

PLAYER MANAGEMENT SYSTEM

A PROJECT REPORT

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ABSTRACT

The purpose of this study is to develop a Distributed Player Management System. Many professional sport organizations are currently in the process of finding or already using sports information systems (SIS) to integrate data from different information and measurement systems. The problem is that they are not designed keeping the stakeholders in mind and provide functionality that is partially implemented and does not cater to the needs of the users of the system in its entirety. Keeping the stake holders - Stats man, Selection Committee and Enthusiasts in mind, an all-in-one distributed platform has been developed keeping the convenience of the end users in mind. Distributed Player Management System is a one stop location for the stake holders to Store, Retrieve, Update and Analyze the Player Stats in real-time.

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LIST OF ABBREVIATIONS

- HTML - Hypertext Markup Language
- CSS - Cascading Style Sheets
- JS - JavaScript
- EJS - Embedded JavaScript Templating
- API - Application Programming Interface
- NoSQL - Not Only Structured Query Language
- JSON - JavaScript Object Notation
- BSON - Binary JavaScript Object Notation
- RAM - Random Access Memory
- MB - Mega Bytes
- DB - Data Base
- BF - Balls Faced

CHAPTER 1 – INTRODUCTION

1.1 Introduction

Through this project we intend to digitize and simplify the ways in which cricket players' statistics are analyzed and maintained. The major objective of this application is to minimize the cumbersome process that usually takes place while analyzing and maintaining the stats. This reduces the hard manual paperwork and makes the process trouble free. The project contains a vast database with a few Collections. One Collection holds the information about the players (Name, player id, region), the second table holds the statistics of the player (matches, innings, runs, highest score, average, 50's, 100's, wickets, economy, strike rate), the third table holds the information about players' personal details (date of birth, age, birth place).

1.2 Motivation

To ease the life of Stats Man, Selection Committee, and Enthusiasts by digitizing the menial tasks usually done by Stats Man and Selection Committee.

1.3 Problem Statement

As mentioned all the data being kept by the organizers is on paper and even if data is being updated continuously the data is not integral and consistent. And fans and enthusiasts who are eagerly checking the stats of their favorite cricket player need a player management system which can handle the load of a lot of enthusiasts and it has to be able to keep up with the update rate of these stats throughout the match.

CHAPTER 2 – REQUIREMENTS

2.1 Software Requirements

Browser with latest updates

2.2 Hardware Requirements

RAM - Minimum 128 MB

Processor - At least Pentium 3

Good internet connectivity

2.3 Technology Stack

Frontend - HTML, CSS, JavaScript, EJS

Middleware - Mongoose

Backend - Node.js

Database - MongoDB

CHAPTER 3 – DESIGN

The design of the web app is extremely simple to understand and Fig 3.1 depicts a variety of use cases and user groups for this system.

