

CO227::Computer Engineering Project - Report

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# Tournament Management System

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## **Abstract**

‘Managing’ a cricket tournament is not as simple as it looks. When managing cricket tournaments, tournament administrators go through a painful process of entering match and tournament information into physical and large data sheets. And, they go through a lot of trouble to match the teams in a tournament.

With the difficulty of handling a large number of matches manually, there are international level softwares out there to automate these processes. These systems that are used to manage matches and tournaments are known as ‘Tournament management systems’.

By using these systems, tournament administrators have achieved a great relief in planning the match schedules and managing the matches. But those softwares are not available for small and medium scale club levels, or they are very complex that small clubs tend to stick to the traditional physical managing systems of club level tournaments. Therefor, this project offers a flexible and easily adoptable web application for small and medium sized clubs to easily manage the tournaments.

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# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 Purpose and background**

When managing cricket tournaments and matches, tournament administrators in the past went through a painful process to match the teams in a tournament, and to enter match and tournament information into physical and large data sheets.

With the increasing difficulty of handling a large number of matches manually, there are international level softwares to automate these processes. These systems that are used to manage tournaments are known as ‘Tournament management systems’. By using these systems, tournament administrators have achieved a great relief in planning the match schedules and managing the matches. But those softwares are not adoptable by small and medium scale club levels as they are custom made for those parties, and are not for sale. Therefor, this project offers a flexible and easily adoptable web application for small and medium sized clubs to easily manage the tournaments.

### **1.2 Structure**

The report is organised in a way that a complete walk though of the project details are presented.

First, some related work was analysed and discussed. After understanding the limitations and weaknesses of those work, a model was designed to get the intended results and intended objectives. Then under a well planned structure, after identifying objectives and the scope, the project was executed as explained in the ‘methodology’ section in detail.

### **1.3 Parameters of the project**

Our project was a plan of three basic intentions;

1. Storing match and tournament data in a centralised location
2. Showing the real time updates of the match and the tournament
3. Easy match managing system by automatic matching of the teams

It is very important that you have a history of data of completed tournaments for many reasons and situations such as introducing a weightage for the teams in matching teams against each other. And with our product where a cloud storage would be used to store the tournament data, a club will be able to securely store and maintain tournament data. It was

succeeded by introducing a method of dynamically generated databases and tables to systematically arrange tournament information in a cloud storage.

As in the internationally played matches, even in club level matches, it is very important to display the live scores in real time. It was successful with an additional step to display the real time updates of the player performance in each match as well as in the complete tournament.

Even though we were successful in materialising the first two intentions, with some practical problems which will be described later, we couldn't achieve the 3rd objective of the project, to automate the matching of the teams in each round under the categories of 'league' and 'knockout'.

## CHAPTER 2

### RELATED WORK

We could find several products related with the project.

1. <http://cricket.jhalak.com> is a web application which provides almost the same features which our Tournament management provides. But the scope of the particular web application is higher than our system because it's not only based on Cricket. But our system is specifically based on Cricket. Because of that, our web application is simple and can be used to manage club level tournaments as well while it has the ability to manage a larger tournament as well. The main difference between these two web applications is the simplicity. Features and the structure provided in our system is not complicated for any user.
2. <http://scheduler.leaguelobster.com/> is also a similar kind of web application that could be found. But this only allows the tournament administrator to schedule matches and display the schedule details. But our system includes match managing methods, tournament managing methods and real time updated score card as well, making it more supportive and fit for purpose.

## **CHAPTER 3**

### **OBJECTIVES AND SCOPE**

#### **Purpose**

Purpose of this system is to design a simple cricket tournament management system, as most of the available tournament managing systems are complicated for normal users. Also to give the administrative access for tournament managers ,and to provide live updates of the matches for the viewers.

#### **Scope**

The web application product ‘Cricket Tournament Management System’ will be an application that will provide the features of storing all the match data and the tournament details in separate dynamically created databases, and it’ll show the real time updates of every match with detailed view or in a simple view on user demand, and finally to provide methods to easily manage matches by placing them in teams.

But automatically placing the teams in a group gave a practical problem. One of the main reasons is the inability to place the teams after the first round, because the results of the first round will be deciding the teams of the second round in situations like knockout matches. And also, the administrator has no details about the past match results. The unavailability of that information about teams caused this system not to include an automatically placing teams in groups. But still this includes a match managing system using manual inputs.

# CHAPTER 4

## METHODOLOGY

### 4.1 OVERVIEW OF METHODOLOGY

#### 4.1.1 MANAGING THE TORNAMENT

Log in to the system is given only to the authorized users. They are here by refer as admin users. When user name and password are given user have the chance to choose to create a tornament. Here the user name and passwords are hard coded. User name is ‘user’ and password is ‘password’.

In the Tournament management system we have developed, there is a pre built database called TRMDB where the details about the tournaments are recorded. Inside this database there is only one table and it is ‘trm’. This entity has only 2 attributes.

#### TRMDB

TRM

id	name
----	------

(Table 4.1)

When creating a tournament after we give the name of the tournament and number of teams it will automatically create a database in the name of the tournament. Actualy whole process after this stage is dynamic. If the name of the tournament is IPL it will automatically create a database called ipl. Inside this database at the beginning there are tables as matches and teams. Then we have to enter the name of the teams. According to the name of the teams inside the database automatically tables will be made. Then the database have tables in the names of teams too.

#### IPL

matches

id	name	team1	team2
----	------	-------	-------

(Table 4.2)

teams

teamNumber	name
------------	------

(Table 4.3)

If the names of the teams are SL and AUS then there will be tables as follow.

SL

playerNumber	name
--------------	------

(Table 4.4)

AUS

playerNumber	name
--------------	------

(Table 4.5)

Now the process of making the tournament is over. Now we have to manage it by making matches. But before the mid evaluation the system we developed had this facility to automatically schedule the tournaments. But due to practical problems like giving weights to the team according to their performance we had to omit it.

#### 4.1.2 MANAGING THE MATCH

In the above section how a tournament will be made is discussed. Now we have to manage the tournament by making matches. Here the user will have to enter details about the round and the name of the ground. Name of the teams can be choose by the dropdown menu and when we proceed a new database will be automatically made in the name by using the details user gave. If this is a first round game and teams are SL and AUS. Name of the database will be round1\_SL\_vs\_AUS. In parallel to this name of the match is entered in to the matches table in the database of the current tournament. Inside the new database there are tables as inning1, inning2 and players.

inning1

id	score	wickets	wideball	noball	batsmen1	batsmen2	bowler	balls
----	-------	---------	----------	--------	----------	----------	--------	-------

(Table 4.6)

Inning2

id	score	wickets	wideball	noball	batsmen1	batsmen2	bowler	balls
----	-------	---------	----------	--------	----------	----------	--------	-------

(Table 4.7)

players

id	name	score	ballsfaced	six	four	oversbowled	wickeets	wide	no	runs
----	------	-------	------------	-----	------	-------------	----------	------	----	------

(Table 4.8)

#### 4.1.3 UPDATING THE MATCH

After we proceed it will give a summary about the match details and then after user proceed there are 2 tabs opened to edit information about match. Only the details about score, wickets, noball, wideball, batsmen1, batsmen2, bowler are filled by user. System automatically decide whether it is a ball or not according to the number user gives to the noball and wideball boxes. This section should be filled ball by ball. In the batsmen1,batsmen2 and bowler boxes what user has to put is the player ids given to the

players. It will be from 1 to 22. 1 to 11 will be given to the team who bats first. And from 12 to 22 will be given to the team who bowls first.

In the other tab there will be boxes to add information about players. The information in this tab will be directly related to the players table in the database mention in above section.

Note: if the admin user who enter data logout before the match ends there is a button called manage current match to get in to the current match and continue updating.

#### 4.1.4 END OF THE MATCH

After match is end a full summary of the match will be displayed. This will include the details about two innings and player by player information.

#### 4.1.4 DISPLAYING THE MATCH

Information about the match will be displayed in the home page. Innings will be displayed in the screen with details of total, no of wickets, current batsmen, batsmen in the other side and current bowler. This is updated using the data from inning1 and inning2 tables. For total, number of wickets and no of overs total of each column will be selected. Here the number of balls should be displayed as overs for that following formula was used.

$\$over1 = \$row2["balls"]/6;$

$\$over = floor(\$row2["balls"]/6);$

*echo "Over ".\\$over. ":" .(\\$row2["balls"]-6\*\\$over). "<br>";*

Furthermore using the details obtained run rate and wickets in hand are calculated using simple algorithms.

