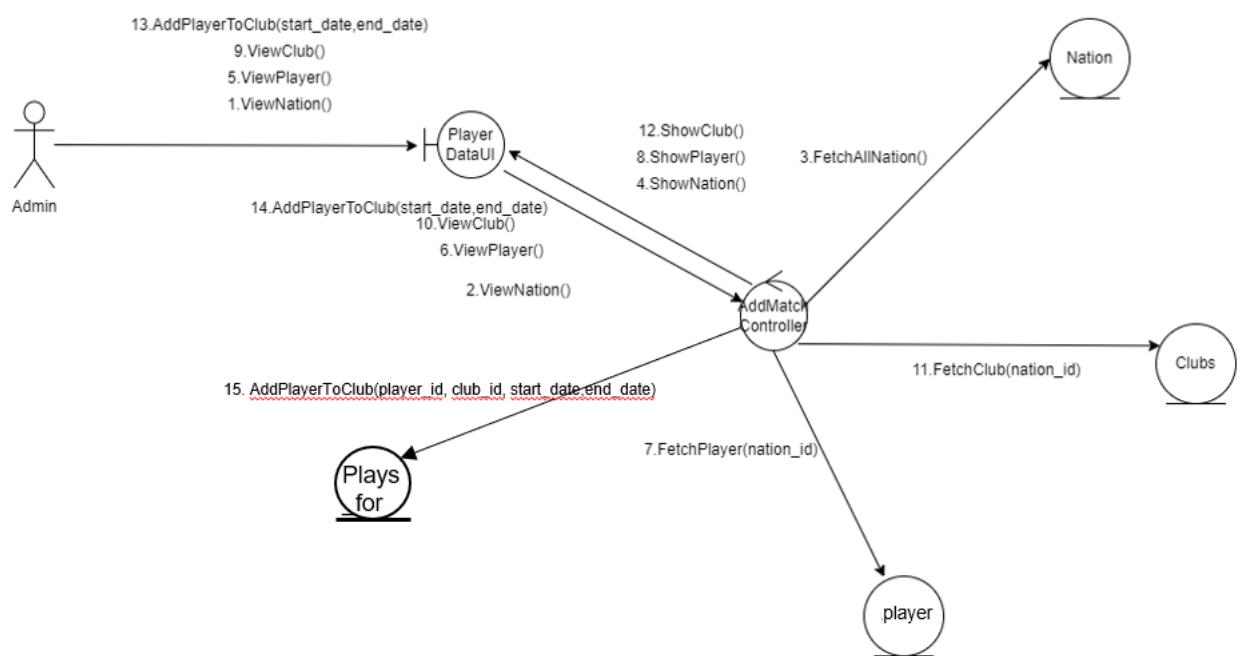


Figure 39: Add player to club

14 Feedbacks(Sequence and Collaboration Diagram)

The feedbacks we got are stated below:

- How we handle situation a player plays in changing positions.
- How data is stored and when we fetch from database.

The changes we did for that are stated below:

- We added PVMap to handle dynamic behaviour change.
- For sample we fetched data. But for ongoing matches we do scraping of live data.

15 Part 7:(Snippets of the Final Product(Soccer-Live))

All the images of Soccer Live are given below:

