

CRICKET SCORE BOARD

A Major Project Report

submitted in partial fulfillment of requirements of the degree

of

Master of Computer Applications

by

ANKIT MISHRA

EN21CA501021

under the guidance of

Prof. Mohit Kadwal



Department of Computer Applications

Faculty of Engineering

MEDI-CAPS UNIVERSITY, INDORE- 453331

Jan - June 2023

CRICKET SCORE BOARD

A Major Project Report

submitted in partial fulfillment of requirements of the degree

of

Master of Computer Applications

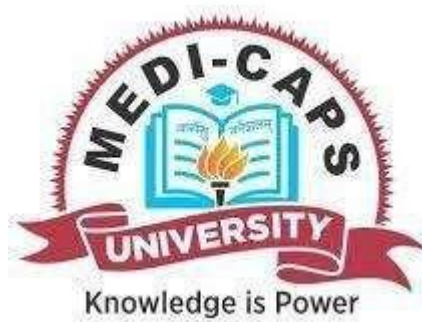
by

ANKIT MISHRA

EN21CA501021

under the guidance of

Prof. Mohit Kadwal



Department of Computer Applications

Faculty of Engineering

MEDI-CAPS UNIVERSITY, INDORE- 453331

Jan - June 2023

Report Approval

The project work **CRICKET SCORE BOARD** is hereby approved as a creditable study of an engineering/computer application subject carried out and presented in a manner satisfactory to warrant its acceptance as prerequisite for the Degree for which it has been submitted.

It is to be understood that by this approval the undersigned do not endorse or approval any statement made, opinion expressed or conclusion drawn there in; but approve the “Project Report” only for the purpose for which it has been submitted.

Examiner(s)

Name(s)

Signature(s)

- | | |
|---------|-------|
| 1. | |
| 2. | |
| 3. | |
| 4. | |
| 5. | |

Date:

Declaration

I hereby declare that the project entitled **CRICKET SCORE BOARD** submitted in partial fulfillment for the award of the degree of Master of Computer Applications in “Master of Computer Application” completed under the supervision of **Prof. Mohit Kadwal Asst. Professor and Department of Computer Application**, Faculty of Engineering, Medi-Caps University Indore is an authentic work.

Further, I/we declare that the content of this Project work, in full or in parts, have neither been taken from any other source nor have been submitted to any other Institute or University for the award of any degree or diploma.

Signature _____

Ankit Mishra

Date

Certificate

I **ADITYA KUMAR** certify that the project entitled **CRICKET SCORE BOARD** submitted in partial fulfillment for the award of the degree of Master of Computer Applications by **ANKIT MISHRA** is the record carried out by him/her/them under my/our guidance.

Prof. Mohit Kadwal

Department of Computer Application

Medi-Caps University, Indore

Mr. Yogesh Dwivedi

CEO

Golden Eagle

Prof. Anil Patidar

Head of the Department

Department Of Computer Application

Medi-Caps University, Indore

Acknowledgement

Student shall write in his/her/their own words.

I would like to express my deepest gratitude to our Honorable Chancellor, **Shri R. C. Mittal**, who has provided me with every facility to successfully carry out this project, and my profound indebtedness to **Prof. (Dr.) D. K. Patnaik**, Vice- Chancellor, Medi-Caps University, whose unfailing support and enthusiasm has always boosted up my morale. I also thank **Prof. (Dr.) Pramod S Nair**, Dean, Faculty of Engineering, Medi-Caps University, for giving me a chance to work on this project. I would also like to thank my Head of the Department **Prof. Anil Patidar** for his continuous encouragement for betterment of the project.

I express my heartfelt gratitude to my **External Guide, Mr. Aditya Kumar**, Designation, Ample e-business as well as to my Internal Guide, **Prof. Mohit Kadwal**, Assistant Professor, Department of Computer Application. for continuous help and support which helped me to complete this project.

I would also like to thank to my team at Golden Eagle, **Mr. Yogesh Dwivedi** who extended their kind support and help towards the completion of this project. It is their help and support, due to which I/we am/are able to complete the design and technical report. Without their support this report would not have been possible.

ANKIT MISHRA (EN21CA501021)

MCA IV Semester

Department of Computer Applications Faculty of Engineering

Medi-Caps University, Indore

Abstract

Customer Relationship Management (CRM) is a business strategy that focuses on building strong relationships with customers. It involves the use of technology to organize, automate, and synchronize sales, marketing, customer service, and technical support processes. A CRM system enables businesses to manage their interactions with customers, gain insights into their behavior and preferences, and improve customer satisfaction and loyalty. A CRM project typically involves the implementation of a CRM system, which can be either an on-premises or cloud-based solution. The project team typically consists of business analysts, IT professionals, and stakeholders from various departments such as sales, marketing, and customer service. The project scope includes defining the business requirements, selecting the right CRM solution, configuring the system, testing, training, and deployment. Using HTML, CSS, Node.js, MongoDB and Node.js the system is designed. The CRM is a new technique in marketing where the marketer tries to develop long term relationship with the customers to develop them as life time customers. CRM aims to make the customer climb up the ladder of loyalty.

Table of Contents

S.No	Content	Page No.
	Report Approval	ii
	Declaration	iii
	Certificate	iv-v
	Acknowledgement	vi
	Abstract	vii
	Table of Contents	ix
	List of Figures	x
	List of Tables	xi
	Abbreviations	xii
	Notations and Symbols/Nomenclatures	xiii
Chapter 1	Introduction	1-5
	1.1 Identity of Client/Organization (if applied)	4
	1.2 Description of project.	5
Chapter 2	Background	6-8
	2.1 Description of the existing system	6
	2.2 Circumstances leading to the current new system	7
	2.3 Work already carried out in the project domain	8
	2.4 Objective of the project	8
Chapter 3	Analysis	9-18
	3.1 System Requirement Analysis	9-11
	3.2 System Analysis	12-13
	3.3 Information flow representation	14-16
	3.4 Method/Technology to be used	17
	3.5 Testing Tools	17-18

Chapter 4	Design	19-49
	4.1 System Architecture	19
	4.2 Data Design	20-27
	4.3 Interface Design	28-49
Chapter 5	Testing	50-55
	5.1 Scope of testing	50-52
	5.2 Test plan	53
	5.3 Test case design	54
	5.4 Sample test data and results	55
Chapter 6	Limitations	56-57
	6.1 Limitation	
Chapter 7	Summary and Conclusions	58-59
Chapter 8	Future Scope	60-61
	Appendix	62-63
	Bibliography	64-65

List of Figures

S. No.	Description	Page No.
1	Use Case Diagram	14
2	ER-Diagram	15
3	Activity Diagram	16
4	System Architecture	19
5	Test Plan	53

List of Tables

S. No	Description	Page No.
1	Data Design	20-27
2	Interface Design	28-49

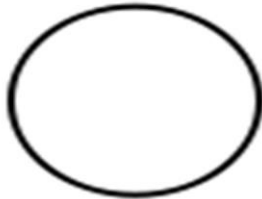
Abbreviations

Keywords

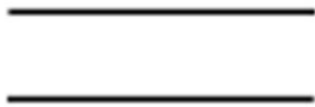
1. CSB: - Cricket Score Board

Notations and Symbols/Nomenclatures

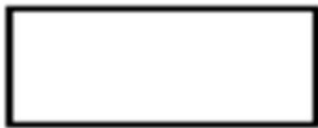
1. Data Flow Diagram Notation:-



Function



File/Database



Input/Output



Flow

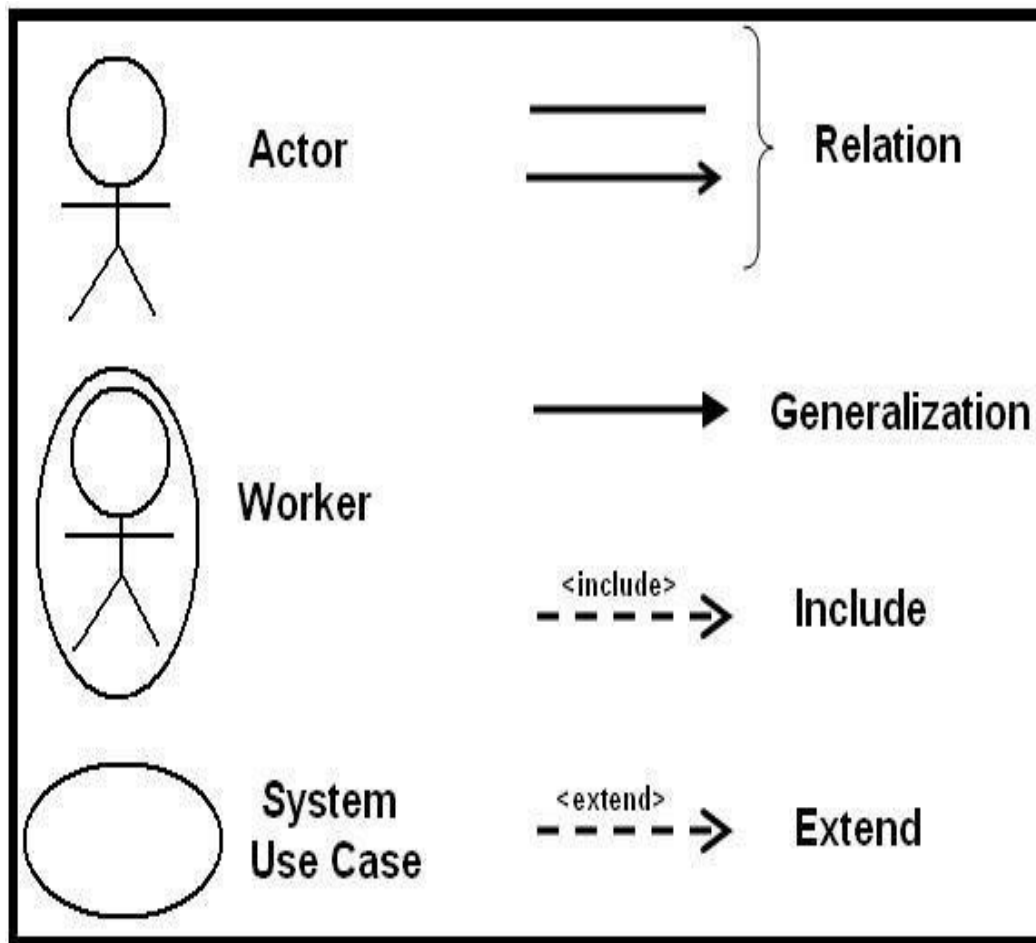


External Entity



External Entity

2. Use Case Diagram Notation: -



Chapter1

Introduction

The cricket score board is a website project which is primarily focused on bringing the entertainment of cricket into your hands you can feel the importance of cricket with the help of this website. Once you log into this website you can get easy access to all the unique Features of this website which are full of high end features and all the other unique features which are required to make it available for cricket users.

This website is easy to operate and you can easily understand the working of this website because it is designed in such a way that is very easy to operate and is very easily available for it's users it will be of great use for it's users.

This website will be developed more in the near future because it is not completed yet it is in working stage now but the updates will be coming in the near features and more and more advancements will be done to this website in the near future

This Project is the combination of practices, strategies and technologies that companies use to manage and analyze customer interactions and data throughout the customer lifecycle. The goal is to improve customer service relationships and assist in customer retention and drive sales growth. It combines customer data across different channels, or points of contact, between the customer and the company, which could include the company's website, telephone, live chat, direct mail, marketing materials and social networks. It's systems can also give customer-facing staff members detailed information on customers'personal information, purchase history, buying preferences and concerns.

consolidates customer information and documents it into a single CRM database so business userscan more easily access and manage it. Over time, many additional functions have been added to CRM systems to make them more useful. Some of these functions include recording various customer interactions over email, phone, social media or other channels; depending on system capabilities, automating various workflow automation processes, such as tasks, calendars and alerts;and giving managers the ability to track performance and productivity basedon information logged within the system.

Marketing automation. CSB tools with marketing automation capabilities can automate repetitive tasks to enhance marketing efforts at different points in the lifecycle for lead generation. For example, as salesprospects come into the system, it might automatically send email

1.1 Identity of Client/Organization

Golden Eagle create web and client/server software on different platforms, in particular Java, Python, Nodejs, React JS and Node.Js Technology, with the aim of creating solid, modular and functional business applications, easy to use and custom-designed.