*if(\\$over1=='0') {*

*\\$runrate='0';*

*} else {*

*\\$runrate = \\$total/\\$over1;*

*}*

*\\$wickHand = '10'-\\$wicketsT;*

*echo "##Run Rate: ". \\$runrate. " ##Wickets in hand: ".\\$wickHand."<br>";*

Along with the current batsmen and bowler their personal information will be displayed for a batsman, his current score and number of balls faced will be displayed and for the bowler how many overs bowled and how many wickets taken will be displayed. These data are taken from **players** table.

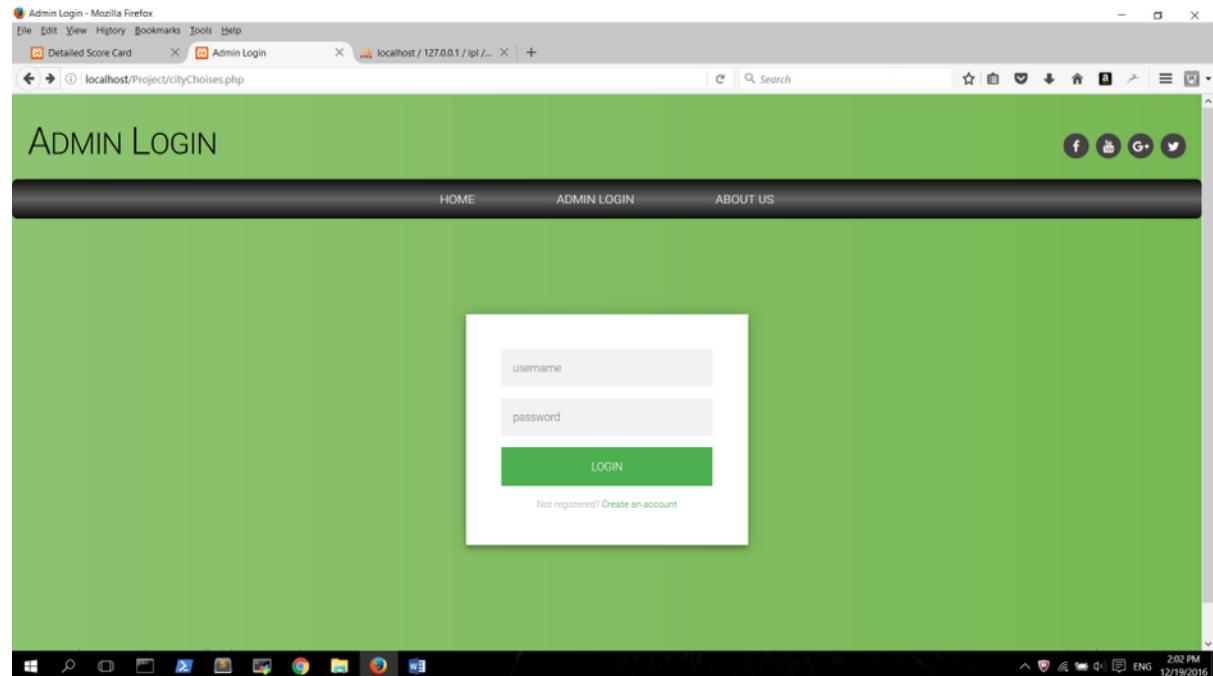
Far more to give the big picture of the match there is a button to go to the detailed view of match. In that view batting and bowling performances of players will be displayed.

#### 4.1.5 REFER TO PAST MATCHES

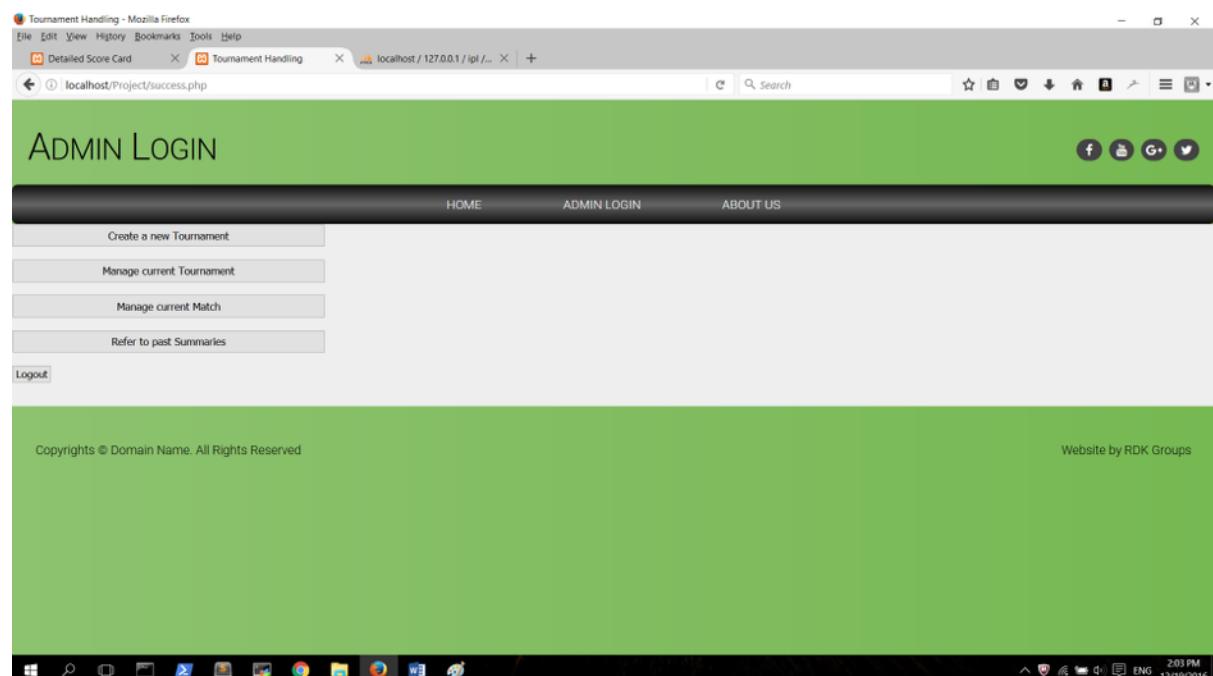
Other than creating a match there is a tab for admin users to view the past match summaries. There all the databases will be used to take information.

### 4.2 ACHIEVEMENTS

#### 4.2.1 ENTER TO THE SYSTEM

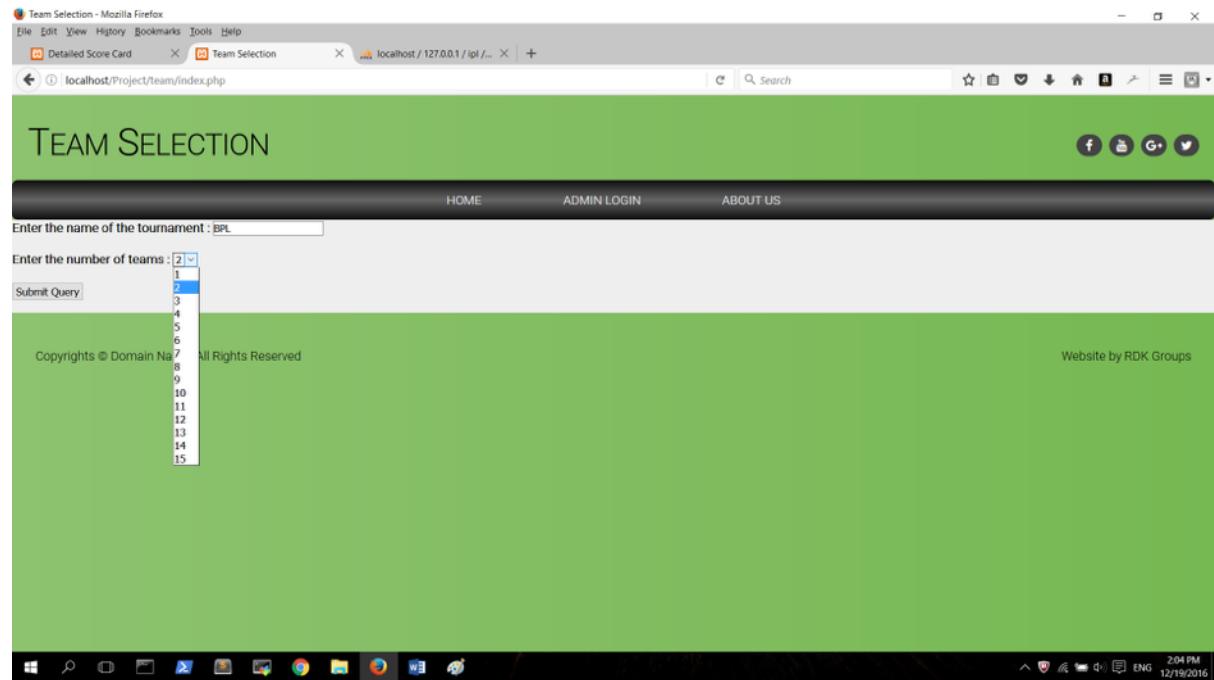


(Figure 4.1)