3.1 Use Case Diagram

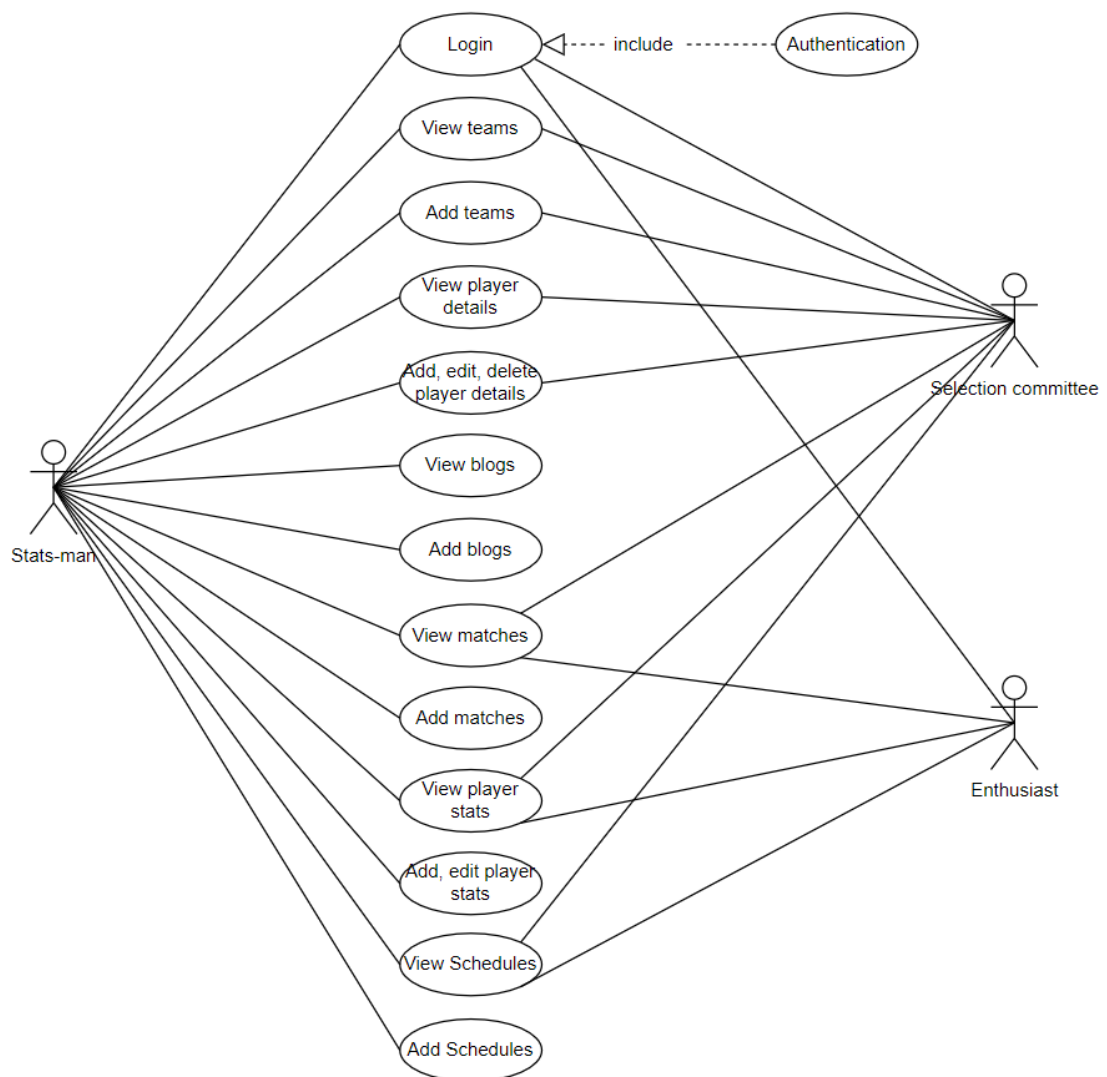


Fig 3.1 Use case diagram

CHAPTER 4 – IMPLEMENTATION

4.1 MongoDB

MongoDB is a document-based, NoSQL database. It stores data in JSON-like documents. MongoDB environment provides a server, which when started can be used to create multiple databases. This server converts the JSON data into a binary form known as BSON in the backend. Thus, it is queried efficiently and is fast. Several MongoDB servers work together to form a MongoDB cluster.

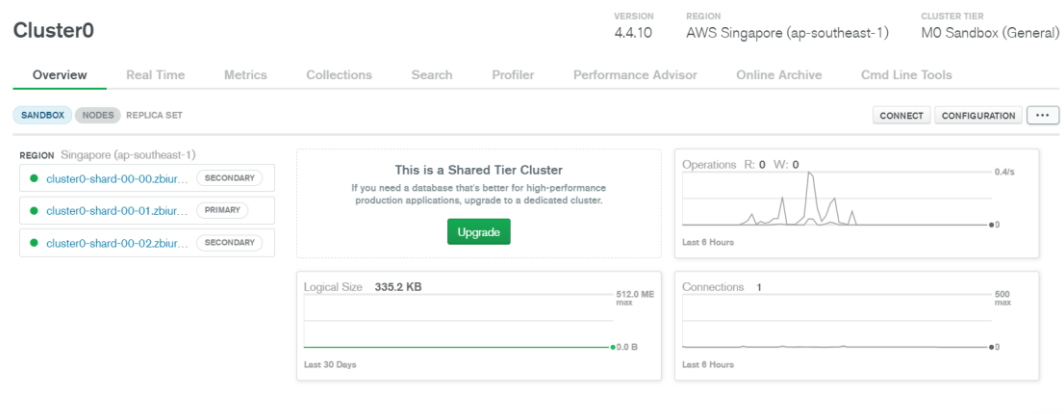


Fig 4.1 Creating a cluster in MongoDB

4.2 Web App Features

Stats man dashboard:

- Take notes in the app in form of mini microblogging
- Continuously keep track of the cricket player & match statistics
- Make schedule of the matches

Selection Committee dashboard:

- Access to players personal information (mobile number, email, etc.)
- View access to cricket player & match stats
- View access of the cricket schedule

Enthusiast dashboard:

- View access to cricket player & match stats
- View access of the cricket schedule

4.3 Schema Design

Match Collection:

```
var matchSchema = new mongoose.Schema({  
  name:{  
    type:String  
  },  
  image:{  
    type:String  
  },  
  user:{  
    type:String  
  }  
});
```

Articles Collection:

```
var memorySchema = new mongoose.Schema({  
  image:{  
    type:String  
  },  
  title:{  
    type:String  
  },  
  description:{  
    type:String  
  },  
  user:{  
    type:String  
  },  
  date:{
```

```
type:Date,  
default:Date.now()  
}  
});
```

Player Collection:

```
var playerSchema = new Schema({  
  name:{  
    type:String  
  },  
  fatherName:{  
    type:String  
  },  
  dateOfBirth:{  
    type:String  
  },  
  preTeam:{  
    type:String  
  },  
  address:{  
    type:String  
  },  
  mobileNo:{  
    type:Number  
  },  
  email:  
  {  
    type:String  
  },  
  user:{
```

```
type:String
},
team:{
type:String
},
date:{
type:Date,
default:Date.now()
}
});
```

Player Match Stats Collection:

```
var playerMatchSchema = new Schema({
name:{
type:String
},
nomatch:{
type:Number
},
user:{
type:String
},
runs:{
type:String
},
BF:{
type:String
},
hundreds:{
```

```
type:String
},
fiftys:{
type:Number
},
fours:
{
type:String
},
sixs:{
type:String
},
team:{
type:String
},
match:{
type:String
},
date:{
type>Date,
default>Date.now()
}
});
```

Schedule Collection:

```
var scheduleSchema = new mongoose.Schema({
Teamname:{
type:String
},
```

```
scheduleDate:{
  type:Date
},
time:{
  type:String
},
user:{
  type:String
},
date:{
  type:Date,
  default:Date.now()
}
});
```

Teams collection:

```
var teamSchema = new mongoose.Schema({
  name:{
    type:String
  },
  image:{
    type:String
  },
  user:{
    type:String
  }
});
```

User collection:

```
var userSchema = new mongoose.Schema({
```

```
username:String,  
password:String  
});
```


CHAPTER 5 – RESULTS

After running our application, the following results were achieved:

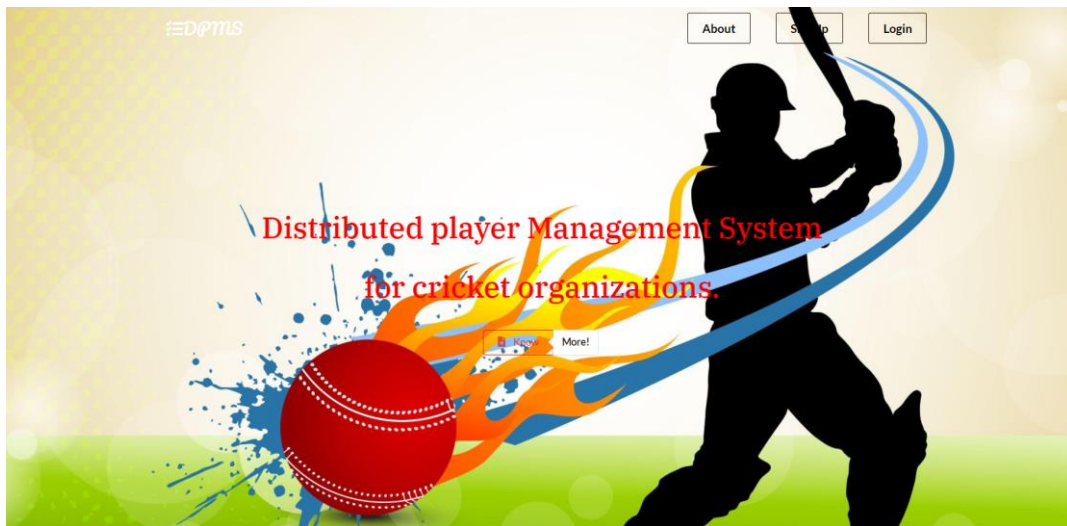


Fig 5.1 Home page

The image shows the 'Contact Us' page. It has a title 'Contact Us' with a red underline. Below the title is a form with the following fields: 'Name' with a placeholder 'Enter your name', 'Email' with a placeholder 'your email', 'How did you find us?' with a dropdown menu showing 'friend', 'Newsletter' with a checked checkbox and the text 'Yes Please', and 'Drop us a line' with a text area containing 'Your Message'. At the bottom of the form is a 'send it!' button. The footer of the page contains the DPMS logo and the text '©2021 DPMS'.

Fig 5.2 Contact us page

	EDPMS		Home	About Us	Login
--	-------	--	------	----------	-------

SignUp new User

SignUp

Already a user? [Login](#)

Fig 5.3 Sign up page

	EDPMS		Home	About Us	Signup
--	-------	--	------	----------	--------

Stats man Login

Login

New to us? [Sign Up](#)

Selection committee [Login](#)

Enthusiast [Login](#)

Fig 5.4 Stats-man login page

	EDPMS		Home	About Us	Signup
--	-------	--	------	----------	--------

Selection Committe Login

Login

New to us? [Sign Up](#)

Stats man [Login](#)

Enthusiast [Login](#)

Fig 5.5 Selection Committee login page

DPMS	Home	About Us	Signup
------	------	----------	--------

Enthusiasts Login


[New to us? Sign Up](#)

[Stats man Login](#)

[Enthusiast Login](#)

Fig 5.6 Enthusiasts' login page

DPMS	sriramnuthi@gmail.com	Logout
------	-----------------------	--------



sriramnuthi@gmail.com

- Articles
- Player Stats
- Schedule

Dashboard:-


Team

Gallery

Schedule

Fig 5.7 Stats-man dashboard

DPMS	sriramnuthi@gmail.com	Logout
------	-----------------------	--------




sriramnuthi@gmail.com

- Articles
- Player Stats
- Schedule

New Team

Fig 5.8 Add new team

DPMS	sriramnuthi@gmail.com	Logout
------	-----------------------	--------



sriramnuthi@gmail.com


- Articles
- Player Stats
- Schedule

Teams:-


India Test Team

New Zealand

Fig 5.9 Show teams




[sriramnuthi@gmail.com](#)
[Logout](#)



sriramnuthi@gmail.com

- Articles
- Player Stats
- Schedule




IndiaTestTeam

Team Players


[Add New Player](#)

Name	Registration Date	E-mail address	Details
virat kohli	Wed Nov 17 2021	viratkohli@gmail.com	View

Fig 5.10 View players in a team




[sriramnuthi@gmail.com](#)
[Logout](#)



sriramnuthi@gmail.com

- Articles
- Player Stats
- Schedule



IndiaTestTeam

Player Details:-

[delete](#) [Edit Details](#)

Personal Information

Name: virat kohli

Father Name: kk

Date Of Birth: 05/11/1988

Previous Team: Nill


Contact Information:-

Address: mumbai


Mobile no.: 1234567890

Email: viratkohli@gmail.com

Fig 5.11 View player details




[sriramnuthi@gmail.com](#)
[Logout](#)



sriramnuthi@gmail.com

- Articles
- Player Stats
- Schedule



IndiaTestTeam

Edit Player Details:-

Personal Information

Name:

Father Name:

Date Of Birth:

Previous Team:

Contact Information:-

Address:


Mobile no.:

Email:

[Submit](#)

Fig 5.12 Edit player details

	DPMS		sriramnuthi@gmail.com	Logout
--	------	--	-----------------------	--------




sriramnuthi@gmail.com

Articles

Player Stats

Schedule



IndiaTestTeam

Add Player Details:-

Personal Information

Name:

Father Name:

Date Of Birth:

Previous Team:


Contact Information:-

Address:

Mobile no.: Email:

Fig 5.13 Add player details

	DPMS		sriramnuthi@gmail.com	Logout
--	------	--	-----------------------	--------



sriramnuthi@gmail.com


Articles

Player Stats

Schedule

Blogs:-


[Add New Blog](#)



India registers first Test win at Oval after 50 years

After a dramatic fifth day finish at the Oval, India ended its 50-year wait for a win at the venue with a 157-run victory against England on Monday. India last won at the iconic ground way back in 1971 when it stunned the host by four wickets to clinch its first series triumph in England under the leadership of Ajit Wadekar. India first played at the Oval - the oldest international stadium in England - in 1936 and lost the Test by nine wickets. India has drawn a Test at the venue on seven occasions (1946, 1952, 1979, 1982, 1990, 2002 and 2007). It had also lost on its three previous Tours in 2018, 2014 and 2011.


Wed Nov 17 2021



Virat Kohli Turns 33: Here Are His Top Records That Show What An Enigma The Indian Captain Is

Kohli has 9 centuries to his name against West Indies. In the 39 matches, he has scored 2235 runs averaging 72.09 with a highest score of 157*. Not only that, he has even scored 11 fifties.

Thu Nov 25 2021




Rohit Sharma replaces Virat Kohli as India's ODI Captain

Kohli, who took over as India's full-time captain in 2017, when the great MS Dhoni decided to step down, will go down as the country's most successful ODI captain with a win percentage of 70.43. He led India in 95 games - winning 65 and losing 27, and is fourth in the list of most matches as India skipper behind Dhoni, Mohammad Azharuddin and Sourav Ganguly. In a massive announcement, the BCCI has named Rohit Sharma as the new ODI captain of the Indian cricket team. He will take over from his predecessor Virat Kohli starting the three-ODI series against South Africa in January 2022.

Wed Dec 08 2021

Fig 5.14 Blogs page

	DPMS		sriramnuthi@gmail.com	Logout
--	------	--	-----------------------	--------



sriramnuthi@gmail.com

Articles

Player Stats

Schedule

New Blog

Image Url:

Title:

Blog Post:

Fig 5.15 Add new blog

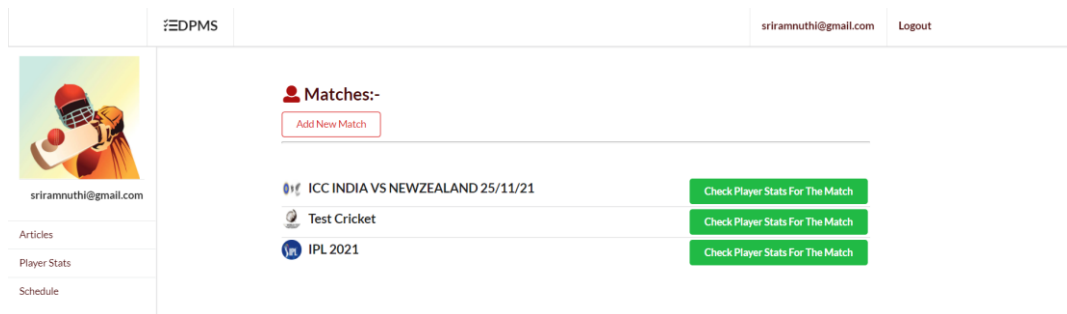


Fig 5.16 View matches

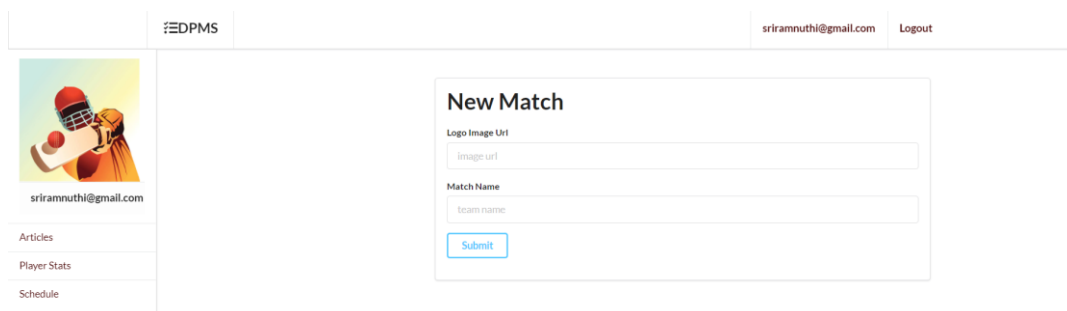


Fig 5.17 Add new match

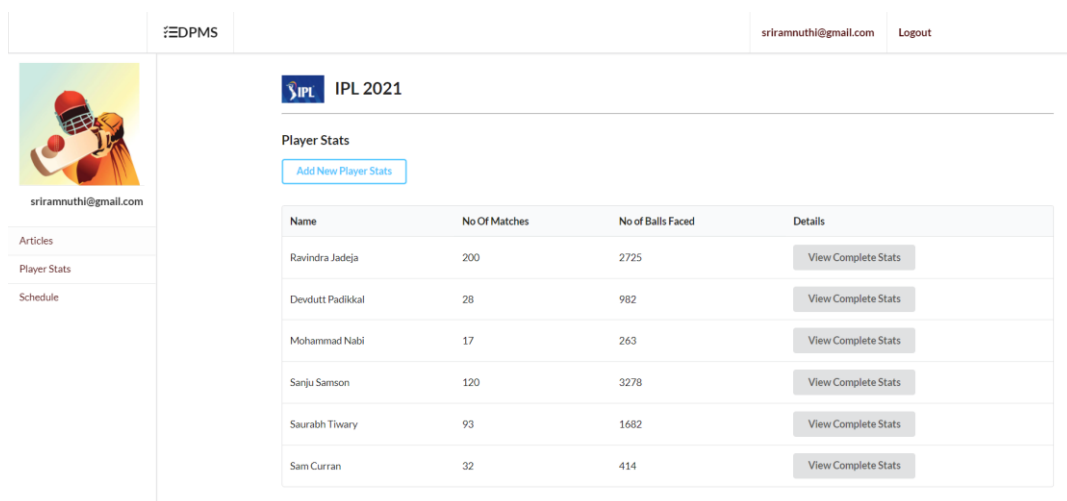



Fig 5.18 View player stats for a match

DPMS		sriramnuthi@gmail.com	Logout
------	--	-----------------------	--------



sriramnuthi@gmail.com

- Articles
- Player Stats
- Schedule

ICC INDIA VS NEWZEALAND 25/11/21

Player Details:-

[delete](#) [Edit Details](#)

All Time Statistics


Name:	Virkat Kohli
No Of Matches:	7889
No of Balls Faced:	3445

Match Specific:-

Runs:	200
Hundreds:	2
Fiftys:	4
Fours:	8
Sixes:	20
Team:	India

Fig 5.19 Complete player stats

DPMS		sriramnuthi@gmail.com	Logout
------	--	-----------------------	--------



sriramnuthi@gmail.com

- Articles
- Player Stats
- Schedule

ICC INDIA VS NEWZEALAND 25/11/21

Edit Player Details:-

Personal Information

Name:

nomatch:

runs:

BF:

Hundreds:

Fiftys:

Fours:

Sixs:

Team:

Fig 5.20 Edit player stats




		sriramnuthi@gmail.com Logout
 Articles Player Stats Schedule	 ICC INDIA VS NEWZEALAND 25/11/21	
	Add Player Details:-	
	Personal Information	
	Name: <input type="text"/>	
	nomatch: <input type="text"/>	
runs <input type="text"/>		
BF <input type="text"/>		
Hundreds <input type="text"/>		
Fiftys <input type="text"/>		
Fours <input type="text"/>		
Sixs <input type="text"/>		
Team <input type="text"/>		

