So, there are 2 users of the Laravel thing... One is the admin and one is the club-admin.

The admin is the one who can;

- create a new club
- view and edit club list
- create a new match
- view leaderboards
- logout.

The club-admin is the one who can;

- Add new player
- Players List
- View and Edit Players details
- Matches List
- View Leaderboards
- Logout

Admin User

So, from the above list view and edit club and logout is working as expected so what is remaining is the create new club, create new match and view leaderboards report

create new club

the form for this is ready just that it is not working that is it is not able to add the club.

Create a new match

There should be a form to create the new match that is;

- Home Team: Select from the dropdown list of all registered clubs
- Away Team: Select from the dropdown list of all registered clubs
- Date: Select the date the match will be played
- Home Ground: This should be auto picked from whichever team is selected as the home team since while registering the club the home ground is picked.

Once all this is selected then it should create a match for the 2 teams. So now this creates match will allow scoring of the match scores for the match on the club-admin side. Suppose it is Team A vs Team B then if Team B is the home team, then in the matches list side of the club-admin panel should show a place where Team B can do scoring for the match since it is the responsibility of the home team to do the scoring of the match.

View Leaderboards

This is a report that is generated by inputting the scores of matches. It technically is the data while will be used to train and predict the model. There will be 2 reports under the leaderboards report that is the batting report and the bowling report. So, the batting report will include 10 players who are ranked based on their performance that is based on runs sorted from highest to lowest and for the bowling report it will also include 10 players who are ranked based on the performance of their bowling that is sorted based on the number of wickets taken from highest to lowest. This report should be downloadable in pdf format, csv file and excel format .

The other functionalities of the admin user are working.

Now onto the club-admin

Add new player

For this the form is ready on the code just that the button is working that is it is not able to add the new player.

View and Edit Player Details

The club-admin should be able to view and edit the registered players details.

This is the main part

Matches List

As evident from the code on the club side once the admin So once the admin has registered the match or started created a match it should show on the club admin side. On the club admin side, the club admin should be able to start scoring for the match that is to open the form for Having the scores updated. There should be a button to start scoring so once the club admin presses on the start scoring button there will be a form that is displayed and is filled by the club admin. It looks something like this

Toss winner: Dropdown of the name of the club (So if it is team A versus team B. Then there should be a drop down to select either Team A or Team B.)

Opted To: Dropdown to select from Bat First or Bowl First

Select Players for Home Team : The players are selected from a drop-down list of the registered players of that club. It should allow and list out the eleven players selected for that match

Select Players for Away Team : The players are selected from a drop-down list of the registered players of that club. It should allow and list out the eleven players selected for that match

Display the list of the starting eleven of both the team's side by side

After this the club admin then clicks on start 1st innings so once this button is clicked then it opens 2 tabs that is batting first tab and bowling first tab.

So the batting first form looks like this;

Name	Batting	Runs	Bowls	Out / Not Out
Player 1				
Player 2				
Player 3				
Player 4				
Player 5				
Player 6				
Player 7				
Player 8				
Player 9				
Player 10				
Player 11				

- Name - So in the table, all the eleven players that were selected in the starting 11 should be listed there. This is for the team that is batting first.
- Batting - In the batting column it should be a drop-down list to select either batting or Did not Bat. By default, it should be Did not Bat. And if it is default. This means that the other fields should not be editable. It should only be editable once the other option is selected, that is batting.
- Runs - So these are figures that will be filled in by the club admin about the runs scored by that player.
- Bowls - Bowls is also the figures that will be filled by the club admin and it is the number of balls played by that player in that match.
- Out / Not Out - This will be a drop down which the club admin will select either from out or not out.

Once this batting first table is filled. It should save the data to the leaderboards batting report. Then after that it should prompt the admin to start the bowling first form.

So the bowling first form looks like this;

Name	Bowled	Overs Bowled	Bowls	Runs Given	Wickets Taken	Economy
Player 1						
Player 2						
Player 3						
Player 4						
Player 5						
Player 6						
Player 7						
Player 8						
Player 9						
Player 10						
Player 11						

- Name: So in the table, all the eleven players that were selected in the starting 11 should be listed there. This is for the team that is bowling first.
- Bowled: In the bowled column it should be a drop-down list to select either bowled or Did not Bowl. By default, it should be Did not Bowl. And if it is default. This means that the other fields should not be editable. It should only be editable once the other option is selected, that is bowled.
- Overs Bowled: This should be manually filled in by the club admin stating the number of overs bowled by each bowler in that match.