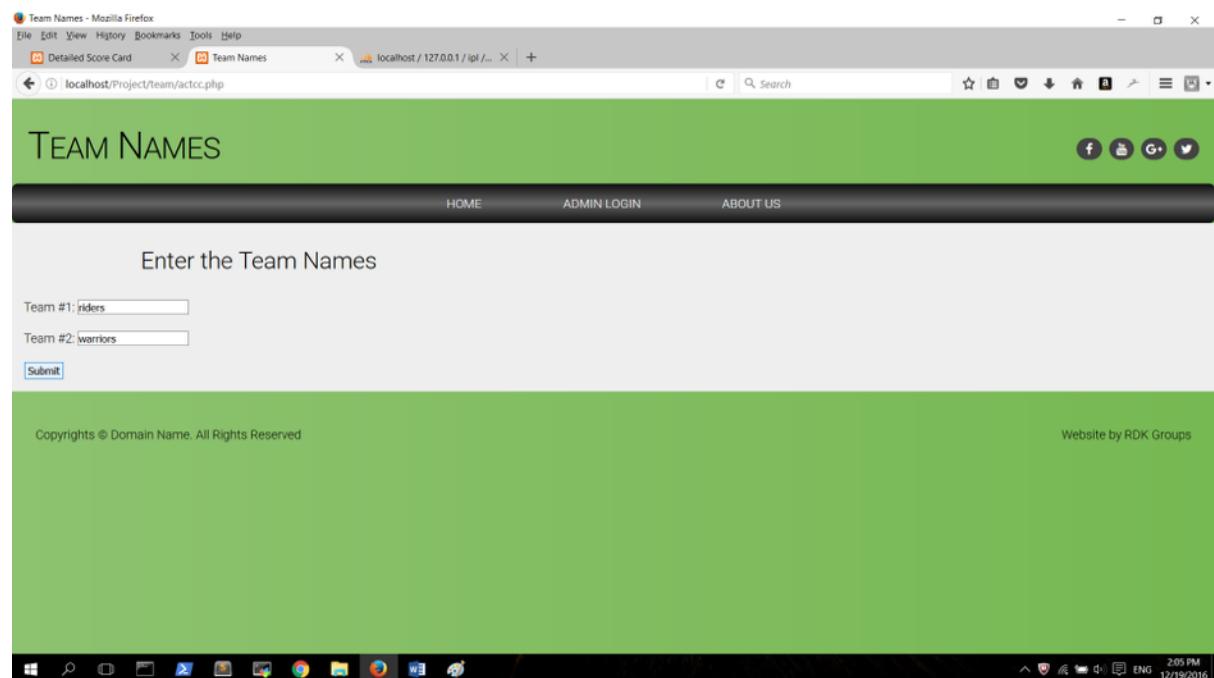


(Figure 4.2)

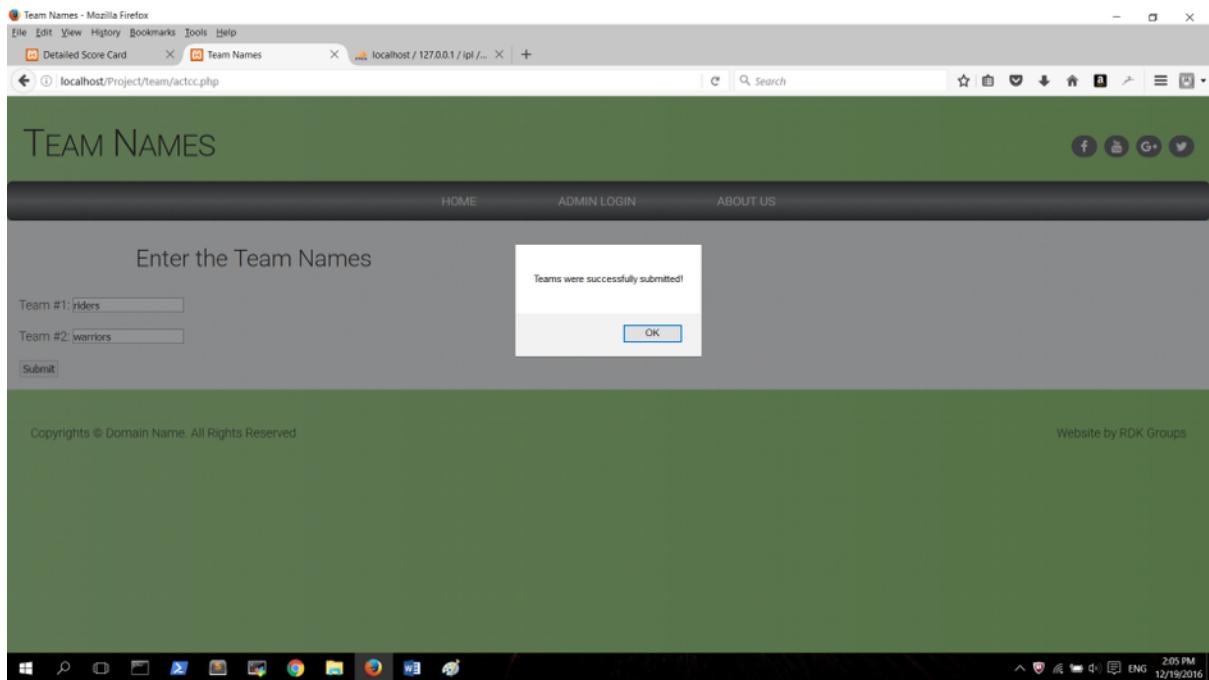
#### 4.2.2 CREATING A TOURNAMENT



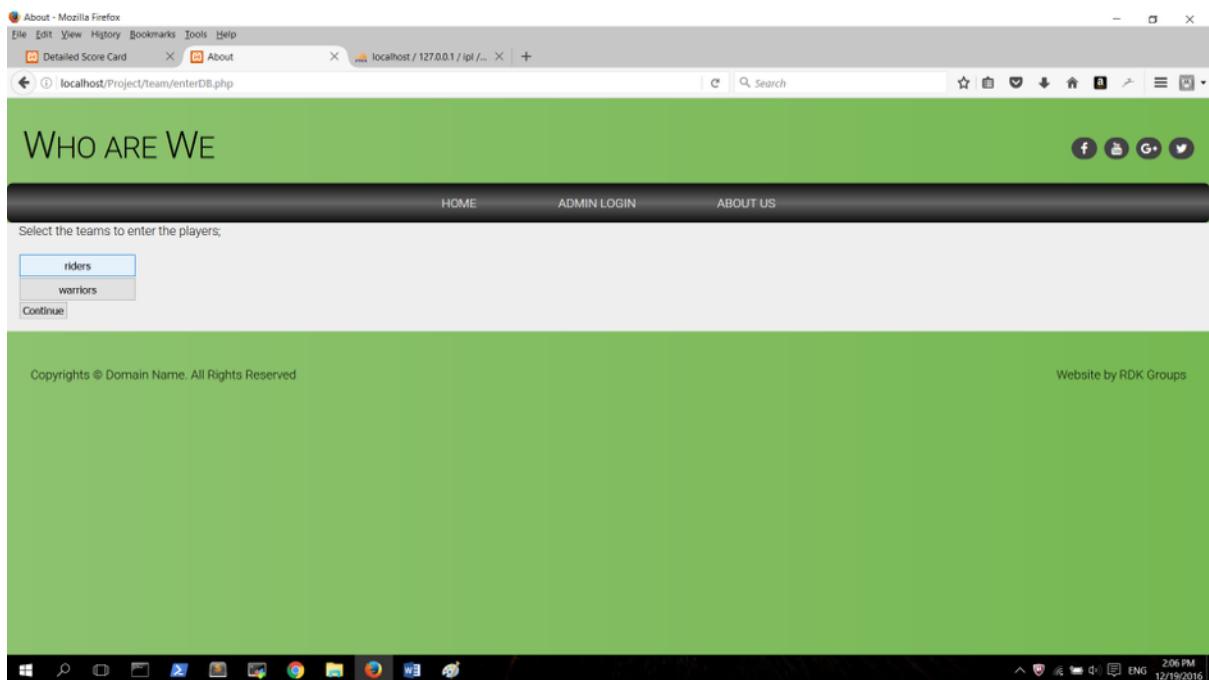
(Figure 4.3)