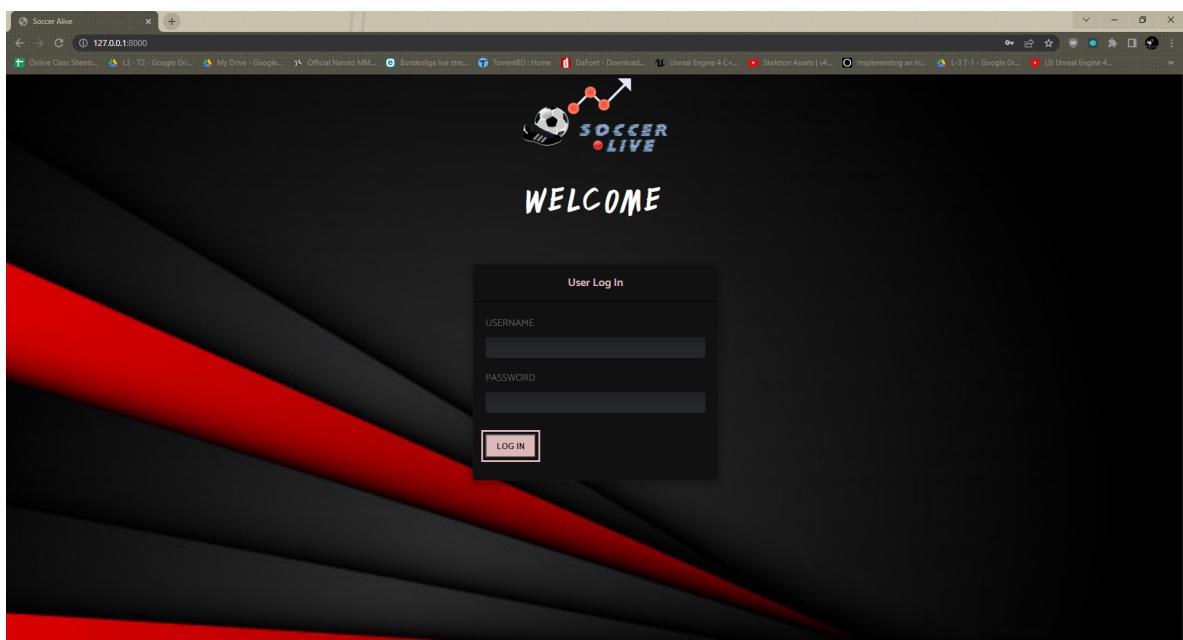


Figure 40: User Login

The first page a user will see after entering the website. If a user logs in, he will go directly to the team module, which will be different case for an admin.

Once in the team data module, the user will be presented with all the available match data sorted by the date.

The screenshot shows a web browser window titled "Team Data". The URL is 127.0.0.1:8000/home/userserviz/. The main content area is titled "Matches (2)". It displays two rows of match information:

DATE	HOME	VS	AWAY	STADIUM
Feb. 15, 2022	PSG	VS	Real Madrid	Le Parc des Princes
Feb. 19, 2022	Real Madrid	VS	Alaves	Estadio Santiago Bernabeu

Figure 41: All Live matches

This data will be shown without filtering. A user can filter the data by the bar above the match list. A user can either filter by only one parameter, or he can even cascade the filters to filter even further.

This is the match center of a selected match. The user will have the option to select any attribute he wants to see and click on it. After the click, the data will be retrieved from the storage, where the data was saved after scraping.

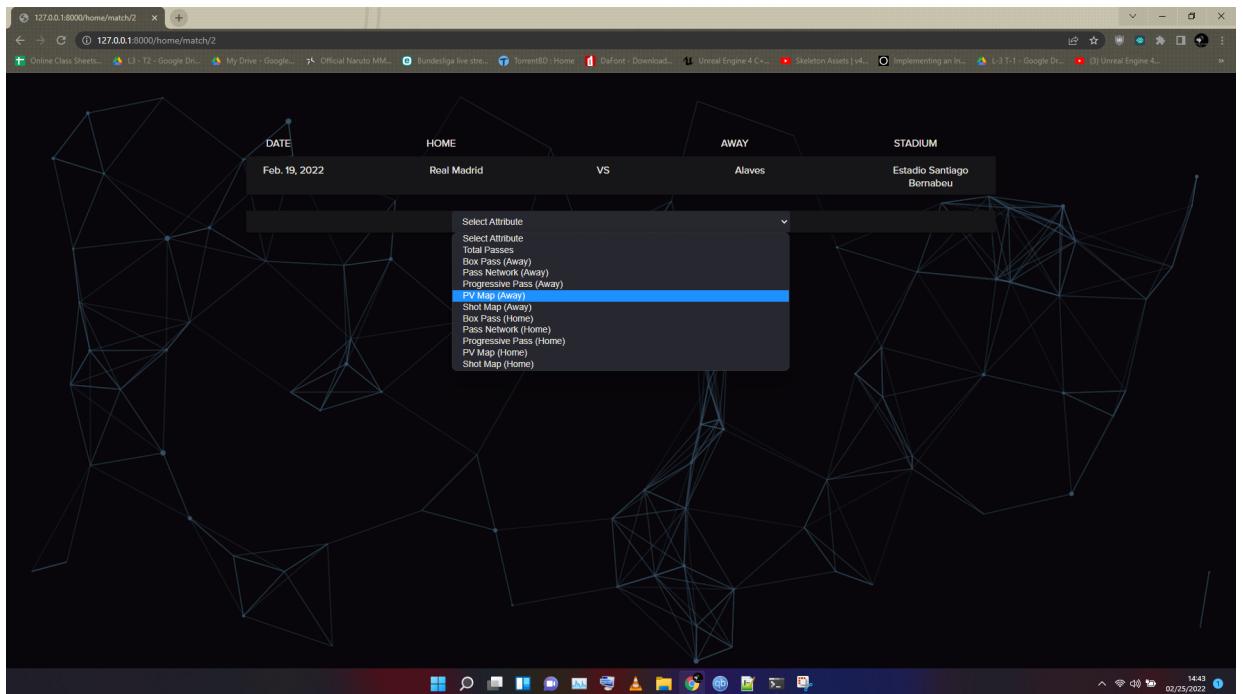


Figure 42: Vizualization Module

As the admin will have scraped the match data and stored the result, the result will be shown from the storage to the user.