Senior Project Manager: Mr. Yogesh Dwivedi

Website: info@goldeneagle.ai

Email: info@goldeneagle.ai

Contact No.: +91 7987585868

Location: NRK Biz Park Behind C21 Mall,

PU-4, Scheme No. 54, AB Road Indore

Specialties: Web Development, Web Designing, Mobile App Development, Android App Development, NodeJS, Python, Node.Js, React Native.

1.2 Description of Project: -

The cricket score board is a website project which is primarily focused on bringing the entertainment of cricket into your hands you can feel the importance of cricket with the help of this website. Once you log into this website you can get easy access to all the unique Features of this website which are full of high end features and all the other unique features which are required to make it available for cricket users.

Once the CSB solution has been selected, the project team needs to configure the system to meet the organization's requirements. This involves defining data fields, designing workflows, and integrating the CSB system with other business applications. The team also needs to ensure that the CSB system is secure and complies with data privacy regulations.

The project team needs to provide adequate training to users to ensure they can effectively utilize the CSB system. This includes training on data entry, reporting, and analysis, and customer service best practices. The team also needs to develop user manuals and provide ongoing support to ensure that the CSB system continues to meet the organization's needs.

CHAPTER 2

BACKGROUND

2.1 Description of the existing system: -

The system may include features such as contact management, leadtracking, sales forecasting, marketing automation, customer service andsupport, and analytics and reporting. The system may also integrate with othersoftware systems, such as accounting, e-commerce, or social media platforms. The success of a CSB project depends on several factors, including thealignment of the system with the organization's goals and processes, effectiveuser adoption and training, data quality and management, and ongoingmonitoring and optimization. A well-executed CSB project can lead toimproved customer relationships, increased sales, and enhanced customerloyalty and retention.

2.2 Circumstances leading to the current new system: -

The current CSB system may be outdated and no longer meet the needs of the business or its customers. This may result in inefficiencies, inaccuracies, or delays in managing customer data. In new CSB project adding new functionality like: -invoice generating, invoice display and printing.

2.3 Work already carried out in the project domain: -

Market research and analysis: This involves conducting market research to identify the target audience, analyzing the competition, and identifying the most effective lead generation strategies.

Lead capture and management system evaluation: This involves evaluating the current lead management system and identifying areas for improvement. This could include evaluating the current lead capture forms, lead scoring models, lead routing rules, and lead nurturing strategies.

CRM system integration: This involves integrating the lead management system with the existing customer relationship management (CRM) system to ensure a seamless flow of information and data between the two systems.

Continuous improvement: This involves continuously monitoring and evaluating the lead management process and making changes as necessary to ensure that it is meeting the project goals and objectives.

2.4 Objective of project: -

The primary objective of a customer lead management project is to increase the efficiency and effectiveness of managing customer leads, which can lead to increased sales revenue and customer satisfaction. Here are some specific objectives of a customer lead management project:

Improve lead quality: By implementing a lead management process, the project aims to improve lead quality by identifying the most promising leads that are more likely to convert to customers.

Increase lead conversion rates: The project aims to increase lead conversion rates by ensuring that the leads are properly nurtured, and sales teams follow up with them in a timely and effective manner.

Enhance customer engagement: The project aims to enhance customer engagement by providing personalized and relevant content to the leads at

every stage of the buying process, leading to higher customer satisfaction and loyalty.

Optimize sales processes: The project aims to optimize the sales processes by streamlining lead capture, scoring, and routing, resulting in faster sales cycles and reduced sales costs.

Improve data management: The project aims to improve data management by providing a centralized system for managing customer data, resulting in better data quality, accuracy, and consistency.

Increase revenue: By improving lead quality, conversion rates, and sales processes, the project aims to increase revenue and profitability for the organization.

lead data, identifying trends, and developing targeted marketing strategies, leading to better customer engagement and increased sales.

CHAPTER 3 ANALYSIS

3.1 System Requirement Analysis: -

There are two types of System requirement analysis

- Information Gathering
- Feasibility Study

Information Gathering

We gathered information on the basis of following questionnaires: -

- How the existing systems work?
- What are the limitations of existing system?
 - What features we should provide to overcome those limitations which are inexistent system?
- What will be the tables in the database?
- What and how many attributes will be in each table?
- How the data will flow in the system?
- What will be the access level of user to use the system?
 - What the information we should provide which will be interesting to the user?
- How to maintain the interactivity with the use.

Feasibility Study

A feasibility study is a test of a system proposal according to its workability, impact on the organization, ability to meet user needs, & effective use of resources. The objective of a feasibility study is not to solve the problem but to acquire a sense of its scope. In the analysis phase we first focus on the fact that is the required system is actually feasible or not? Is the required system will work according to the present.

condition or not? And we get a successful result that is our system is feasible in present condition.

Economic Feasibility: -

In economic feasibility we work on the following questions like, are there sufficient benefits to creating the system to make the costs acceptable? Or the cost of none is creating the system so great that the project must be undertaken? Then after the cost benefit analysis we conclude that our system is economically feasible. We are using SUBLIME as a front end and MONGODB as back end which are also freely available. So, this project the cost of development is negligible as compare to the running cost. In absence of this software, a user would have to wait long time. So as a whole, software is economically feasible.

Technical Feasibility: -

The technical feasibility is that is our project is technically feasible, that menace is present technology is useful & supported by our project? Our project is technically physical it supports the minimum pc configuration. Technical feasibility focuses around the present computer system (Hardware & Software) & to extent it can support the proposed addition. We are using SUBLIME as front-end so that software is platform independent. It can work on windows & MONGODB as back-end. The total number of databases has been identified as 18 entities. The major part of the databases is categorized as administrative components and the general user components. The administrative components are useful in managing the actual master data that is very much necessary to maintain the consistency upon the system. The administrative databases are purely used for the internal organizational needs and necessities only at the upper and middle management areas. The user

components are designed to handle the transactional states that arise upon the system whenever the general employee within the organization visits the user interface for mock enquiry for the required data. The normal user interfaces get associated to the environment mostly for the sake of report standardization. The user components are scheduled to accept parametrical information from the users as per the system necessity.

Behavior Feasibility: -

People are inherently resistant to change, and computer has been known to facilitate change. All estimates regarding reaction, comfort & ease of use for the people it meant for, should be made prior. So, this software is also behavior feasible.

3.2 System Analysis: -

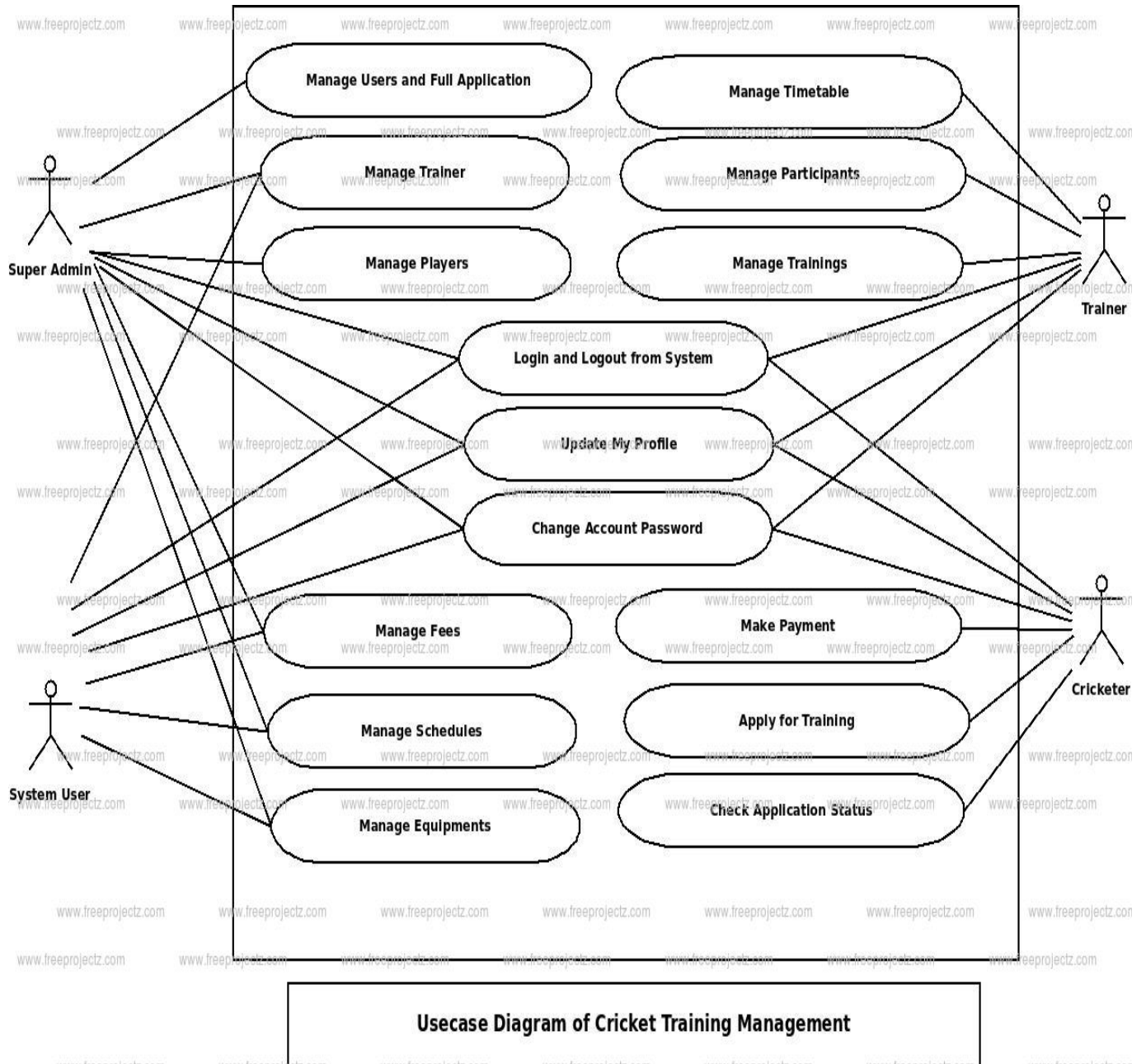
System analysis is a critical step in a CSB project that involves examining the existing processes, identifying any inefficiencies, and designing a new system to improve the overall customer experience. Here are some system analysis points that should be considered in a CSB project:

1. **Current system analysis:** The project team should analyze the existing CSB system to understand how it is currently being used, how data is being collected and managed, and the overall performance of the system.
2. **Business process analysis:** The team should analyze the business processes that are involved in the customer relationship management, including lead generation, lead nurturing, sales, and customer service.
3. **Customer journey mapping:** The team should map out the customer journey from lead generation to customer acquisition and beyond, identifying touchpoints where the customer interacts with the business.
4. **Data analysis:** The team should analyze the data being collected to identify patterns, trends, and opportunities for improvement. This could include customer demographics, sales data, and customer feedback.
5. **System requirements:** Based on the analysis, the team should identify the requirements for the new CRM system, including the desired features, functionality, and integrations with other systems.
6. **User requirements:** The team should also identify the requirements of the users of the CSB system, including sales representatives, marketing teams, and customer service agents.
7. **Data migration:** The team should plan for the migration of data from the old system to the new system, ensuring that the data is accurate and consistent.
8. **System testing:** The team should test the new system to ensure that it meets the requirements and is functioning correctly. This could include unit testing, integration testing, and user acceptance testing.