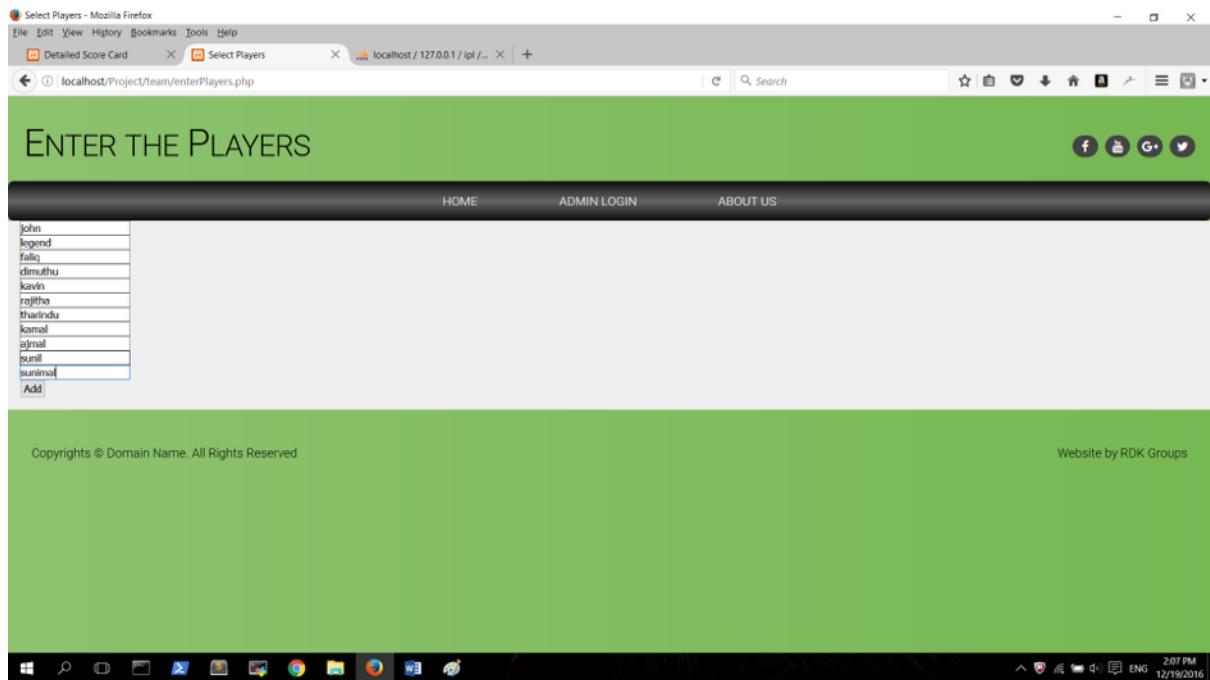
(Figure 4.4)



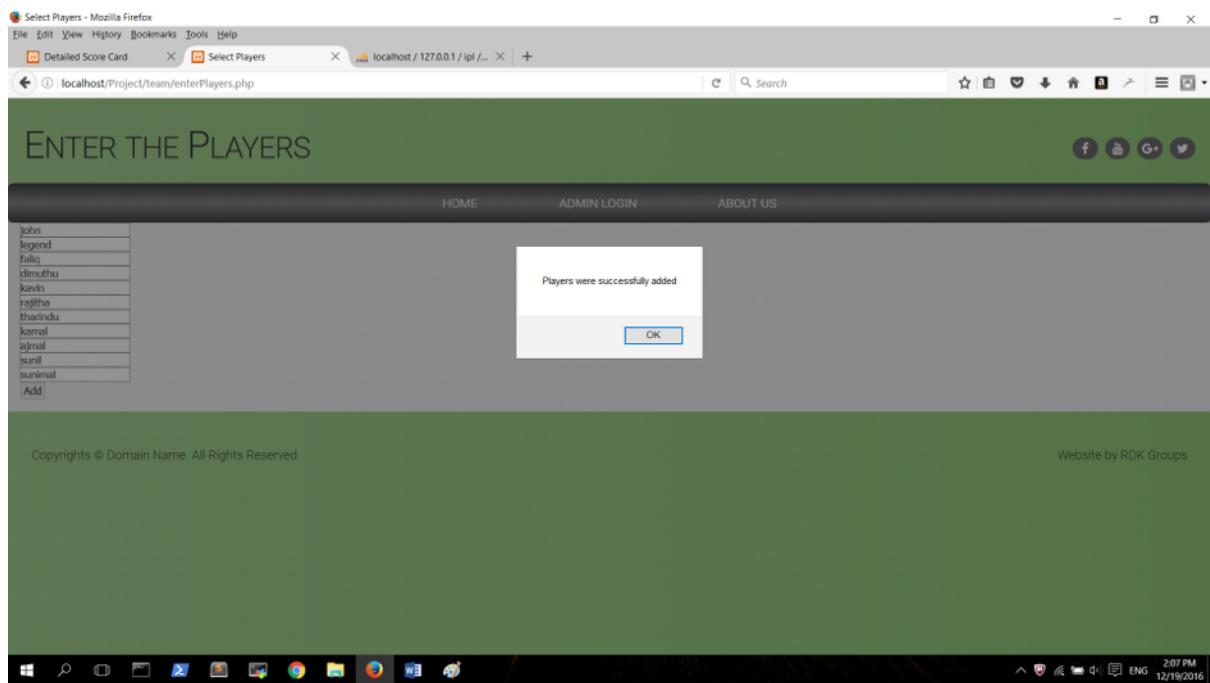
(Figure 4.5)



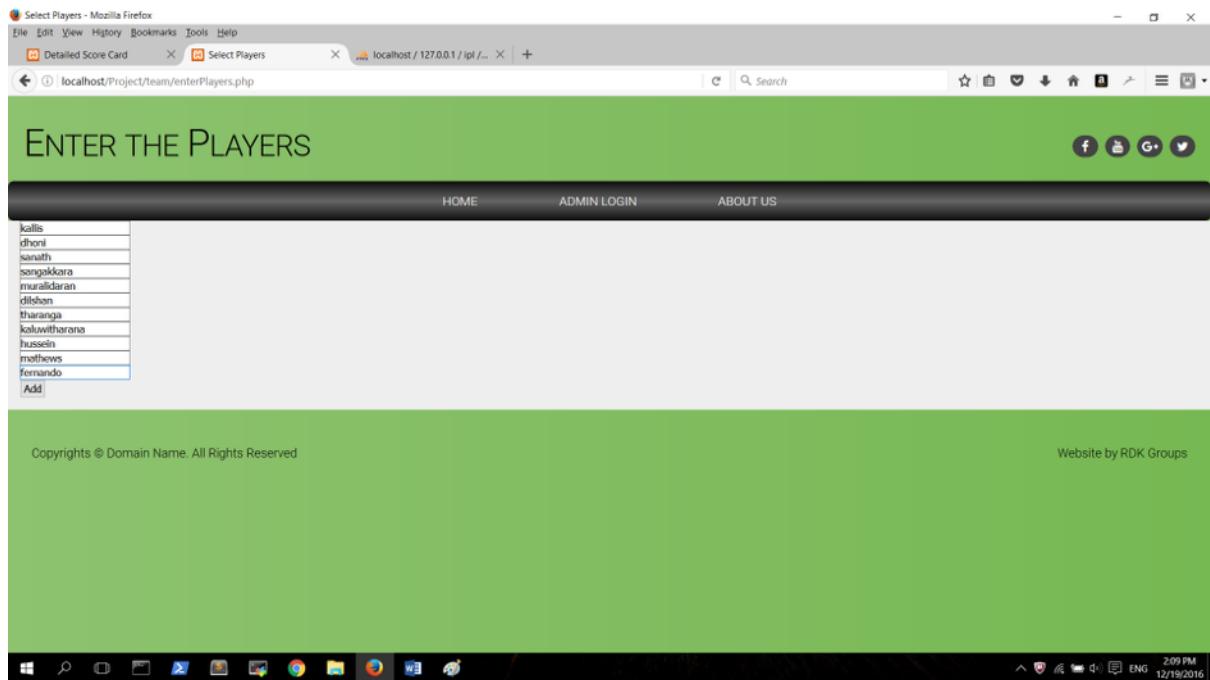
(Figure 4.6)