- Bowls: This is the Number filled in the Overs bowled column * 6. So if the overs bowled is 2 then the bowls will be 12 (6*2)
- Runs Given: They should be manually filled by the club admin about the number of runs given by that bowler in total.
- Wicket Taken: This also is manually filled by the club admin and states the number of wickets taken by that bowler in that match.
- Economy: This is automatically calculated by the formula (Runs Given divided by Overs Bowled).

So these are the forms that the club admin will fill in the first innings. So once the forms are filled. Prompt the club and meant to click on start second innings. In the second innings there will be the same two forms, that is the batting form and the bowling form, but in this case now it will read as Batting second and Bowling Second. So the forms are the same as the one in the first innings. Only difference is that the team that was batting first in the first innings will now be the bowling second in the second innings and the team that was bowling first in the first innings will now be the batting second in the second innings. So in the batting second form the players listed over there will be the same players that were there in bowling first form.

So once the two forms are filled, that is the first innings and the second innings form. This data is then taken into the Leaderboards report. As mentioned above, the Leaderboard report will also have two forms, that is the Batting form and the Bowling form. The Leaderboard report for batting looks something like this.

Name	Matches	Runs	Bowls	Outs	Average	Performance Runs 5	Performance Runs 4	Performance Runs 3	Performance Runs 2	Performance Runs 1
Player 1										
Player 2										
Player 3										
Player 4										
Player 5										
Player 6										
Player 7										
Play										

er 8										
Player 9										
Player 10										
Player 11										

- Name: Is the name of the player.
- Matches: Total number of matches that the player has batted in that is in the batting form for both the first innings and the second innings all the players that were selected batting from the dropdown list of batting (Batting , did not Bat).
- Runs: This is the total number of runs scored by that player in all the matches he has played so far.
- Balls: Balls is the number of balls that, that player has played in all the matches that he has played so far.
- Outs: The number of times that player has gotten out in all the matches he has played so far.
- Average: This is calculated by the formula (Runs / Outs).
- Performance 5: The runs scored in the most recent match that that player has played.
- Performance 4: It's the runs scored in the previous match, that is the match that was played before the last match i.e., if the player played a match today and yesterday. Then performance is the runs scored in yesterday's match.
- Performance 3: Runs scored in the second previous match, that is. Last match - 2 matches. For example, if the player was playing on Monday, Tuesday, Wednesday and since today is Wednesday then this is the runs scored on the Mondays match. That is the second previous match.
- Performance 2: Runs scored in the second previous match, that is. Last match - 3 matches. For example, if the player was playing on Sunday, Monday, Tuesday, Wednesday and since today is Wednesday then this is the runs scored on the Sundays match. That is the third previous match.
- Performance 1: Runs scored in the second previous match, that is. Last match - 4 matches. For example, if the player was playing on Saturday, Sunday, Monday, Tuesday, Wednesday and since today is Wednesday then this is the runs scored on the Saturdays match. That is the fourth previous match.

So for the performance data, all the matches performance needs to be updated after every match. So assume there is a player called XYZ who scores 5 runs in the first match, 8 runs in the second match. 12 runs in the third match. 2 runs in the fourth match. And 0 in the fifth match. So then the performance will be;

Performance 5 = 0

Performance 4 = 2

Performance 3 = 12

Performance 2 = 8

Performance 1 = 5

Then assuming in the next match, he scores 20, then the performance will now be.

Performance 5 = 20

Performance 4 = 0

Performance 3 = 2

Performance 2 = 12

Performance 1 = 8

The same applies for all players as The new scores come in. With that, the old scores fade out. Also the data such as the number of matches, runs, balls, all that is calculated and once new match data comes in. It add it adds up to. Whatever was there to previous. For example, if a player played two matches and now plays the third match, then in the leaderboards report it should read three and then whatever he scored in the third match plus the total of whatever was caught in the first second match. So now the total runs in the after the third match will be. The total scored from first match plus second match plus third match. The same with all the other data.

That is only about the Batting 's report. For the Leaderboards reports. Once the batting 's report is filled. Then now went to the bowling leaderboard report. Although nothing on the batting 's report or the bowling's report for the Leaderboards report is not editable. It is just auto picked from the data that was filled in the other tables for the first innings and the second innings.