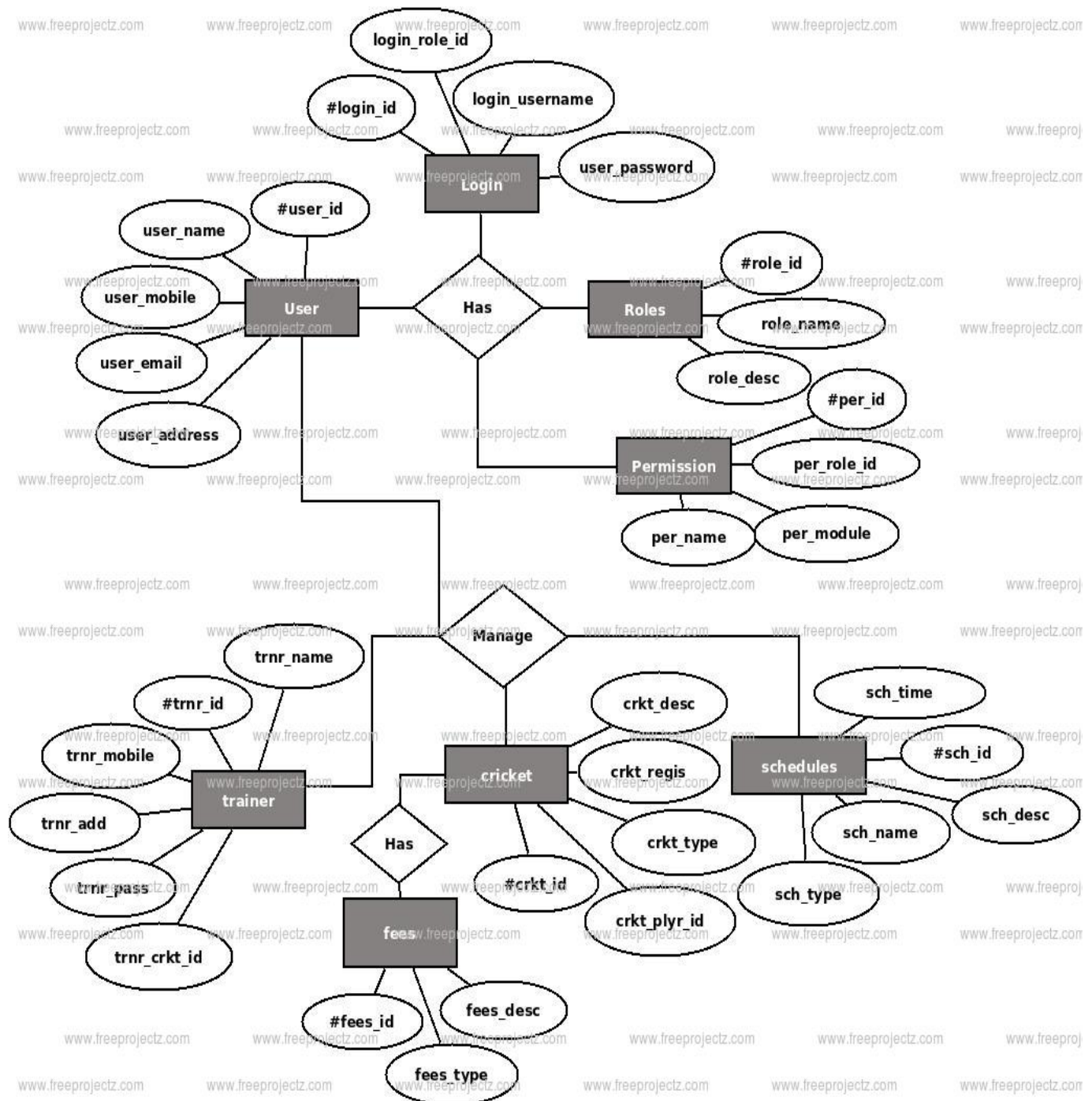
9. User training: The team should provide training to the users of the new CSB system, ensuring that they understand how to use the system effectively.
10. Maintenance and support: The team should plan for the ongoing maintenance and support of the new CSB system, including regular updates and bug fixes.

3.3 Information flow representation: -

3.3.1 Use Case Diagram: -

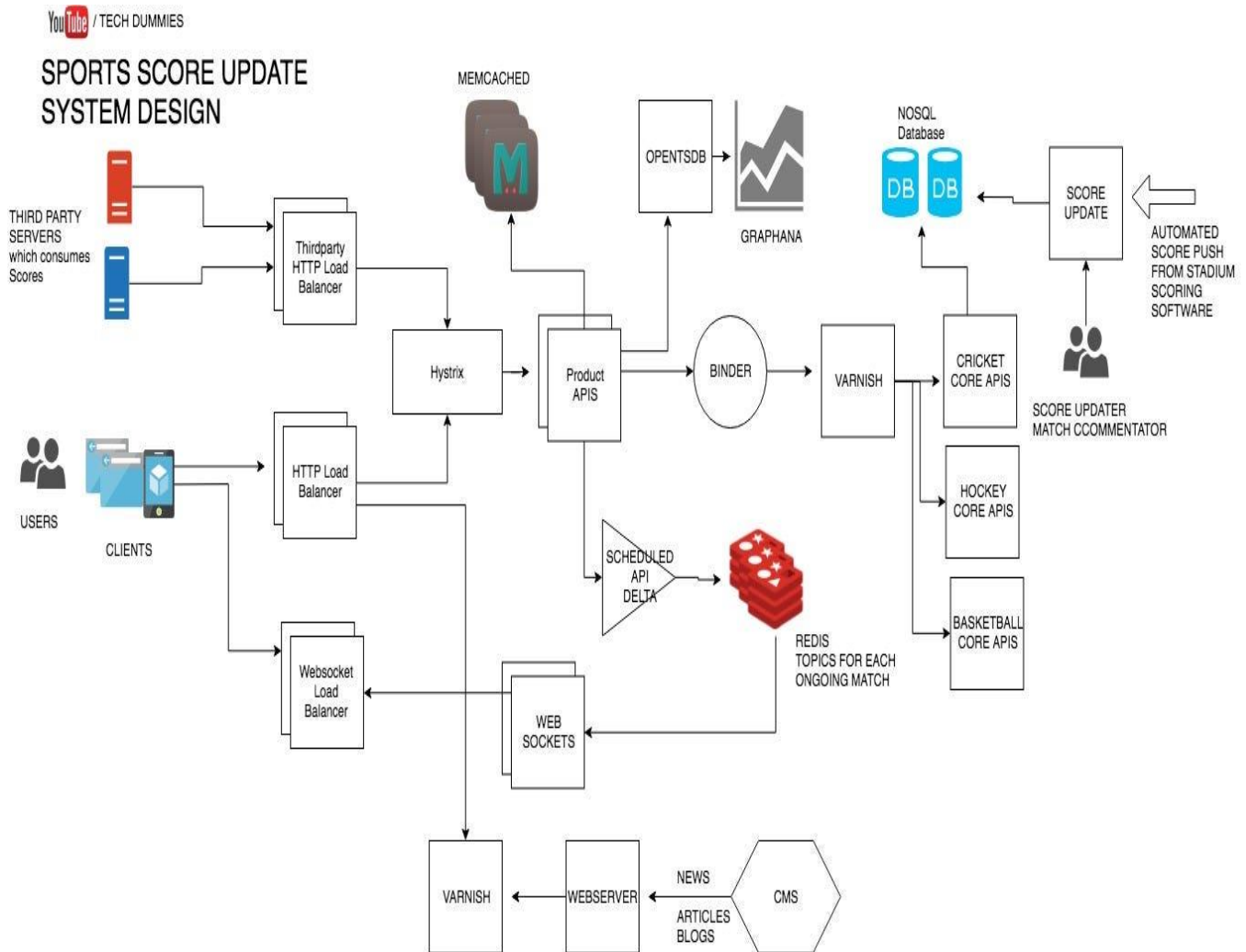


3.3.2 ER Diagram: -



ER Diagram For Cricket Training Management

3.3.3 Activity Diagram: -



3.4 Method/Technology to be used

- o Language: Node Js,
- o Other languages: React JS
- o Database: MongoDB
- o Operating System: Microsoft Window and Linux

3.5 Testing Tools: -

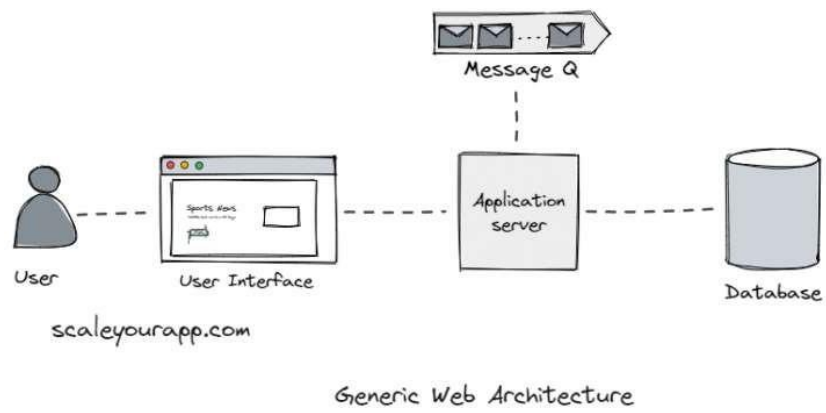
There are various testing tools that can be used for a CSB project. Some of the popular ones are:

1. Selenium: It is an open-source testing tool used for automating webapplications. It can be used to automate repetitive testing tasks and can help speed up the testing process.
2. Test Complete: It is a commercial testing tool that can be used to automate testing tasks for web, desktop, and mobile applications. It provides a user- friendly interface for creating and executing test cases.
3. Appium: It is an open-source testing tool used for testing mobile applications.It supports both Android and iOS platforms and can be used for testing native, hybrid, and web applications.
4. JMeter: It is an open-source testing tool used for testing web applications. Itcan be used to test the performance and load of web applications.
5. SoapUI: It is an open-source testing tool used for testing web services. It canbe used to test SOAP and RESTful web services.

6. LoadRunner: It is a commercial testing tool used for testing the performance and load of web and mobile applications.
7. Postman: It is an open-source testing tool used for testing RESTful web services. It can be used to create and execute API tests.
8. These are just a few examples of the many testing tools that can be used for a CSB project. The choice of testing tool will depend on the specific requirements of the project and the resources available.

CHAPTER 4 DESIGN

4.1 System Architecture: -



4.2 Data Design: -

Designing a CSB data structure requires careful consideration of the types of data that will be stored, how the data will be organized, and how it will be used by different departments and users within the organization. Here are some general steps to follow when designing a CSB data structure:

1. **Identify the data types:** Start by identifying the types of data that will be stored in the CSB such as customer information, sales data, marketing data, support tickets, and other relevant information.
2. **Determine data relationships:** Once you have identified the data types, determine how they are related to each other. For example, customer data may be related to sales data, support tickets may be related to customer data, and so on.
3. **Plan data organization:** Plan how the data will be organized in the CSB. This includes defining data fields, data types, and data relationships. Consider creating a data dictionary or data schema to ensure consistency in data organization.
4. **Create data entry forms:** Once the data structure has been designed, create data entry forms to facilitate data entry into the system. Consider the user experience and ease of use when designing these forms.
5. **Plan data access:** Plan how different users and departments will access the data stored in the CSB. This includes defining user roles and permissions, as well as determining which data should be accessible to each user.
6. **Plan data analysis:** Plan how the data stored in the CSB will be analyzed and used to generate reports and insights. This may involve creating custom reports, dashboards, or other tools to help users access and analyze the data.

4.2.1 USER TABLE: -

Atlas NodeProject Access Manager Billing All Clusters Get Help Ankit

Project 0 Data Services App Services Charts

Search Namespaces

LOGICAL DATA SIZE: 17.89KB STORAGE SIZE: 312KB INDEX SIZE: 268KB TOTAL COLLECTIONS: 10 CREATE COLLECTION

Collection Name	Documents	Logical Data Size	Avg Document Size	Storage Size	Indexes	Index Size	Avg Index Size
ipaddresses	1	61B	61B	20KB	1	20KB	20KB
lastbowlers	1	102B	102B	36KB	1	20KB	20KB
laststrikes	1	102B	102B	36KB	1	20KB	20KB
overs	0	0B	0B	4KB	1	4KB	4KB
players	22	4.98KB	232B	36KB	1	36KB	36KB
schedules	4	472B	118B	36KB	1	36KB	36KB
scoreballs	22	4.77KB	222B	36KB	1	20KB	20KB
scorebats	22	4.58KB	213B	36KB	1	20KB	20KB
scoreboards	1	2.28KB	2.28KB	36KB	1	20KB	20KB
teams	5	577B	116B	36KB	2	72KB	36KB

System Status: All Good

©2023 MongoDB, Inc. Status Terms Privacy Atlas Blog Contact Sales

https://cloud.mongodb.com/v2/63b9384ab608da0b2c98117c#/metrics/replicaSet/63b93a3a9ad16b4bd8234ed2/explorer/cricket/overs/find

Cloud MongoDB Atlas interface showing the **cricket** database. The left sidebar lists namespaces: **bookStore**, **cricket** (selected), **ipaddresses**, **lastbowlers**, **laststrikes**, **overs**, **players**, **schedules**, **scoreballs**, **scorebats** (highlighted), **scoreboards**, **teams**, **new_db**, and **originalShots**.