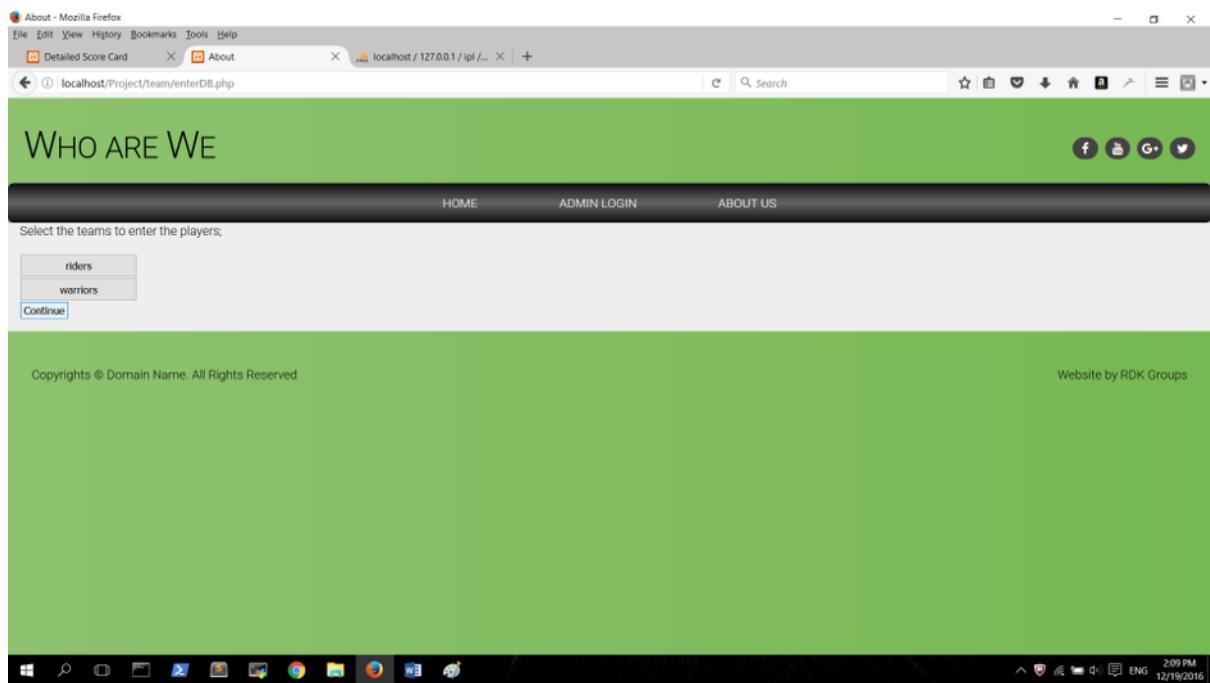
(Figure 4.7)



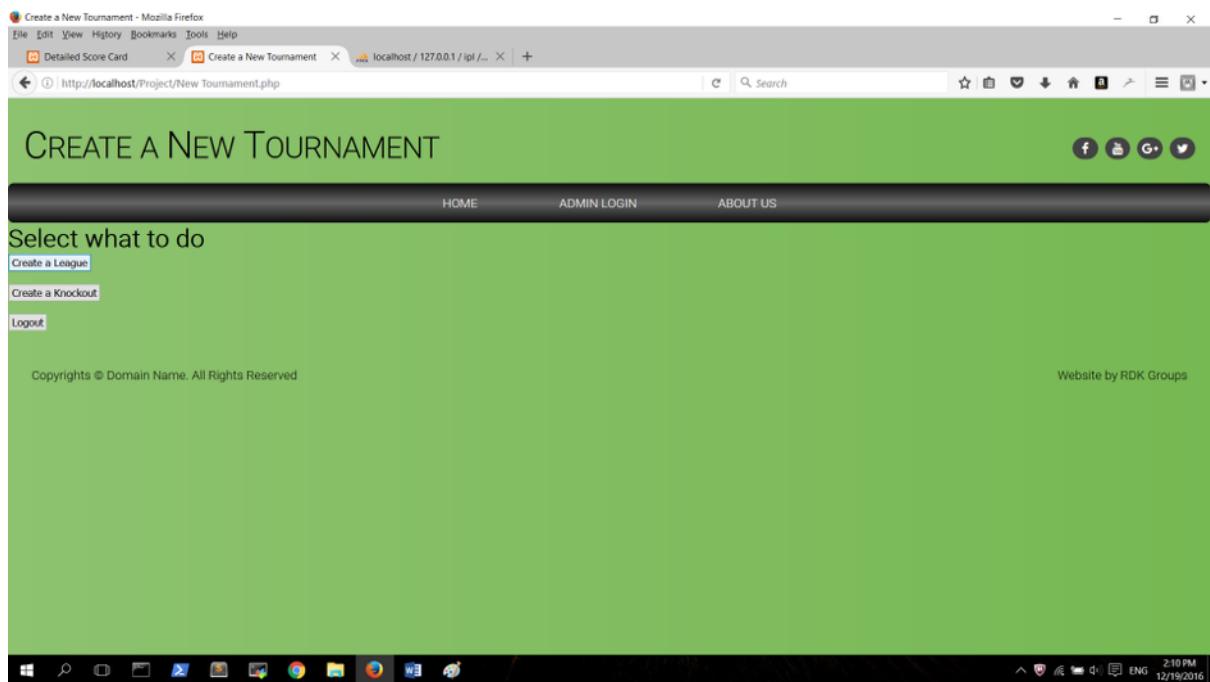
(Figure 4.8)



(Figure 4.9)

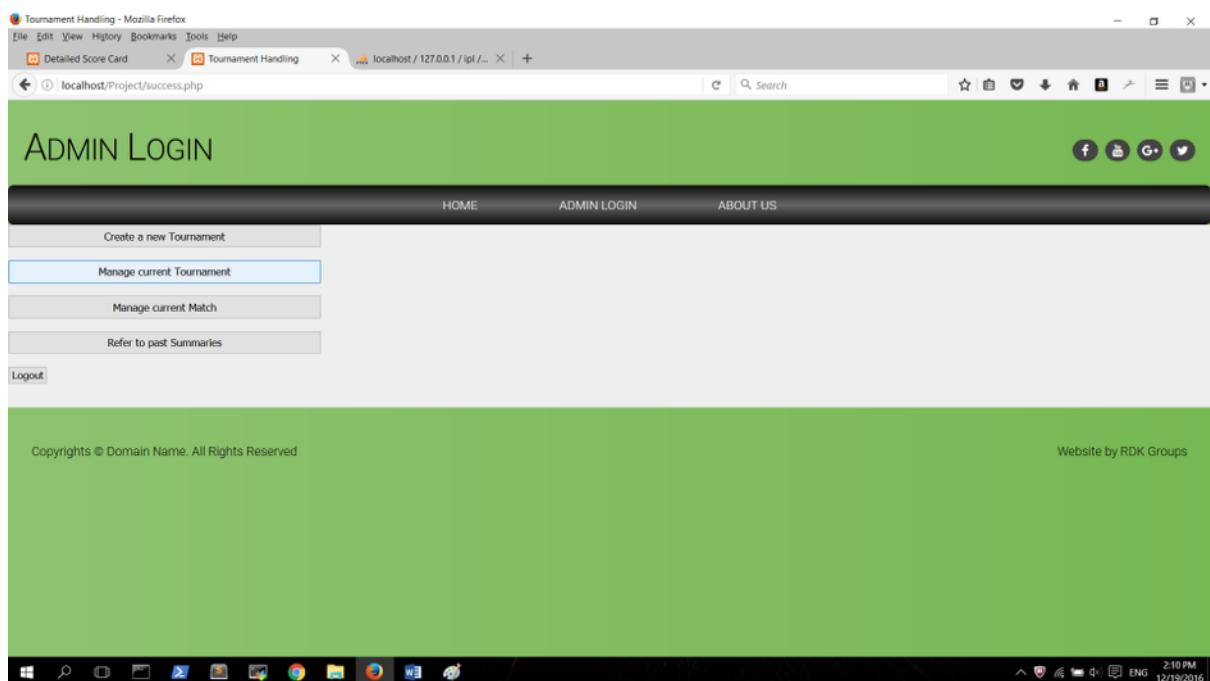


(Figure 4.10)