The result of the data a user want to see:

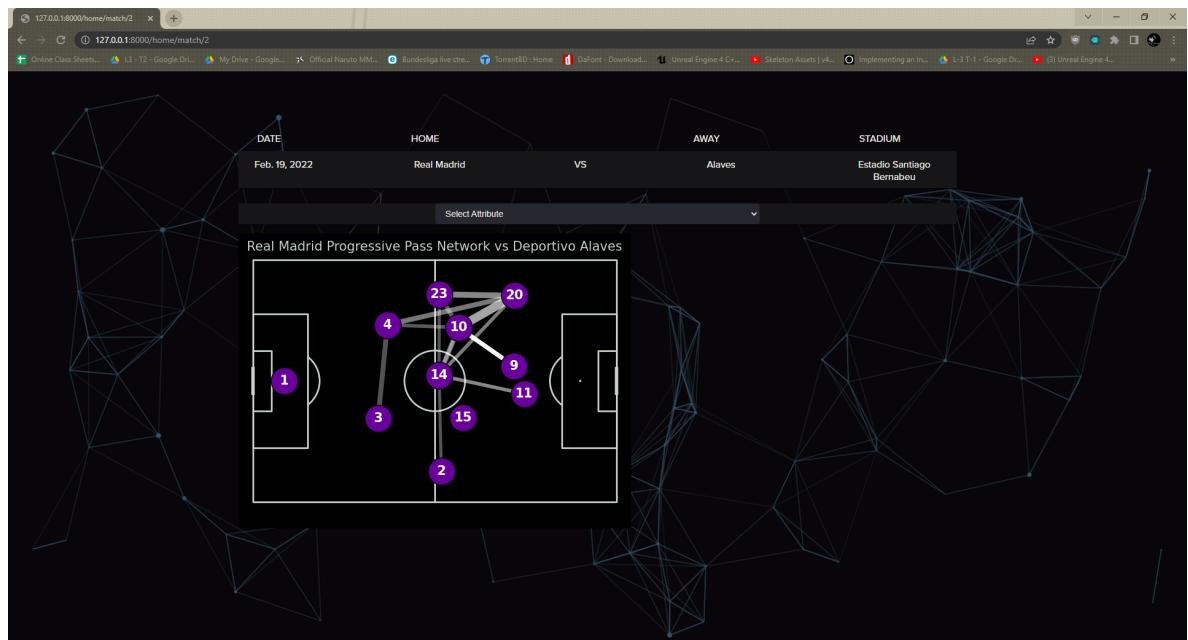


Figure 43: Result Data

This is a specialized metric that we calculated, the user will have the option to see this data as well.