The main panel displays the **scorebats** collection. The top bar shows: STORAGE SIZE: 36KB, LOGICAL DATA SIZE: 4.58KB, TOTAL DOCUMENTS: 22, INDEXES TOTAL SIZE: 20KB. The **Find** tab is active, showing a query filter: `{ field: 'value' }`. The query results show 1-20 of many results, with the first document displayed:

```
{
  "_id": ObjectId("6411754b61fcbf356bce3250"),
  "Batted": true,
  "Strike": false,
  "PlayerId": "64116ed661fcbf356bce315e",
  "MatchId": "641173b861fcbf356bce322e",
  "Runs": 10,
  "BallsPlayed": 4,
  "_4s": 2,
  "_6s": 0,
  "SR": 250,
  "Date": 2023-03-15T07:07:27.800+00:00,
  "Out": Object
}
```

System Status: All Good. ©2023 MongoDB, Inc. Status Terms Privacy Atlas Blog Contact Sales

Cloud MongoDB Atlas interface showing the **cricket** database. The left sidebar lists namespaces: **bookStore**, **cricket** (selected), **ipaddresses**, **lastbowlers**, **laststrikes**, **overs**, **players**, **schedules**, **scoreballs**, **scorebats**, **scoreboards**, **teams** (highlighted), **new_db**, and **originalShots**.

The main panel displays the **teams** collection. The top bar shows: STORAGE SIZE: 36KB, LOGICAL DATA SIZE: 57B, TOTAL DOCUMENTS: 5, INDEXES TOTAL SIZE: 72KB. The **Find** tab is active, showing a query filter: `{ field: 'value' }`. The query results show 1-5 of 5 results, with the first three documents displayed:

```
{
  "_id": ObjectId("64116d3bb4beb9c549454df"),
  "Team": "GEITPL",
  "Logo": "http://192.168.1.16:4000/api/v1/getImg/167886375562.png",
  "__V": 0
},
{
  "_id": ObjectId("64116d558b4beb9c549454ea"),
  "Team": "Wipro",
  "Logo": "http://192.168.1.16:4000/api/v1/getImg/1678863700331.png",
  "__V": 0
},
{
  "_id": ObjectId("64116d6c8b4beb9c549454fb"),
  "Team": "Capgemini",
  "Logo": "http://192.168.1.16:4000/api/v1/getImg/1678863724090.png"
}
```

System Status: All Good. ©2023 MongoDB, Inc. Status Terms Privacy Atlas Blog Contact Sales

Atlas | Cloud: MongoDB | NodeProject | Access Manager | Billing | All Clusters | Get Help | Ankit

Project 0 | Data Services | App Services | Charts

Search Namespaces

DEPLOYMENT

Database

Data Lake | PREVIEW

SERVICES

Triggers

Data API

Data Federation

Search

SECURITY

Backup

Database Access

Network Access

Advanced

Goto

bookStore

cricket

ipaddresses

lastbowlers

laststrikes

overs

players

schedules

scoreballs

scorebats

scoreboards

teams

new_db

originalShots

STORAGE SIZE: 36KB | LOGICAL DATA SIZE: 4.77KB | TOTAL DOCUMENTS: 22 | INDEXES TOTAL SIZE: 20KB

Find | Indexes | Schema Anti-Patterns | Aggregation | Search Indexes | Charts

INSERT DOCUMENT

Filter | Type a query: { field: 'value' } | Reset | Apply | More Options

QUERY RESULTS: 1-20 OF MANY

```
{
  "_id": ObjectId('6411754b61fcbf356bce3252'),
  "Bowling": false,
  "PlayerId": "64116ed661fcbf356bce315e",
  "MatchId": "641173b661fcbf356bce322e",
  "Runs": 0,
  "Wickets": 0,
  "_4s": 0,
  "Extras": 0,
  "_6s": 0,
  "ER": 0,
  "Maiden": 0,
  "Overs": Array
}
```

1-20 of many results

System Status: All Good

©2023 MongoDB, Inc. | Status | Terms | Privacy | Atlas Blog | Contact Sales

Atlas | Cloud: MongoDB | NodeProject | Access Manager | Billing | All Clusters | Get Help | Ankit

Project 0 | Data Services | App Services | Charts

Search Namespaces

DEPLOYMENT

Database

Data Lake | PREVIEW

SERVICES

Triggers

Data API

Data Federation

Search

SECURITY

Backup

Database Access

Network Access

Advanced

Goto

bookStore

cricket

ipaddresses

lastbowlers

laststrikes

overs

players

schedules

scoreballs

scorebats

scoreboards

teams

new_db

originalShots

STORAGE SIZE: 20KB | LOGICAL DATA SIZE: 4KB | TOTAL DOCUMENTS: 1 | INDEXES TOTAL SIZE: 20KB

Find | Indexes | Schema Anti-Patterns | Aggregation | Search Indexes | Charts

INSERT DOCUMENT

Filter | Type a query: { field: 'value' } | Reset | Apply | More Options

QUERY RESULTS: 1-1 OF 1

```
{
  "_id": ObjectId('64116d268b4beb9c549454da'),
  "url": "192.168.1.16",
  "id": 1,
  "__v": 0
}
```

System Status: All Good

©2023 MongoDB, Inc. | Status | Terms | Privacy | Atlas Blog | Contact Sales

Cloud MongoDB Atlas interface showing the 'schedules' collection in the 'cricket' database. The interface includes a sidebar with navigation options like Deployment, Database, and Services. The main panel displays the 'Find' tab with a query filter and results. The query results show 4 documents, with the first two visible:

```
{ "_id": "ObjectId('641173b861fcbf356bce322e')", "Team": "GEITPL", "Opponent": "Wipro", "Venue": "Mumbai", "DateAndTime": "2023-03-15T07:28:48.679+00:00", "Played": false, "__v": 0 }
```

```
{ "_id": "ObjectId('641173d361fcbf356bce3236')", "Team": "Wipro", "Opponent": "Capgemini", "Venue": "Kolkata", "DateAndTime": "2023-03-16T07:29:00.684+00:00", "Played": false, "__v": 0 }
```

Cloud MongoDB Atlas interface showing the 'laststrikes' collection in the 'cricket' database. The interface includes a sidebar with navigation options like Deployment, Database, and Services. The main panel displays the 'Find' tab with a query filter and results. The query results show 1 document:

```
{ "_id": "ObjectId('6411758f61fcbf356bce33b9')", "id": "6411754b61fcbf356bce3254", "MatchId": "641173b861fcbf356bce322e", "__v": 0 }
```


Atlas NodeProject Access Manager Billing All Clusters Get Help Ankit

Project 0 Data Services App Services Charts

Database bookStore cricket ipaddresses lastbowlers laststrikes overs players schedules scoreballs scorebats scoreboards teams new_db originalShots

STORAGE SIZE: 36KB LOGICAL DATA SIZE: 2.28KB TOTAL DOCUMENTS: 1 INDEXES TOTAL SIZE: 20KB

Find Indexes Schema Anti-Patterns Aggregation Search Indexes Charts

INSERT DOCUMENT

Filter Type a query: { field: 'value' } Reset Apply More Options

QUERY RESULTS: 1-1 OF 1

```

{
  "_id": ObjectId("6411754c61fcbf356bce32a8"),
  "MatchId": "641173b861fcbf356bce322e",
  "Status": true,
  "Overs": 20,
  "Date": 2023-03-15T07:07:27.845+00:00,
  "Team": Array,
  "__v": 0
}

```

System Status: All Good
©2023 MongoDB, Inc. Status Terms Privacy Atlas Blog Contact Sales

Atlas NodeProject Access Manager Billing All Clusters Get Help Ankit

Project 0 Data Services App Services Charts

Database bookStore cricket ipaddresses lastbowlers laststrikes overs players schedules scoreballs scorebats scoreboards teams new_db originalShots

LOGICAL DATA SIZE: 17.89KB STORAGE SIZE: 312KB INDEX SIZE: 268KB TOTAL COLLECTIONS: 10

CREATE COLLECTION

Collection Name	Documents	Logical Data Size	Avg Document Size	Storage Size	Indexes	Index Size	Avg Index Size
ipaddresses	1	61B	61B	20KB	1	20KB	20KB
lastbowlers	1	102B	102B	36KB	1	20KB	20KB
laststrikes	1	102B	102B	36KB	1	20KB	20KB
overs	0	0B	0B	4KB	1	4KB	4KB
players	22	4.90KB	232B	36KB	1	36KB	36KB
schedules	4	472B	118B	36KB	1	36KB	36KB
scoreballs	22	4.77KB	222B	36KB	1	20KB	20KB
scorebats	22	4.58KB	213B	36KB	1	20KB	20KB
scoreboards	1	2.28KB	2.28KB	36KB	1	20KB	20KB
teams	5	577B	116B	36KB	2	72KB	36KB

System Status: All Good
©2023 MongoDB, Inc. Status Terms Privacy Atlas Blog Contact Sales

<https://cloud.mongodb.com/v2/63b9384ab608da0b2c98117c#/metrics/replicaSet/63b93a3a9ad16b4bd8234ed2/explorer/cricket/overs/find>

Atlas NodeProject Access Manager Billing All Clusters Get Help Ankit

Project 0 Data Services App Services Charts

Search Namespaces

LOGICAL DATA SIZE: 17.89KB STORAGE SIZE: 312KB INDEX SIZE: 268KB TOTAL COLLECTIONS: 10 CREATE COLLECTION

Collection Name	Documents	Logical Data Size	Avg Document Size	Storage Size	Indexes	Index Size	Avg Index Size
ipaddresses	1	61B	61B	20KB	1	20KB	20KB
lastbowlers	1	102B	102B	36KB	1	20KB	20KB
laststrikes	1	102B	102B	36KB	1	20KB	20KB
overs	0	0B	0B	4KB	1	4KB	4KB
players	22	4.96KB	232B	36KB	1	36KB	36KB
schedules	4	472B	118B	36KB	1	36KB	36KB
scoreballs	22	4.77KB	222B	36KB	1	20KB	20KB
scorebats	22	4.56KB	213B	36KB	1	20KB	20KB
scoreboards	1	2.28KB	2.28KB	36KB	1	20KB	20KB
teams	5	577B	116B	36KB	2	72KB	36KB

System Status: All Good
©2023 MongoDB, Inc. Status Terms Privacy Atlas Blog Contact Sales

https://cloud.mongodb.com/v2/63b9384ab608da0b2c98117c#/metrics/replicaSet/63b93a3a9ad16b4bd8234ed2/explorer/cricket/overs/find

Atlas NodeProject Access Manager Billing All Clusters Get Help Ankit

Project 0 Data Services App Services Charts

Search Namespaces

STORAGE SIZE: 36KB LOGICAL DATA SIZE: 102B TOTAL DOCUMENTS: 1 INDEXES TOTAL SIZE: 20KB

Find Indexes Schema Anti-Patterns Aggregation Search Indexes Charts

INSERT DOCUMENT

Filter Type a query: { field: 'value' } Reset Apply More Options

QUERY RESULTS: 1 OF 1

```

_id: ObjectId('6411758f61fcbf356bce339f')
MatchId: "641173b861fcbf356bce322e"
Id: "6411754b61fcbf356bce327e"
__v: 0

```

System Status: All Good
©2023 MongoDB, Inc. Status Terms Privacy Atlas Blog Contact Sales

https://cloud.mongodb.com/v2/63b9384ab608da0b2c98117c#/metrics/replicaSet/63b93a3a9ad16b4bd8234ed2/explorer/cricket/lastbowlers/find

4.3 Interface Design: -

GUI'S

In the flexibility of the uses the interface has been developed a graphics concept in mind, associated through a browses interface.