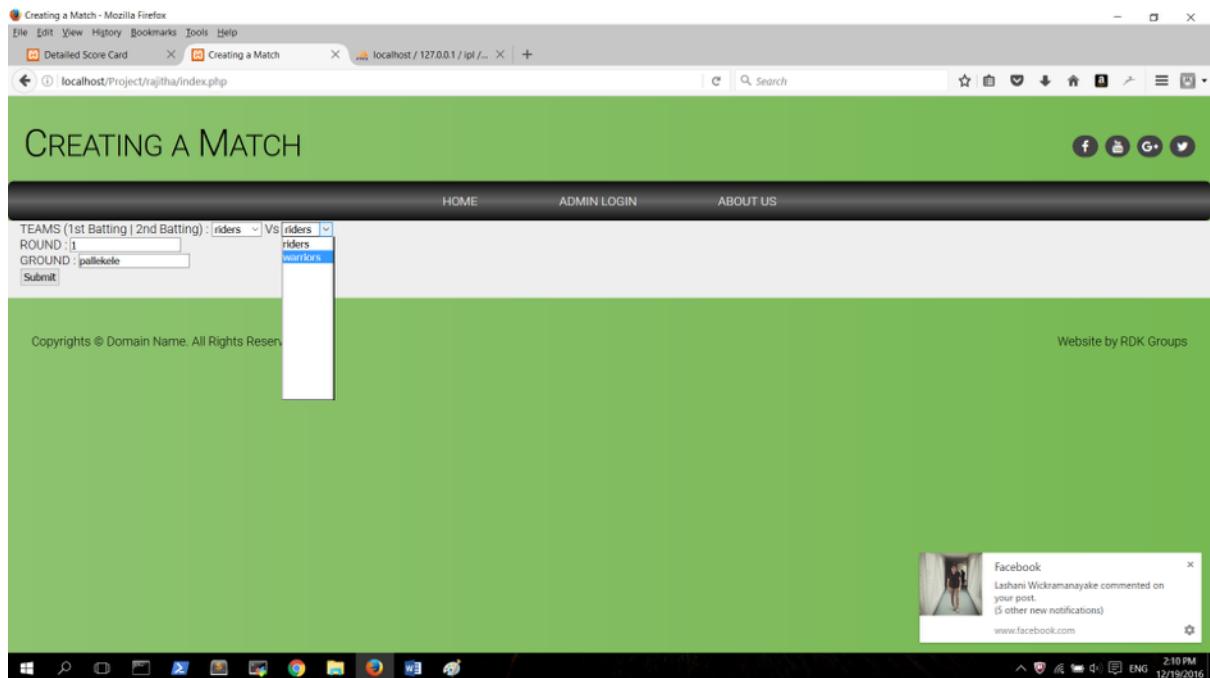


(Figure 4.11)

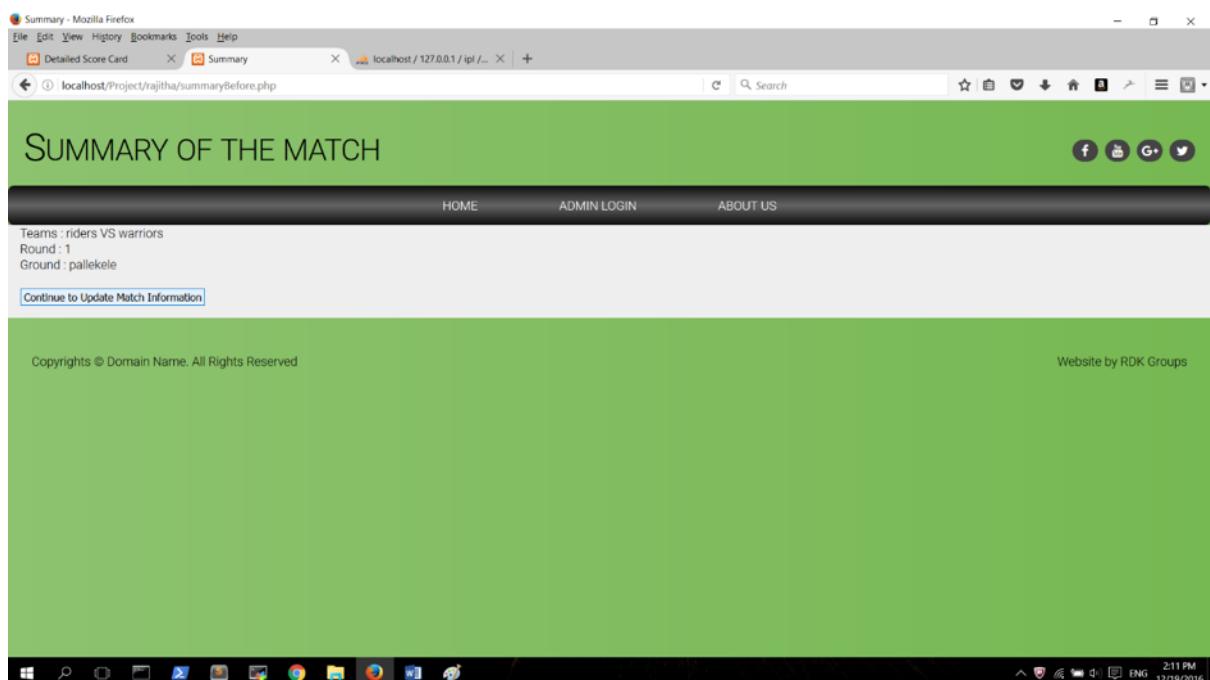
#### 4.2.2 CREATING A MATCH



(Figure 4.12)



(Figure 4.13)



(Figure 4.14)

#### 4.2.2 UPDATING THE FIRST INNING OF THE MATCH

**FIRST INNING**

HOME ADMIN LOGIN ABOUT US

**riders**

Score:

Wickets:

Wide:

No Ball:

Batsmen 1:

Batsmen 2:

Bowler:

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Website by RDK Groups

(Figure 4.15)

**PLAYER PERFORMANCE**

HOME ADMIN LOGIN ABOUT US

**ROUND\_1\_riders\_VS\_warriors**

Player Name	Score	Balls Faced	6's	4's	Overs Bowled	Wickets	Wides	No Balls	Runs
john	4	1	0	1	0	0	0	0	0
legend	0	0	0	0	0	0	0	0	0
faliq	0	0	0	0	0	0	0	0	0
dimuthu	0	0	0	0	0	0	0	0	0
kavin	0	0	0	0	0	0	0	0	0
rajitha	0	0	0	0	0	0	0	0	0
tharindu	0	0	0	0	0	0	0	0	0
kamal	0	0	0	0	0	0	0	0	0
ajmal	0	0	0	0	0	0	0	0	0
sunil	0	0	0	0	0	0	0	0	0
sunimal	0	0	0	0	0	0	0	0	0
kallu	0	0	0	0	0	0	0	0	0
dhoni	0	0	0	0	0	0	0	0	0
sanath	0	0	0	0	0	0	0	0	0
sangakkara	0	0	0	0	0	0	0	0	0
muralidaran	0	0	0	0	0	0	0	0	0
dilshan	0	0	0	0	0	0	0	0	0
tharanga	0	0	0	0	0	0	0	0	0
kaluwitharana	0	0	0	0	0	0	0	0	0
hussein	0	0	0	0	0	0	0	0	0
mathewes	0	0	0	0	0	0	0	0	0

(Figure 4.16)

#### 4.2.2 DISPLAYING THE DETAILS OF MATCH IN HOME PAGE

The screenshot shows a Firefox browser window with the title "Cricket Tournament management system - Mozilla Firefox". The address bar displays "localhost / 127.0.0.1 / ipl / ...". The main content area has a header with "HOME", "ADMIN LOGIN", and "ABOUT US".

**Match Details:**

- ROUND\_1\_riders\_VS\_warriors**
- First Inning:**
  - Total: 4
  - Wickets: 0
  - Over 0.1
  - ##Run Rate: 24 ##Wickets in hand: 10
  - john\* 4(1)
  - legend 0(0)
- Matches:** ROUND\_1\_riders\_VS\_warriors

**Tournament Details:**

- Tournament Name:** BPL
- CRICKET TOURNAMENT** logo featuring stylized green and orange wavy patterns.

At the bottom, there is a Windows taskbar with various icons and a status bar showing "2:15 PM 12/19/2016".

(Figure 4.17)

The screenshot shows a Firefox browser window with the title "Cricket Tournament management system - Mozilla Firefox". The address bar displays "localhost / 127.0.0.1 / ipl / ...". The main content area has a header with "HOME", "ADMIN LOGIN", and "ABOUT US".

**Match Details:**

- ROUND\_1\_riders\_VS\_warriors**
- First Inning:**
  - Total: 10
  - Wickets: 0
  - Over 0.2
  - ##Run Rate: 30 ##Wickets in hand: 10
  - john\* 8(1)
  - legend 0(0)
- Matches:** ROUND\_1\_riders\_VS\_warriors

**Tournament Details:**

- CRICKET TOURNAMENT** logo featuring stylized green and orange wavy patterns.

At the bottom, there is a Windows taskbar with various icons and a status bar showing "2:17 PM 12/19/2016".