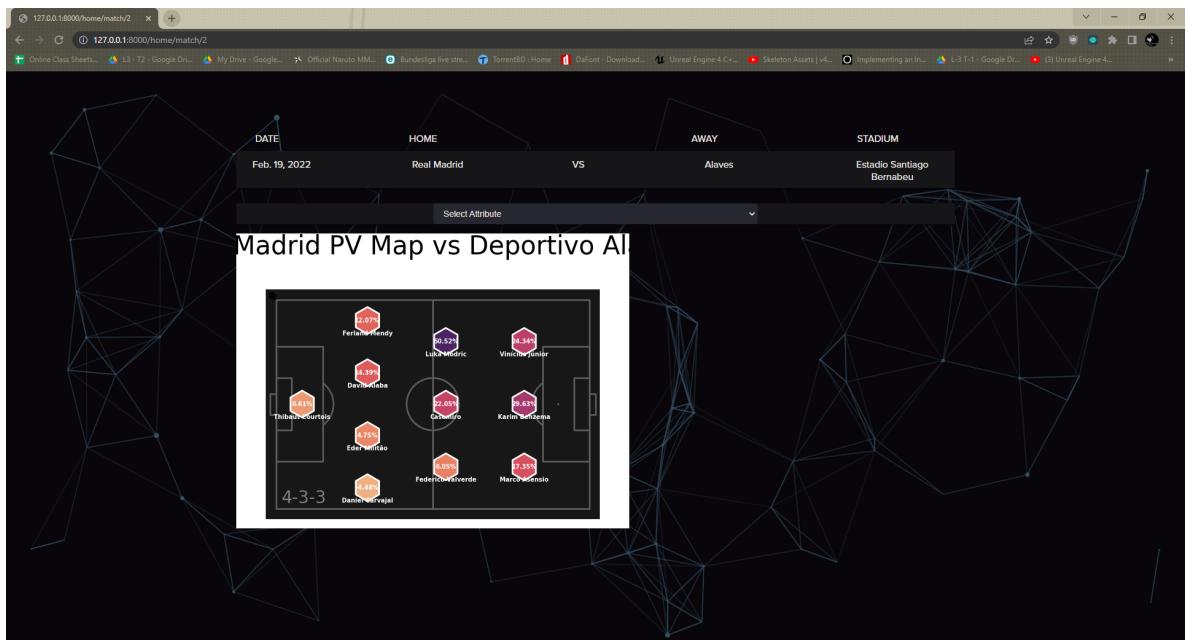


Figure 44: Specialized Metric

After logging in in the admin site, an admin will be redirected here. Here, he can add data or even review the database if necessary.

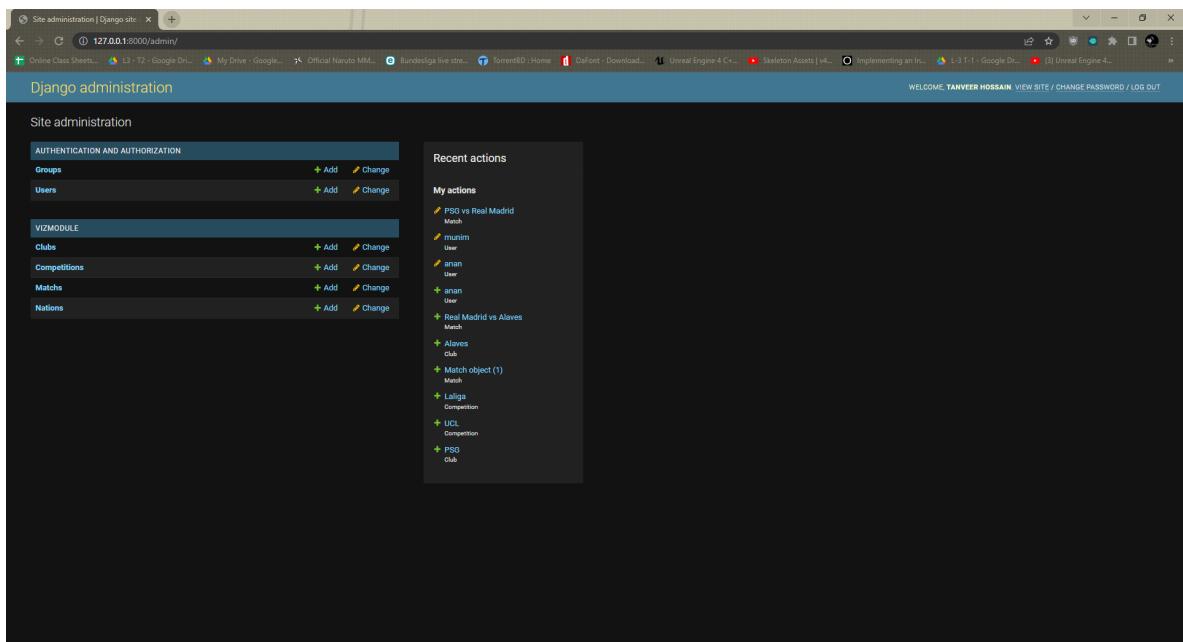


Figure 45: Admin Module

Admin will have the privilege to review this database and modify it as necessary.