The GUI'S at the top level have been categorized as:

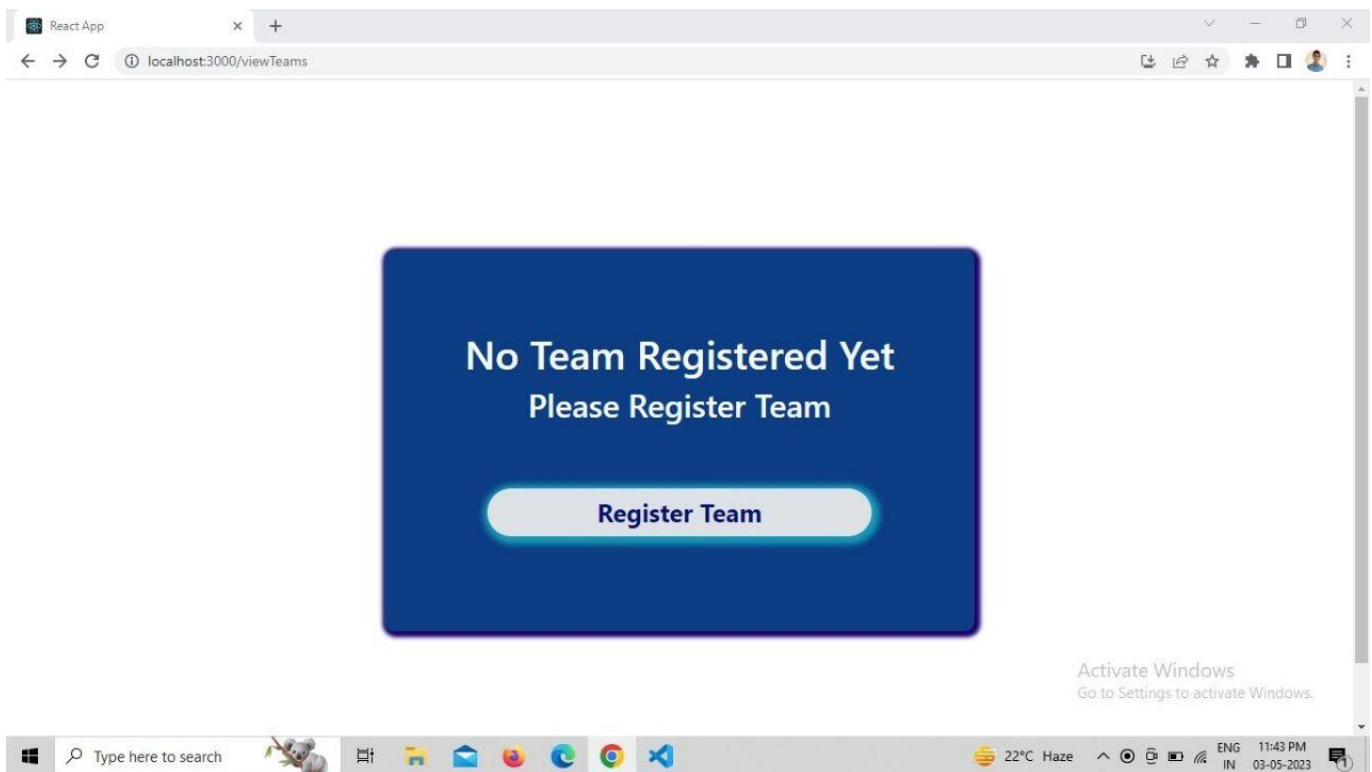
1. Administrative user interface
2. The operational or generic user interface

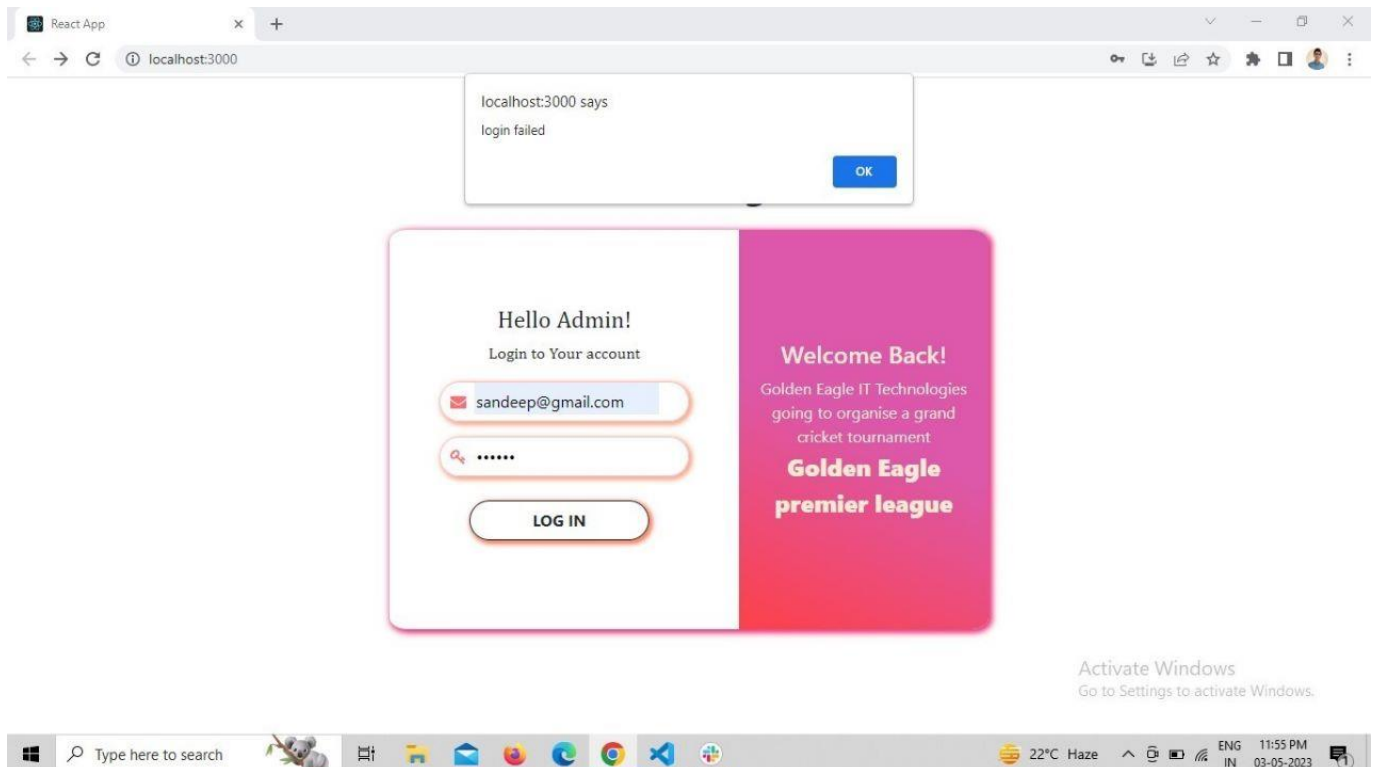
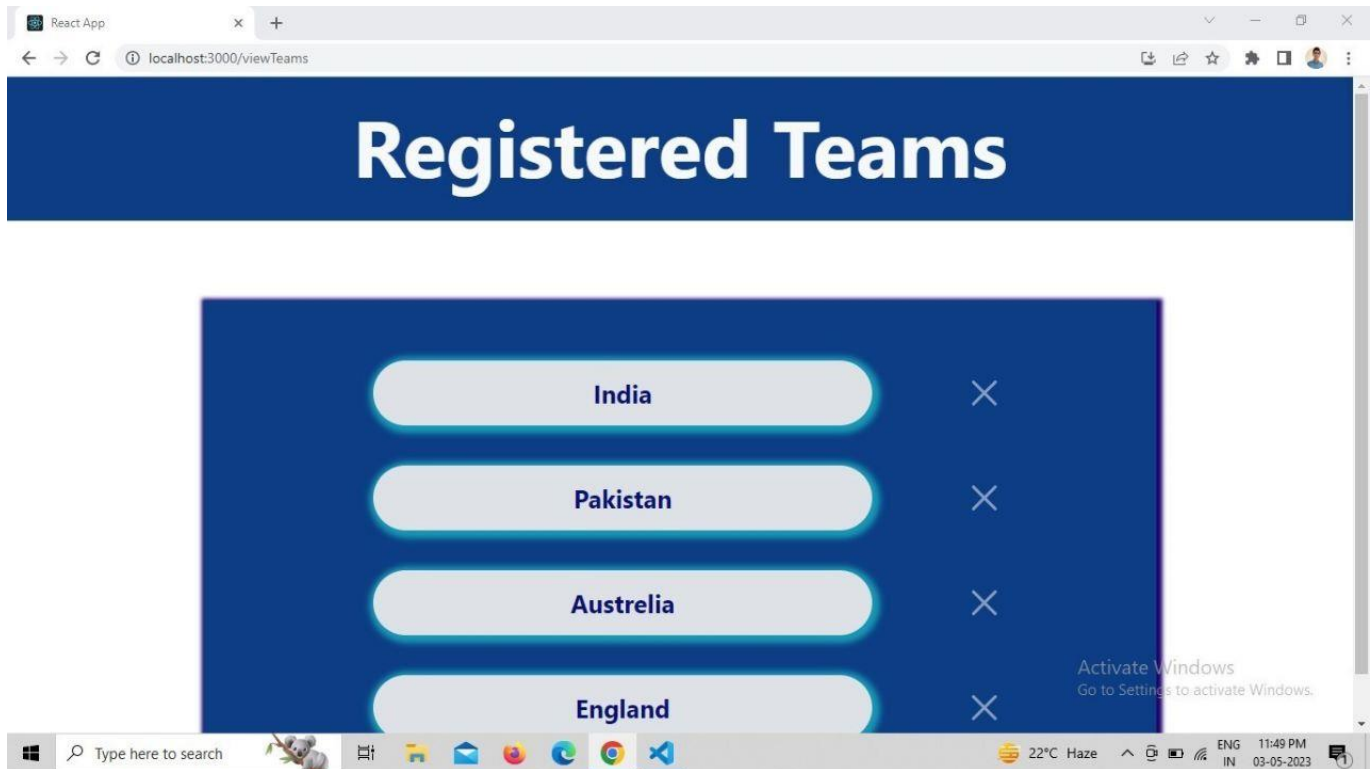
The administrative user interface concentrates on the consistent information that is practically, part of the organizational activities and which needs proper authentication for the data collection. The interfaces help the administrations with all the transactional states like Data insertion, Data deletion and Data updation along with the extensive data search capabilities.