(Figure 4.18)

## 4.2.2 DETAILED VIEW OF THE MATCH

Player Name	Batting				Bowling				
	Score	Balls Faced	6's	4's	Overs Bowled	Wickets	Wides	No Balls	Runs
john	8	1	1	1	0	0	0	0	0
legend	0	0	0	0	0	0	0	0	0
faliq	0	0	0	0	0	0	0	0	0
dimuthu	0	0	0	0	0	0	0	0	0
kavin	0	0	0	0	0	0	0	0	0
rajitha	0	0	0	0	0	0	0	0	0
tharindu	0	0	0	0	0	0	0	0	0
kamal	0	0	0	0	0	0	0	0	0
ajmal	0	0	0	0	0	0	0	0	0
sunil	0	0	0	0	0	0	0	0	0
sunimal	0	0	0	0	0	0	0	0	0
kallis	0	0	0	0	0	0	0	0	8
dhoni	0	0	0	0	0	0	0	0	0
sanath	0	0	0	0	0	0	0	0	0
sangakkara	0	0	0	0	0	0	0	0	0
murallidaran	0	0	0	0	0	0	0	0	0
disshan	0	0	0	0	0	0	0	0	0
tharanga	0	0	0	0	0	0	0	0	0
kaluwitharana	0	0	0	0	0	0	0	0	0
hussein	0	0	0	0	0	0	0	0	0
mathewes	0	0	0	0	0	0	0	0	0
fernando	0	0	0	0	0	0	0	0	0

(Figure 4.19)

## 4.2.2 UPDATING THE SECOND INNING OF THE MATCH

riders

Score:

Wickets:

Wide:

No Ball:

Batsmen 1:

Batsmen 2:

Bowler:

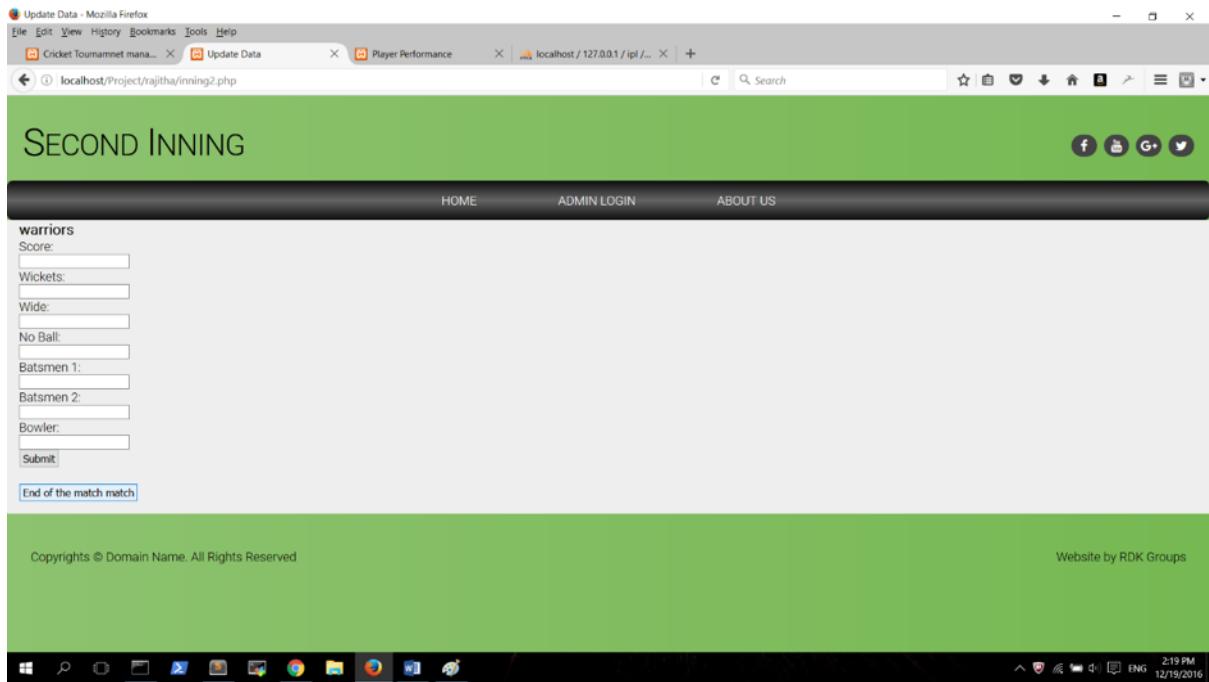
Submit

[Next Inning](#)

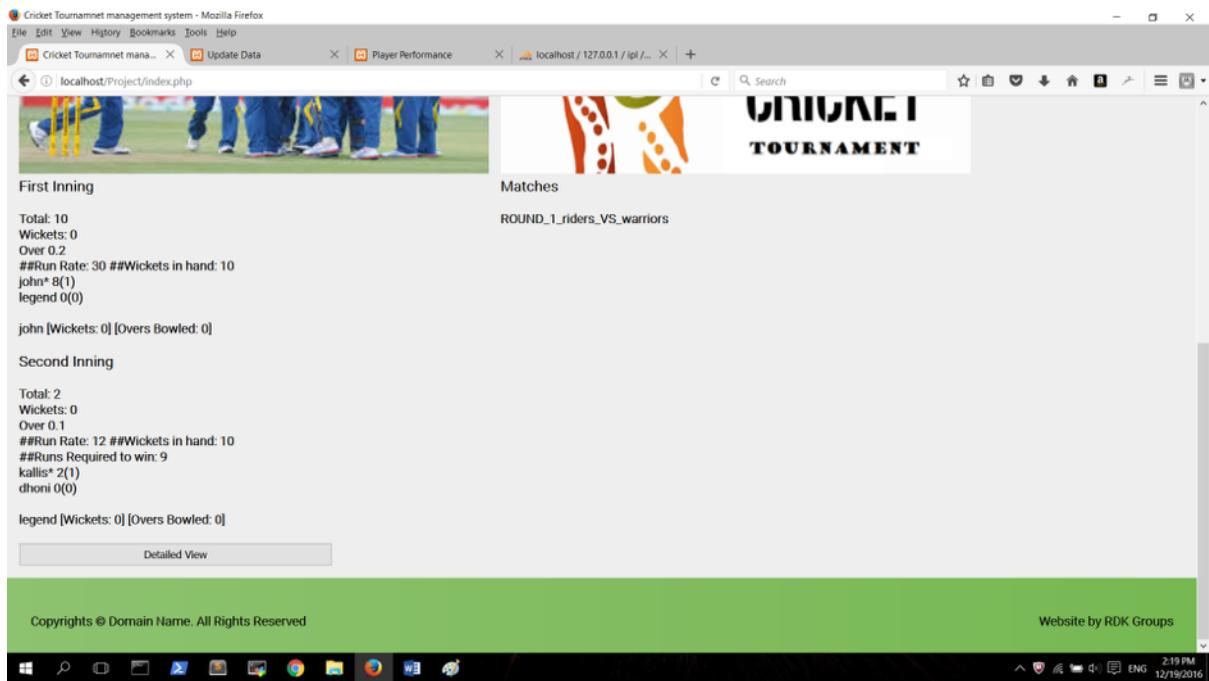
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(Figure 4.20)



(Figure 4.21)



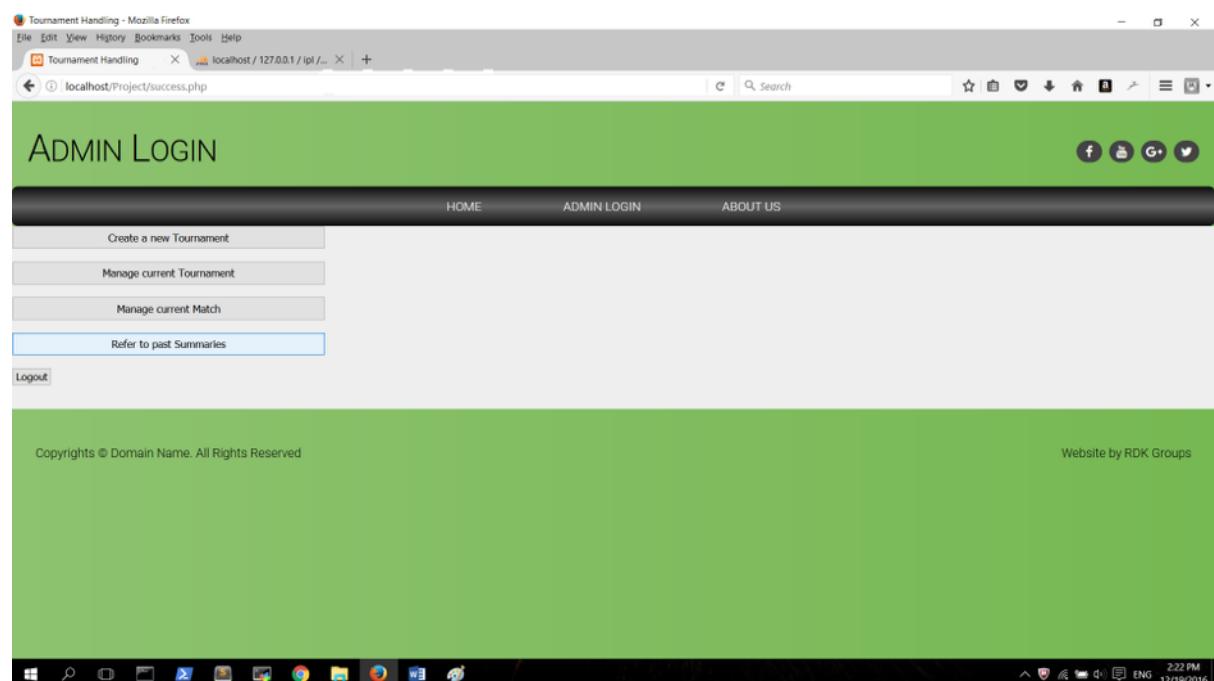
(Figure 4.22)