Fig 5.21 Add player stats




		sriramnuthi@gmail.com Logout
 Articles Player Stats Schedule	 Schedule:-	
	New Schedule	
	<div> India vs Newzealand Time: 15:00 Date: Sat Nov 27 2021 05:30:00 GMT+0530 (India Standard Time) delete Added on: Thu Nov 25 2021 </div>	
	<div> India vs Africa Time: 17:00 Date: Sun Nov 28 2021 05:30:00 GMT+0530 (India Standard Time) delete Added on: Thu Nov 25 2021 </div>	

Fig 5.22 View schedules



		sriramnuthi@gmail.com Logout
 Articles Player Stats Schedule	<div> New Schedule Team Name: <input type="text"/> Date: <input type="text"/> </div>	
	<div> Time: <input type="text"/> </div>	
	Submit	

Fig 5.23 Add new schedule

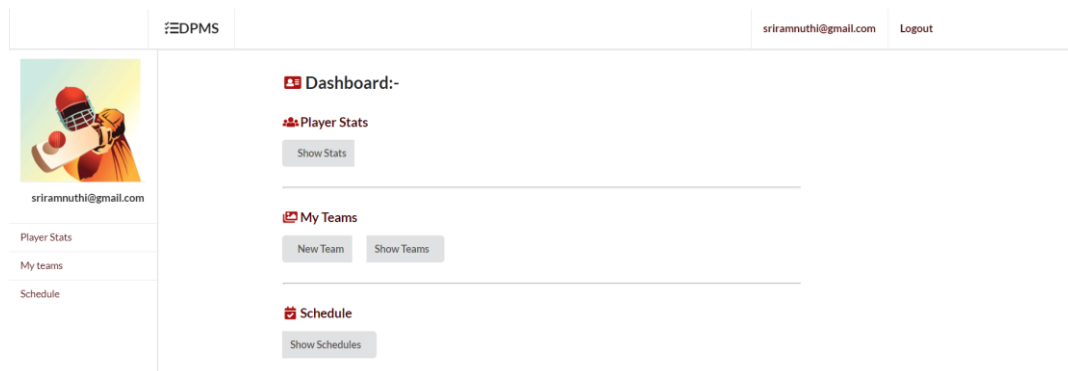


Fig 5.24 Selection committee dashboard

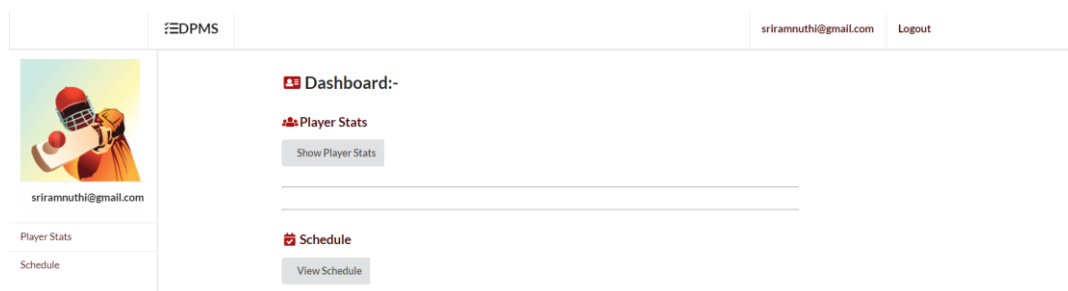


Fig 5.25 Enthusiasts' dashboard

CHAPTER 6 – CONCLUSION

We have made a fully functional web application, which eliminates the time-consuming process that usually takes place while analyzing and maintaining the statistics. This in turn reduces the hard manual paperwork and makes the entire process trouble-free. Thus, we have developed an end-to-end solution for a real-life scenario using MongoDB, a document-based, NoSQL database.

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- [2] <https://docs.mongodb.com/manual/crud/>
- [3] <https://www.mongodb.com/atlas/database>