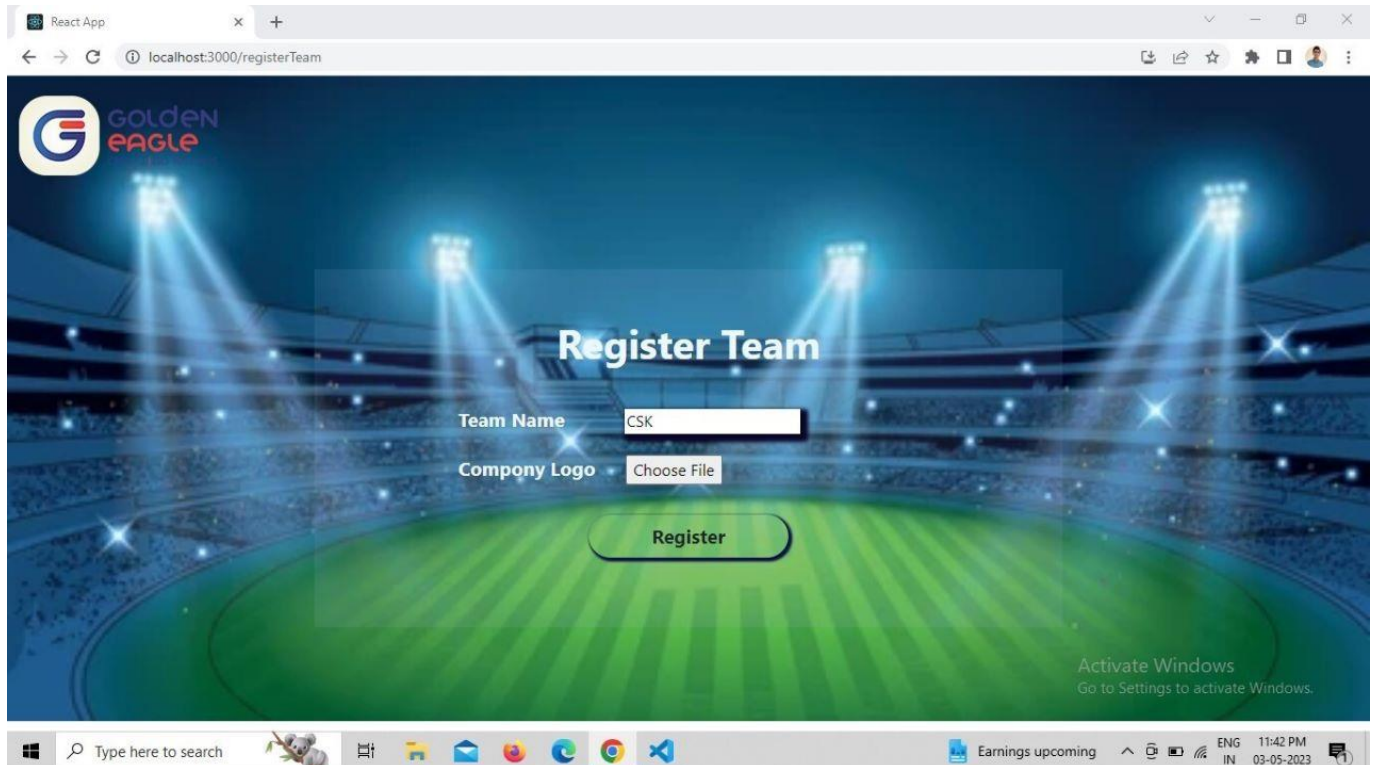
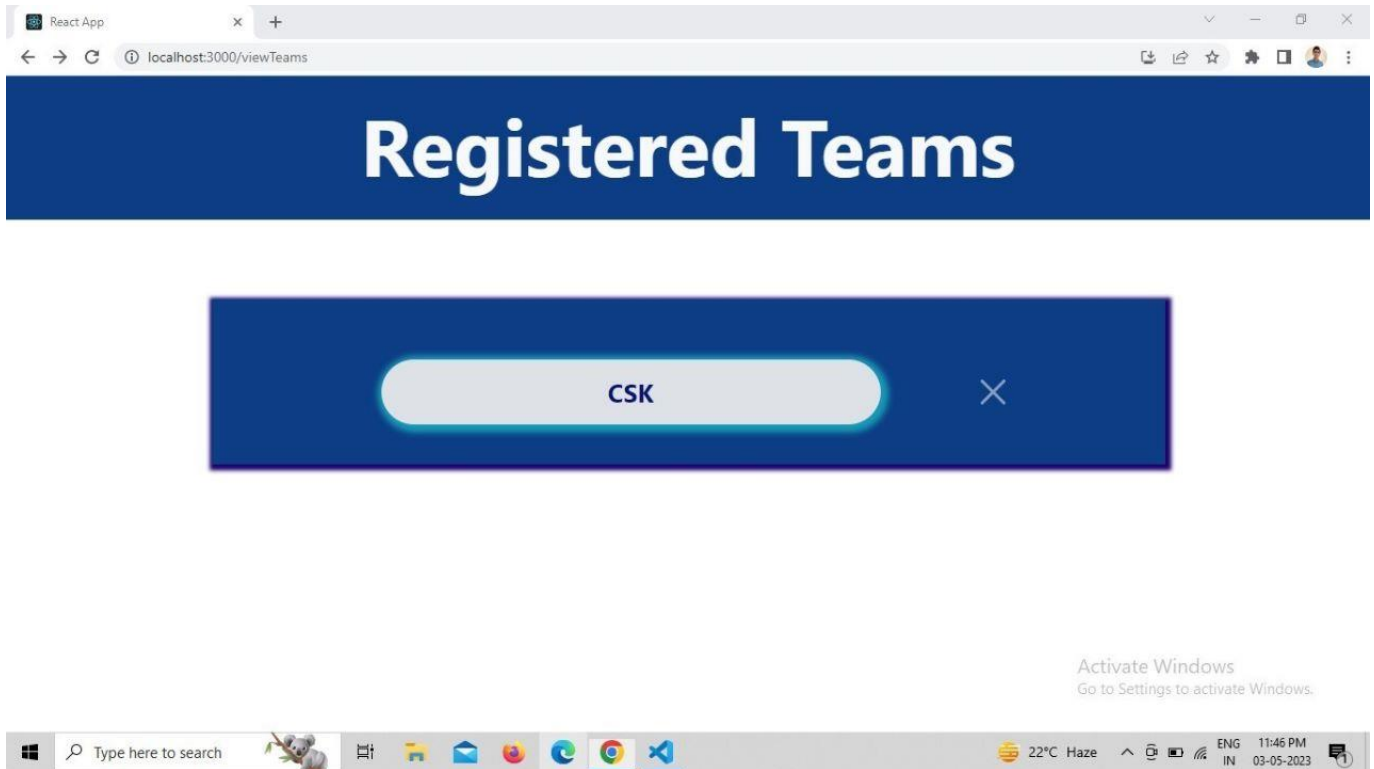
The operational or generic user interface helps the users upon the system in transactions through the existing data and required services. The operational user interface also helps the ordinary users in managing their own information helps the ordinary users in managing their own information in a customized manner as per the assisted flexibilities.

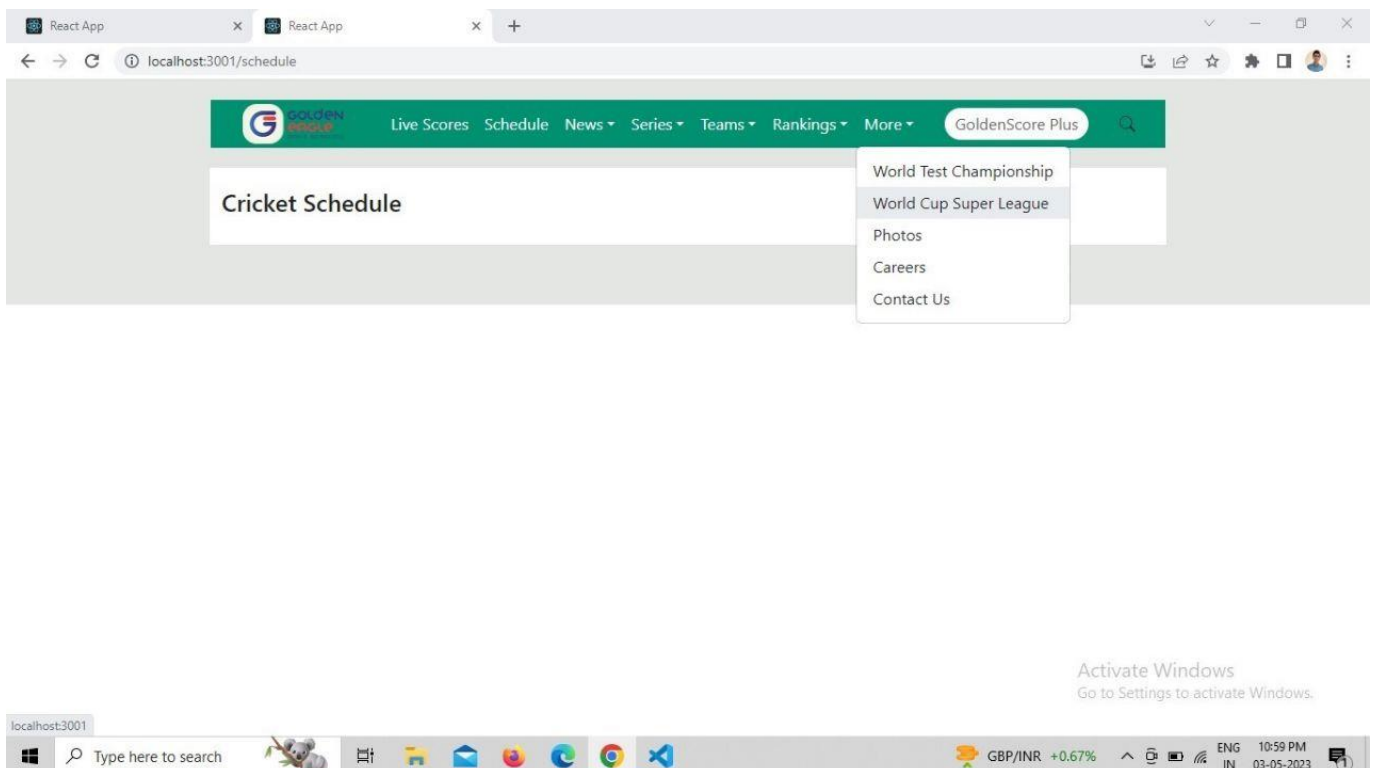
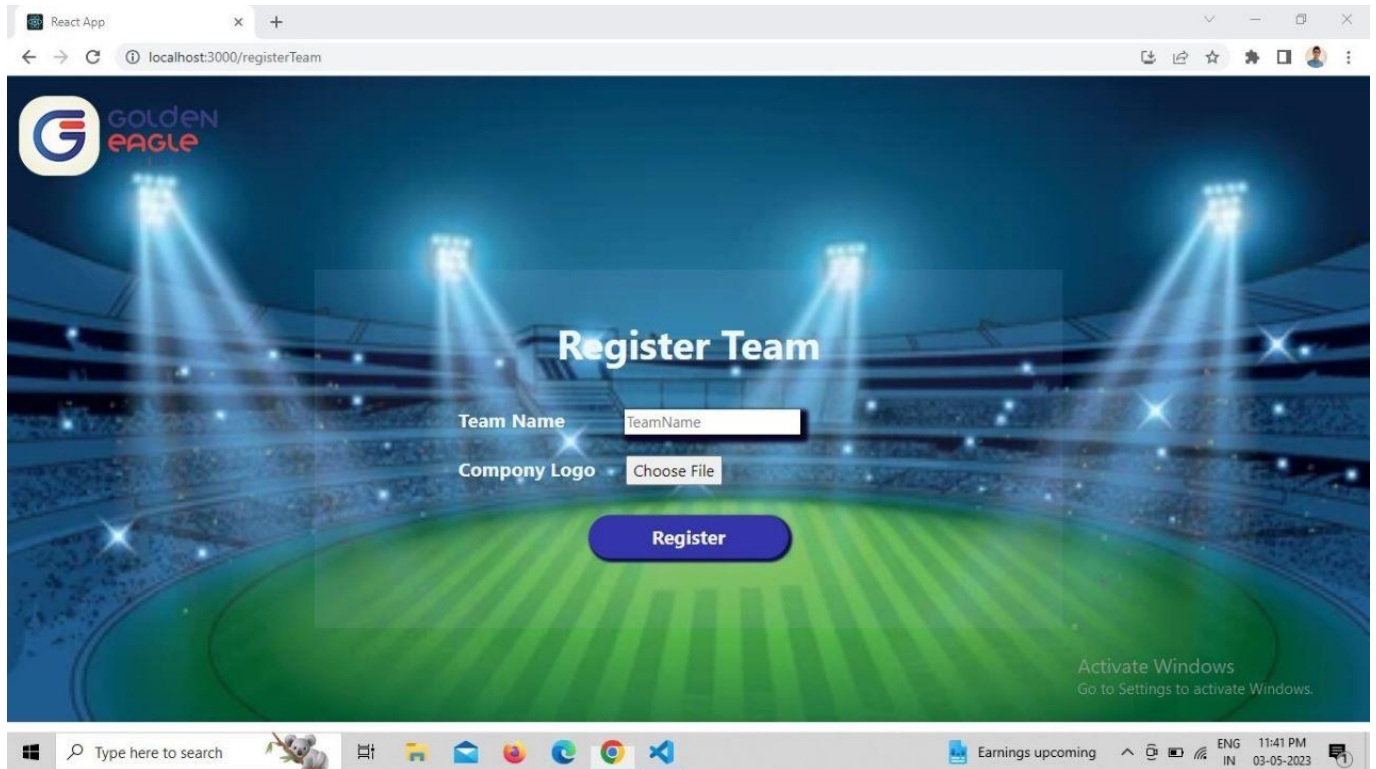
User Interfaces of our system: -