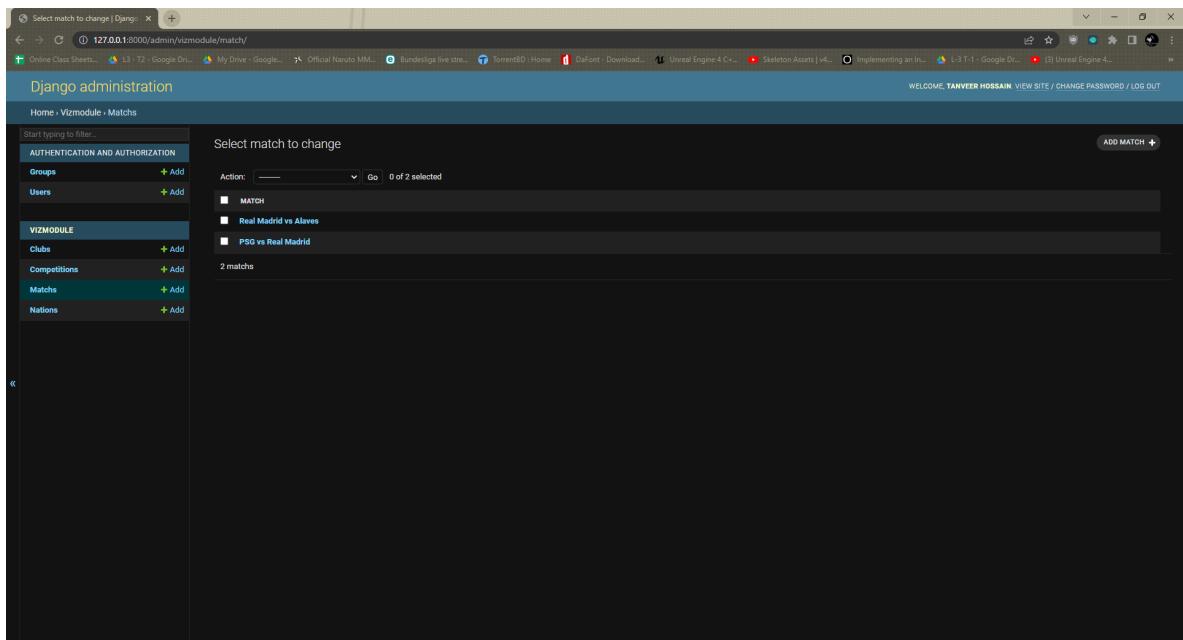


Figure 46: The Database

Admin can add data on nation, club, competition or matches by giving the necessary information as input. After adding a match, the data won't be shown to the user module,

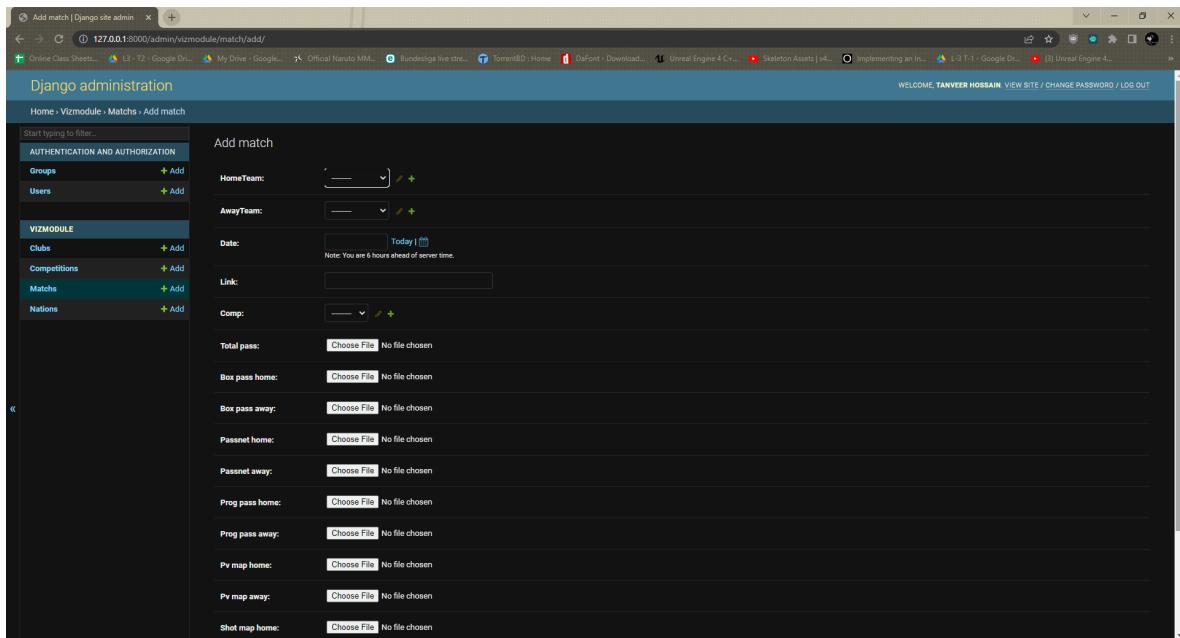


Figure 47: Adding data to database

as the match data should be scraped first. In order to do the scraping, the admin will log in from the user site as mentioned earlier, and he will be redirected to a different page.

On this page, an admin can select an unscraped match from the list, and submit it. After submitting, the backend will do the scraping and the data will be stored on the storage.



Figure 48: Scrape Match

After this, the match will be available in the user list.

16 The Helpful Websites

The websites that we have used to scrap data.

- <https://beautiful-soup-4.readthedocs.io/en/latest/>
- <https://www.selenium.dev/>