## 4.2.2 END OF THE MATCH

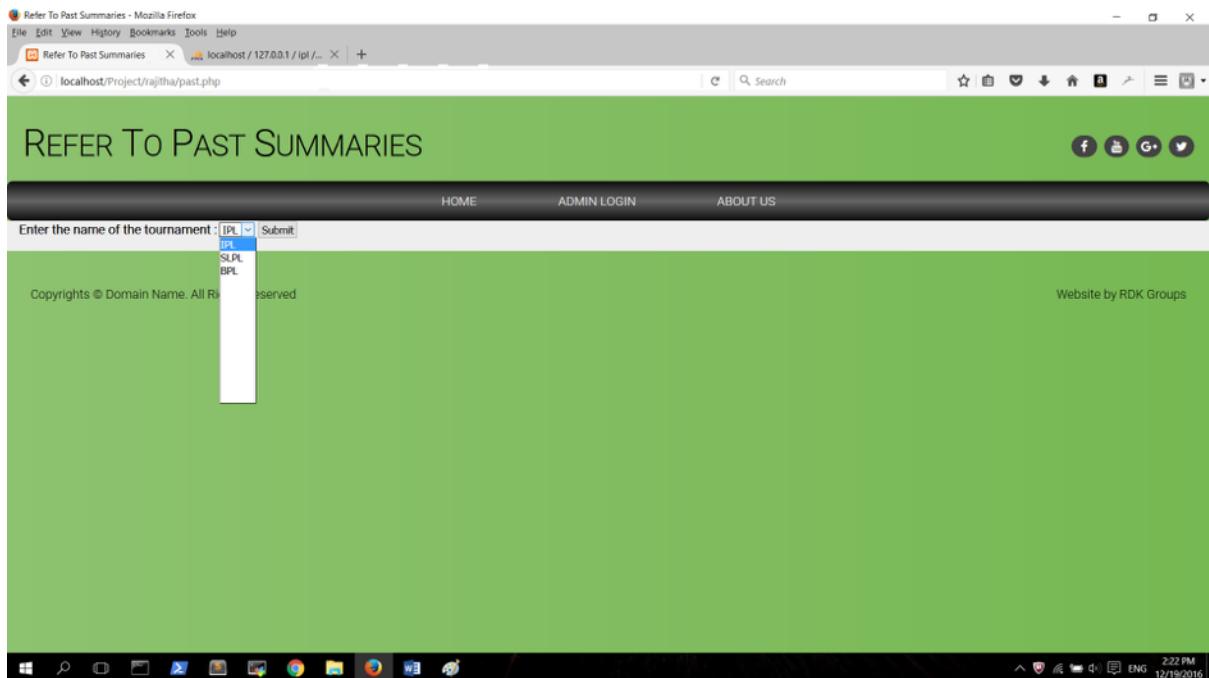
Match Summary									
Batting				Bowling					
Player Name	Score	Balls Faced	6's	4's	Overs Bowled	Wickets	Wides	No Balls	Runs
john	8	1	1	1	0	0	0	0	0
legend	0	0	0	0	0	0	0	0	0
falliq	0	0	0	0	0	0	0	0	0
dimuthu	0	0	0	0	0	0	0	0	0
kavin	0	0	0	0	0	0	0	0	0
rajitha	0	0	0	0	0	0	0	0	0
tharindu	0	0	0	0	0	0	0	0	0
kamal	0	0	0	0	0	0	0	0	0
amal	0	0	0	0	0	0	0	0	0
sunil	0	0	0	0	0	0	0	0	0
sunimal	0	0	0	0	0	0	0	0	0
kallis	2	1	0	0	0	0	0	0	8
dhoni	0	0	0	0	0	0	0	0	0
sanath	0	0	0	0	0	0	0	0	0
sangakkara	0	0	0	0	0	0	0	0	0
muralidaran	0	0	0	0	0	0	0	0	0
dishan	0	0	0	0	0	0	0	0	0
tharanga	0	0	0	0	0	0	0	0	0
kaluwitharana	0	0	0	0	0	0	0	0	0
hussein	0	0	0	0	0	0	0	0	0
mathew	0	0	0	0	0	0	0	0	0
fernando	0	0	0	0	0	0	0	0	0

(Figure 4.23)

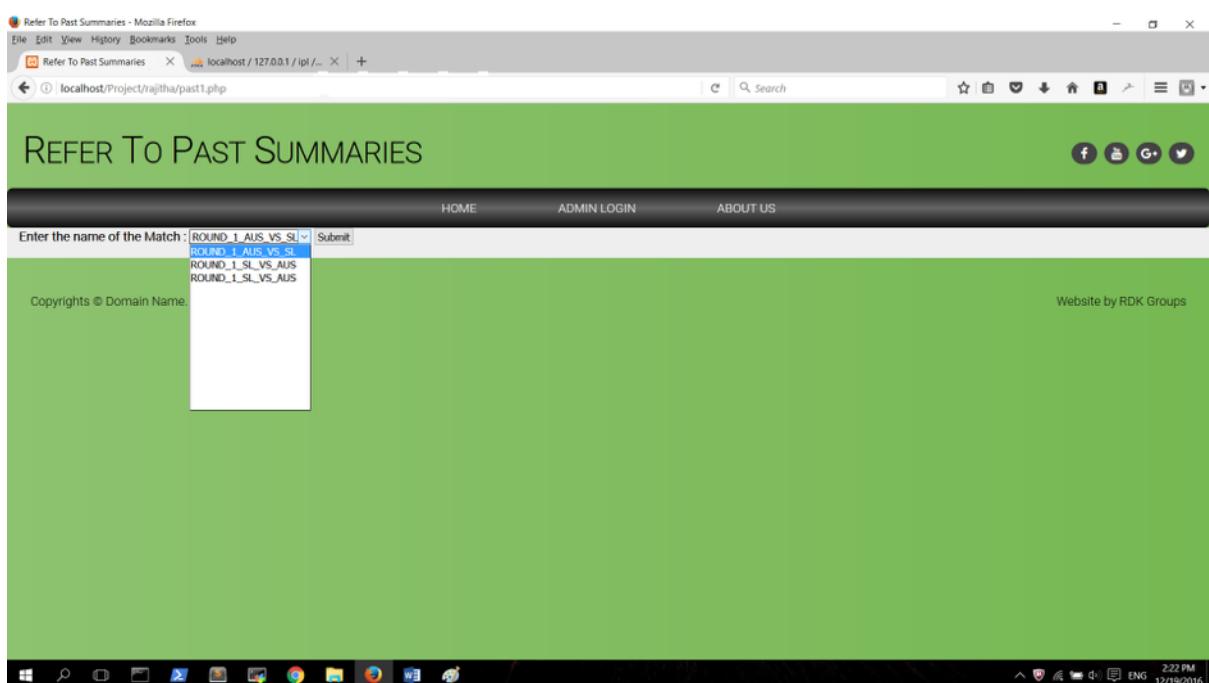
## 4.2.2 REFER TO THE PAST DETAILS OF A MATCH



(Figure 4.24)



(Figure 4.25)



(Figure 4.26)

(Figure 4.27)

## **CHAPTER 5**

### **CONCLUSION**

When managing cricket tournaments, tournament administrators go through a painful process of entering match and tournament information into physical and large data sheets. And, they go through a lot of trouble to match the teams in a tournament. With the difficulty of handling a large number of matches manually, there are softwares out there to automate these processes. By using these systems, tournament administrators have achieved a great relief in planning the match schedules and managing the matches.

But those softwares are not available for small and medium scale club levels. Or they are very complex for small club level tournaments. Therefor, this project offers a flexible and easily adoptable web application for small and medium sized clubs to easily manage the tournaments.

Using this web application, tournament administrators would be able to easily maintain and store tournament data while having the opportunity to display real time match and tournament information to the users. With the ability to view the information ball by ball, clubs will be able to obtain a varied and detailed scope of information on the matches and player performance statics.

## **REFERENCES**

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