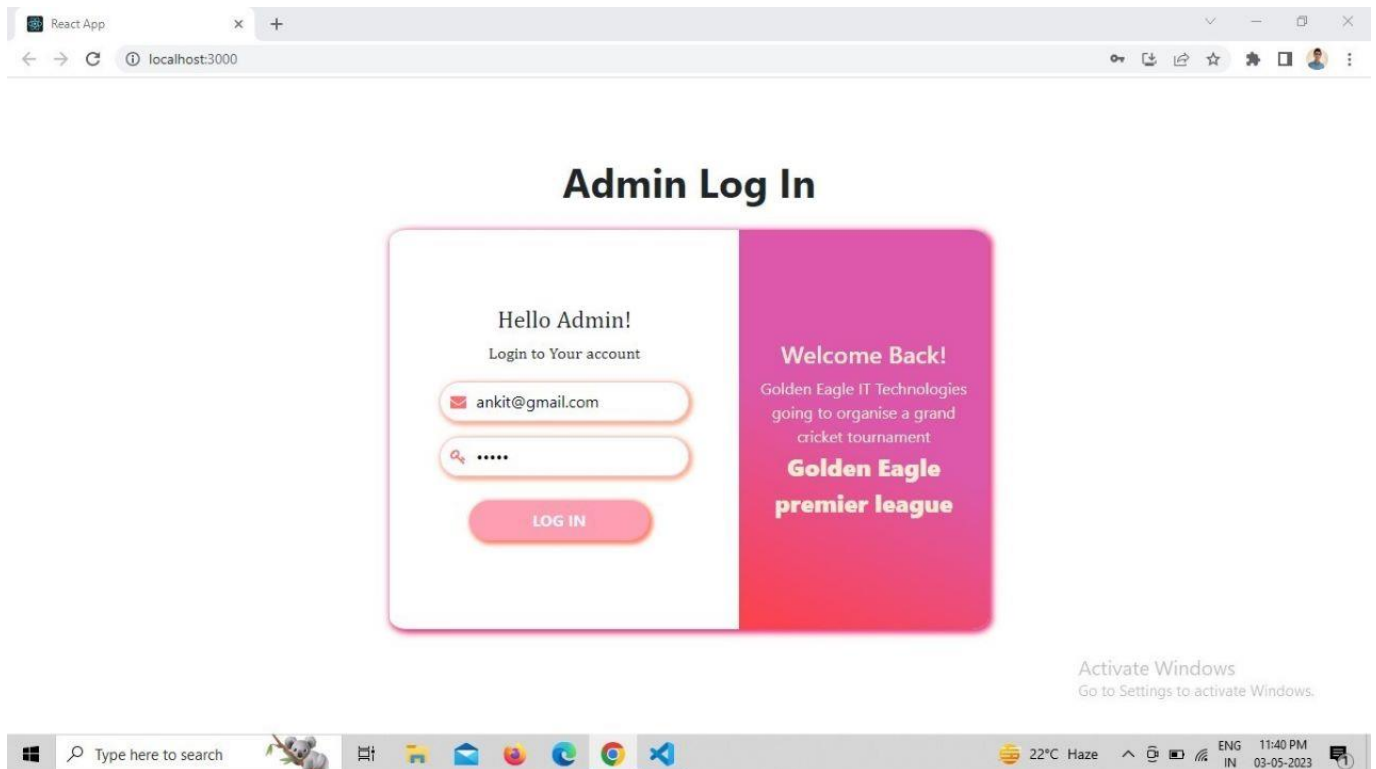
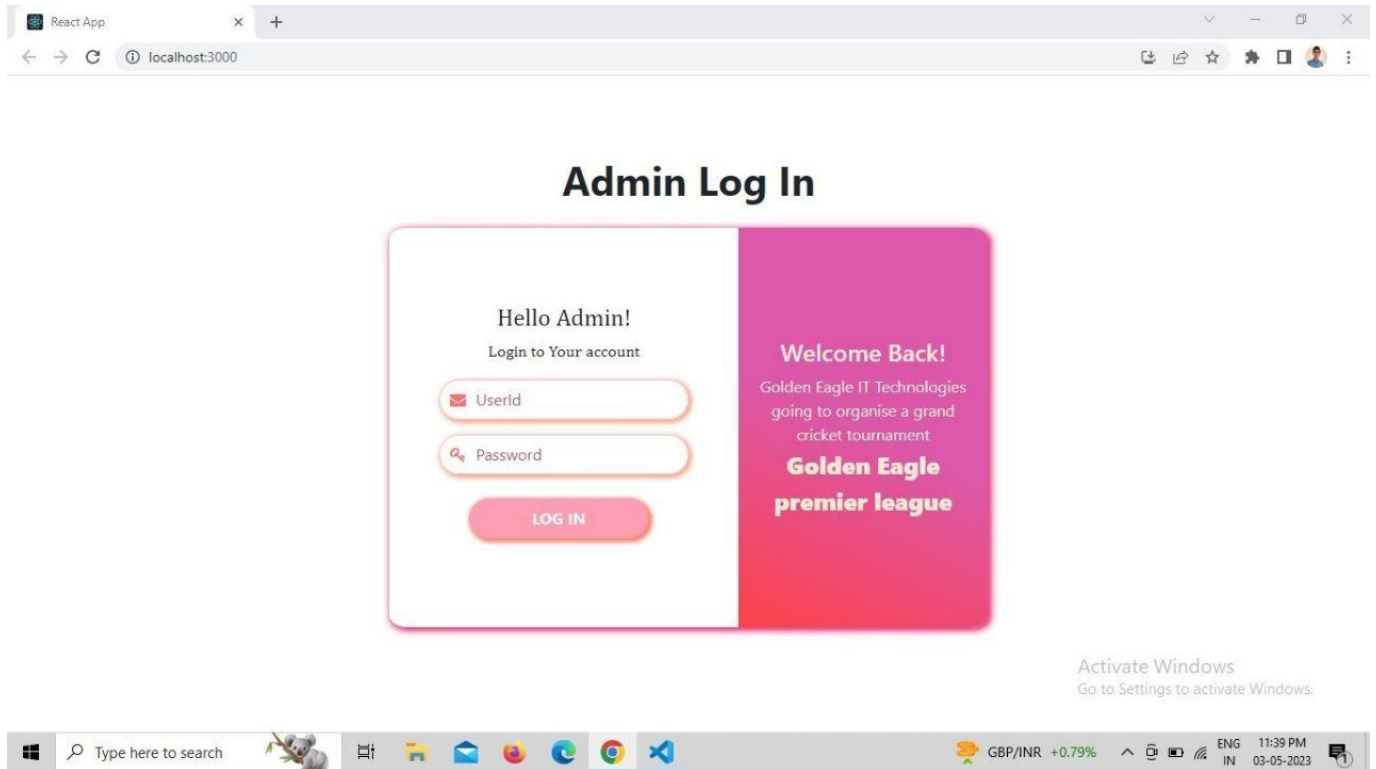
REGISTER PAGE: -

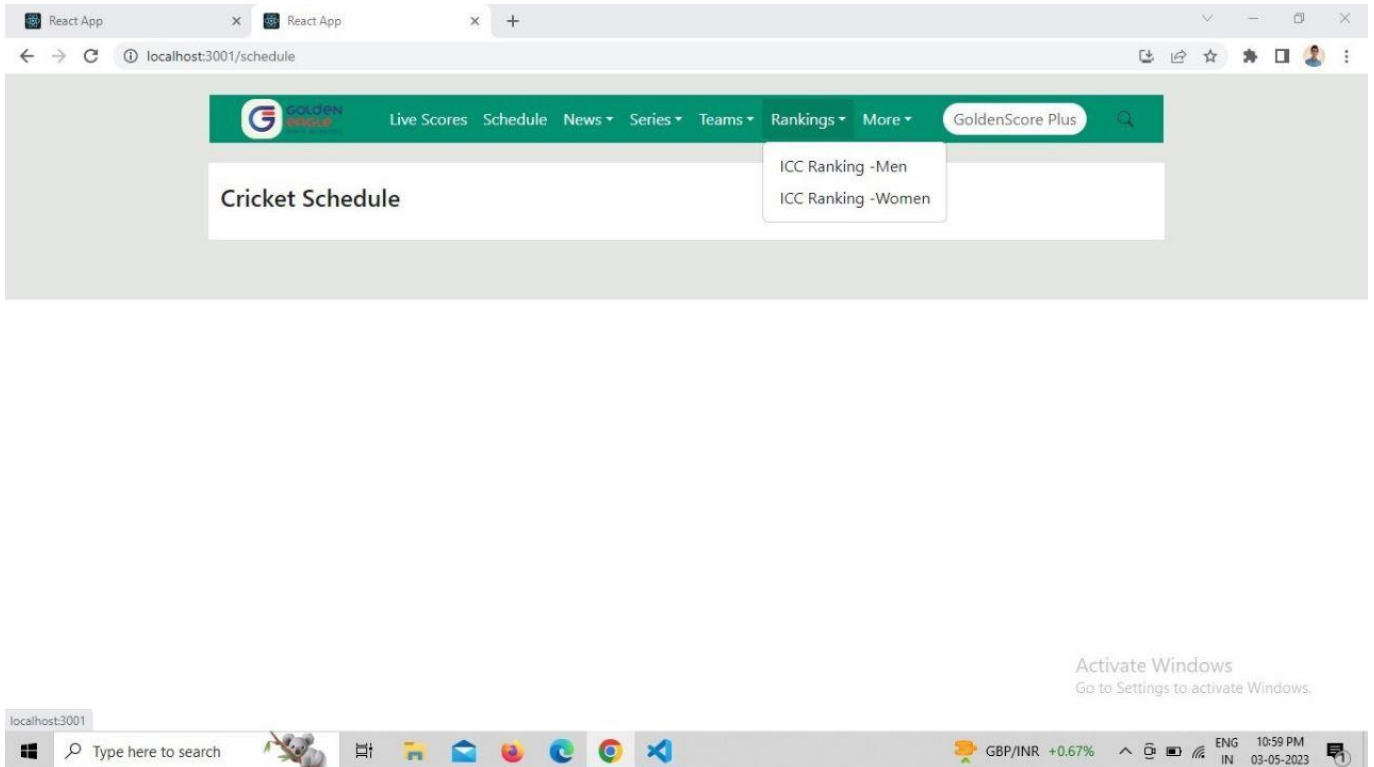


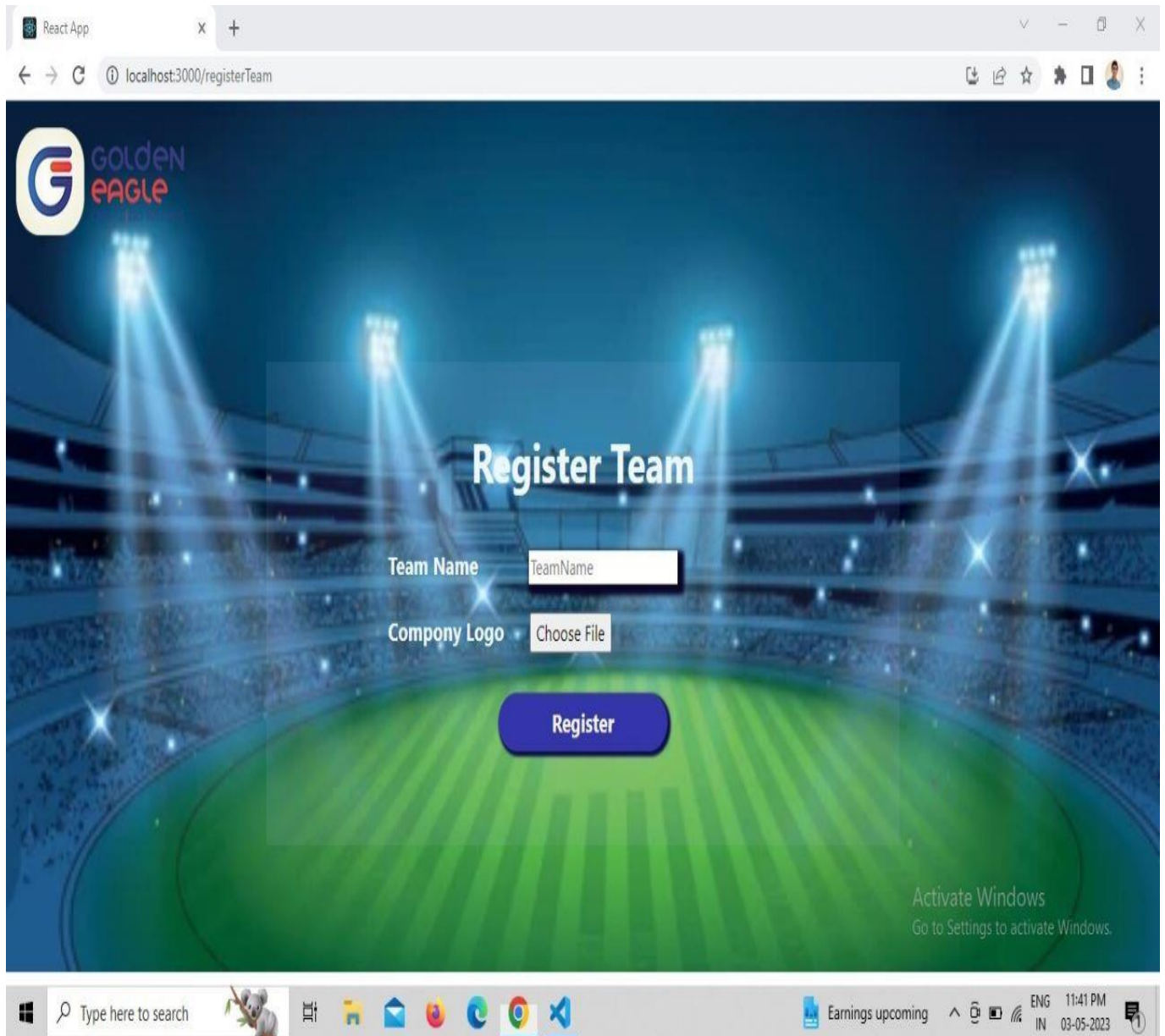












CHAPTER 5 TESTING

5.1 System Testing: -

The philosophy behind testing is to find errors. Test cases are devised with this in mind. A strategy employed for system testing is code testing.