The leaderboards report for the bowling report looks like this

Name	Matches	Overs Bowled	Bowls	Runs Given	Wickets Taken	Economy	Average	Performance Wickets 5	Performance Wickets 4	Performance Wickets 3	Performance Wickets 2	Performance Wickets 1
Player 1												
Player 2												
Player 3												
Player 4												
Player 5												
Player 6												
Player 7												
Player 8												
Player 9												
Player 10												

Player 11												

- Name: Is the name of the player.
- Matches: Total number of matches that the player has bowled in that is in the batting form for both the first innings and the second innings all the players that were selected bowling from the dropdown list of bowling (Bowling , Did not Bowl).
- Overs Bowled: This is the total number of overs bowled by that player in all the matches.
- Bowls: This is calculated by (6*Total number of overs bowled).
- Runs Given: This is the total runs given by that player in all the matches that he has bowled.
- Wickets Taken: The total number of wickets taken by that player in all the matches that that player has bowled in.
- Economy: Calculated by (Runs Given / Overs Bowled)
- Average: Calculated by (Runs Given / Wickets Taken)
- Performance Wickets 5: The number of wickets taken in the most recent match that that player has played.
- Performance Wickets 4: It's the number of wickets taken in the previous match, that is the match that was played before the last match i.e., if the player played a match today and yesterday. Then performance is the runs scored in yesterday's match.
- Performance Wickets 3: number of wickets taken in the second previous match, that is. Last match - 2 matches. For example, if the player was playing on Monday, Tuesday, Wednesday and since today is Wednesday then this is the runs scored on the Mondays match. That is the second previous match.
- Performance Wickets 2: number of wickets taken in the second previous match, that is. Last match - 3 matches. For example, if the player was playing on Sunday, Monday, Tuesday, Wednesday and since today is Wednesday then this is the runs scored on the Sundays match. That is the third previous match.
- Performance Wickets 1: number of wickets taken in the second previous match, that is. Last match - 4 matches. For example, if the player was playing on Saturday, Sunday, Monday, Tuesday, Wednesday and since today is Wednesday then this is the runs scored on the Saturdays match. That is the fourth previous match.

So for the performance data, all the matches performance needs to be updated after every match. So assume there is a player called ABC who takes 1 wicket in the first match, 1 wicket

the second match. 2 wickets in the third match. 2 wickets in the fourth match. And 0 in the fifth match. So then the performance will be;

Performance Wickets 5 = 0

Performance Wickets 4 = 2

Performance Wickets 3 = 2

Performance Wickets 2 = 1

Performance Wickets 1 = 1

Then assuming in the next match, he takes 3 wickets, then the performance will now be.

Performance Wickets 5 = 3

Performance Wickets 4 = 0

Performance Wickets 3 = 2

Performance Wickets 2 = 2

Performance Wickets 1 = 1

The same applies to all the players as the new data comes in the old one fades out and just like the batting leaderboards report even this one is not editable report that is it should just be view only. And is all cumulative data such that it adds to the previous data where necessary.

Both the reports are updated after every match and this is what then should be posted under the View leaderboards that is on both the admin side and the club-admin side. This report is then downloadable and used for training and prediction to give the best starting eleven for the next match amongst players combined from all the clubs.

So for the prediction model now.

Since now we will have 2 reports that is the batting leaderboards report and the bowling leaderboards report. It should use that data to predict the performance in upcoming matches and help in selecting the best starting eleven for the next match.

For the batting leaderboards report use the parameters performance 5, performance 4, performance 3, performance 2, performance 1 together with the average. So this will technically predict performance of runs that will be scored in the next match. So if the prediction of runs is above 20 runs then that player should be selected in the next match together with the average of more that 15 should be picked. Thus from the batting prediction it should pick 6 players.

Then the remaining 5 players of the starting eleven will come from the bowling leaderboards report. This is now predicting the performance in the next match using the parameters performance wickets 5, performance wickets 4, performance wickets 3, performance wickets 2, performance wickets 1 to predict the performance in the next match. Together with the economy parameter so anyone predicted to pick more than 2 wickets in the next match with the lowest economy lower than 6 should be selected that is the top 5 players who will pick more than 2 wickets in the next match and have an economy of lower than 6.

Then list down the players list of the starting eleven of all the players predicted to perform well for the next match.