Code Testing: -

This strategy examines the logic of the program. To follow this method we developed some test data that resulted in executing every instruction in the program and module i.e. every path is tested. Systems are not designed as entire nor are they tested as single systems. To ensure that the coding is perfect two types of testing is performed or for that matter is performed or that matter is performed or for that matter is performed on all systems.

Types Of Testing: -

- Unit Testing
- Link Testing

Unit Testing: -

Unit testing focuses verification effort on the smallest unit of software i.e. the module. Using the detailed design and the process specifications testing is done to uncover errors within the boundary of the module. All modules must be successful in the unit test before the start of the integration testing begins.

In this project each service can be thought of a module. There are so many modules like Login, HWAdmin, MasterAdmin, Normal User, and PManager. Giving different sets of inputs has tested each module. When developing the module as well as finishing the development so that each module works without any error. The inputs are validated when accepting from the user. In this application developer tests the programs up as system. Software units in a system are the modules and routines that are assembled and integrated to form a specific function. Unit the modules and routines that are assembled and integrated to form a specific function. Unit testing is first done on modules, independent of one another to locate errors. This enables to detect errors. Through this errors resulting from interaction between modules initially avoided.

Link Testing: -

Link testing does not test software but rather the integration of each module in system. The primary concern is the compatibility of each module. The Programmer tests where modules are designed with different parameters, length, type etc.

Integration Testing: -

After the unit testing we have to perform integration testing. The goal here is to see if Modules can be integrated properly, the emphasis being on testing interfaces between Modules. This testing activity can be considered as testing the design and hence the emphasis on testing module interactions.

In this project integrating all the modules forms the main system. When integrating all the modules I have checked whether the integration effects working of any of the services by giving different combinations of inputs with which the two services run perfectly before Integration.

System Testing: -

Here entire 'ATM' has been tested against requirements of project and it is checked whether all requirements of project have been satisfied or not.

Acceptance Testing: -

Acceptance Test is performed with realistic data of the client to demonstrate that the software is working satisfactorily. Testing here is focused on external behavior of the system; the internal logic of program is not emphasized. In this project 'Network Management Of Database System' I have collected some data and tested whether project is working correctly or not.

Test cases should be selected so that the largest number of attributes of an equivalence class is exercised at once. The testing phase is an important part of software development. It is the process of finding errors and missing operations and also a complete verification to determine whether the objectives are met and the user requirements are satisfied.

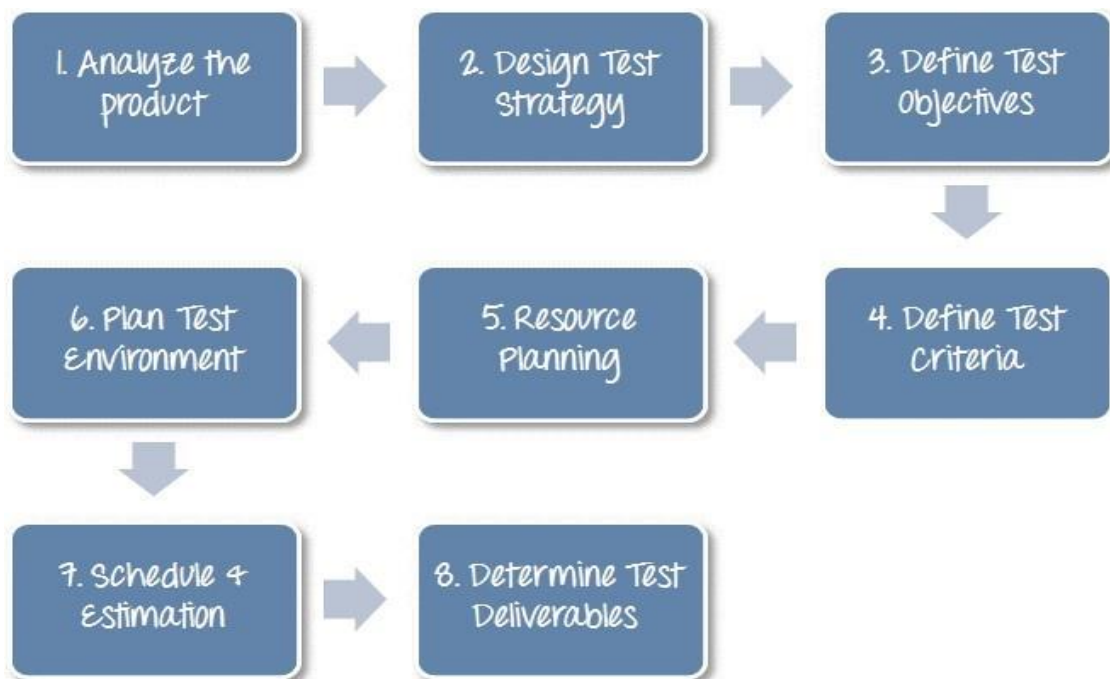
White Box Testing: -

This is a unit testing method where a unit will be taken at a time and tested thoroughly at a statement level to find the maximum possible errors. I tested step wise every piece of code, taking care that every statement in the code is executed at least once. The white box testing is also called Glass Box Testing. I have generated a list of test cases, sample data, which is used to check all possible combinations of execution paths through the code at every module level.

Black Box Testing: -

This testing method considers a module as a single unit and checks the unit at interface and communication with other modules rather getting into details at statement level. Here the module will be treated as a block box that will take some input and generate output. Output for a given set of input combinations are forwarded to other modules.

5.2 Test plan: -



5.3 Test case designTest Case 1: - Login Page: -

- After login a option page will be opened where admin can add information touser's and company's account and can navigate contact details.
- This page contains the text boxes in which Admin can add new information.
- After login a option page will be opened where admin can add information touser's and company's account and can navigate contact details.
- This page contains the text boxes in which Admin can add new information.

5.2 Sample test data and results: -

How to Prepare Data that will Ensure Maximum Test Coverage? Design your data considering the following categories:

- 1) No data: Run your test cases on blank or default data. See if proper error messages are generated.
- 2) Valid data set: Create it to check if the application is functioning as per requirements and valid input data is properly saved in database or files.
- 3) Invalid data set: Prepare invalid data set to check application behavior for negative values, alphanumeric string inputs.
- 4) Illegal data format: Make one data set of illegal data format. The system should not
- 5) Boundary Condition dataset: Dataset containing out of range data. Identify application boundary cases and prepare data set that will cover lower as well as upper boundary conditions.
- 6) The dataset for performance, load and stress testing: This data set should be large in volume.

CHAPTER 6

Limitations

We tried our best to make a flexible and error free system but there are some limitations in this system. The Major problem with this system is, only one administrator handle details of whole company.

While a CRM (Customer Relationship Management) project can bring many benefits to a business, there are also some potential limitations that should be considered. Here are a few examples:

1. **Cost:** Implementing a CSB system can be expensive, especially for smaller businesses. In addition to the cost of the software itself, there may be costs associated with hardware, training, and ongoing maintenance and support.
2. **Integration:** Integrating a CSB system with other existing business systems can be challenging. For example, integrating with an ERP (Enterprise Resource Planning) system or an ecommerce platform may require significant customization and development work.
3. **Data Quality:** A CSB system is only as good as the data that is entered into it. If data is incomplete or inaccurate, the system may not provide the intended benefits. Ensuring data quality requires ongoing effort and attention.
4. **Adoption:** A CSB system is only effective if it is actually used by employees. If employees do not adopt the system, or do not use it correctly, the system may not provide the intended benefits.
5. **Privacy:** A CSB system may contain sensitive customer data, which can create privacy and security concerns. It is important to implement appropriate security measures to protect this data.
6. **Customization:** While many CSB systems offer a high degree of customization, this can also be a double-edged sword. Customizations can be

expensive, and can make it more difficult to upgrade the system in the future.

7. Overall, while a CSB project can provide significant benefits to a business, it is important to carefully consider the potential limitations and plan accordingly. By addressing these limitations proactively, businesses can maximize the value of their CSB investment.

CHAPTER 7

Summary & Conclusion

7.1 Summary and Conclusions

The **Customer Relationship Management** is a web-based application for primarily providing training to the employees who provide customized solutions to meet organizational needs.

This application software has been computed successfully and was also tested successfully by taking “test cases”. It is user friendly, and has required options, which can be utilized by the user to perform the desired operations.

In summary, a CSB (Customer Relationship Management) project is a vital initiative for any business that aims to improve customer satisfaction and loyalty. By implementing a CSB system, companies can centralize customer data, track interactions, and gain insights that can help them provide better service and support.

Throughout the course of a CSB project, there are several key considerations that must be taken into account, including defining business goals and requirements, selecting the right CSB platform, and ensuring data security and privacy. The future scope of CSB projects is likely to focus on enhancing the customer experience through personalization, AI, omnichannel engagement, automation, and data security.

In conclusion, a well-executed CSB project can provide significant benefits to a business, including increased customer satisfaction, improved sales and marketing effectiveness, and more streamlined operations. By leveraging the latest technologies and best practices, companies can stay ahead of the competition and build lasting relationships with their custom

The software is developed using Node.Js and MongoDB

as back end in Windows environment. The goals that are achieved by the software are:

- ✓ Instant access.
- ✓ Improved productivity.
- ✓ Optimum utilization of resources.
- ✓ Efficient management of records.
- ✓ Simplification of the operations.
- ✓ Less processing time and getting required information.
- ✓ User friendly.

CHAPTER 8 FUTURE SCOPE

8.1 Future Scope

The future scope for a CSB project can be quite broad, as technology and business needs continue to evolve. Here are a few potential areas of focus:

1. **Personalization:** In the future, customers will likely expect even greater personalization from companies. This could include things like tailored product recommendations, customized marketing messages, and personalized customer service experiences. CSB systems can play a key role in helping companies deliver this level of personalization by providing data-driven insights about customers' preferences and behaviors.
2. **Artificial Intelligence:** AI and machine learning technologies are becoming increasingly important in the business world, and CSB systems are no exception. In the future, CSB platforms may leverage AI algorithms to automatically categorize and analyze customer data, predict customer behavior, and recommend actions that can improve the customer experience.
3. **Omnichannel Engagement:** As customers interact with companies across an ever-growing number of channels, from social media to chatbots to email and beyond, CSB systems will need to keep pace. In the future, CSB platforms may incorporate more channels of communication, and offer tools to help companies track and manage customer interactions across all of them.
4. **Automation:** CSB systems can help automate many routine tasks, such as data entry, lead qualification, and appointment scheduling. In the future, these automation capabilities may become even more advanced, potentially using robotic process automation (RPA) or other technologies to streamline and

simplify these tasks.

5. Data Security: As more and more customer data is stored in CSB systems, data security will become an increasingly critical concern. In the future, CSB platforms will need to implement robust security measures to protect customer data, including encryption, access controls, and other techniques.
6. Overall, the future scope for CSB projects is likely to be focused on improving the customer experience through personalization, AI, omnichannel engagement, automation, and data security.

8.2 APPENDIX

An appendix for a CSB project might include a range of supporting materials and documentation, such as:

1. Business requirements: A detailed list of the business requirements for the CSB system, including functionality, performance, and scalability requirements.
2. Vendor evaluation criteria: A list of criteria used to evaluate potential CSB vendors, such as product features, cost, support, and integration capabilities.
3. Project plan: A detailed project plan outlining the key milestones, tasks, and dependencies for the CSB project.
4. Data model: A data model that describes the structure of the CSB database, including tables, fields, and relationships.
5. User personas: A set of user personas that describe the key types of users who will interact with the CRM system, such as salespeople, marketing staff, and customer service representatives.
6. Training materials: A set of training materials for end-users, including user manuals, videos, and online tutorials.
7. Change management plan: A plan outlining how the organization will manage the changes that come with implementing a new CSB system, such as communication, training, and support.
8. Risk management plan: A plan that identifies potential risks and mitigations for the CSB project, such as technical issues, vendor delays, or user adoption challenges.
9. Testing plan: A plan that outlines how the CSB system will be tested, including test cases, test scenarios, and expected outcomes.

10. Support plan: A plan for ongoing support and maintenance of the CSB system, including how issues will be reported and resolved, and how upgrades will be managed.
11. Overall, an appendix can provide valuable supporting materials and documentation that help to ensure the success of a CSB project.

8.3 BIOGRAPHY

Javatpoint.com

Nodejs Documentation

Youtube.com