

College of Computing, Informatics & Mathematics


Group Project - Cover Sheet

Course Code	Due Date	Lecturer's Name
CSC584	25 th JULY 2024	DR. GLORIA JENNIS TAN
Course Name		Group
ENTERPRISE PROGRAMMING		T5CDCS2304C
Project Title		
GYMNASTIC RHYTHMIC SCORING SYSTEM		

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Score Sheet			
			Comments
Presentation video			
<input type="checkbox"/> Organization of content <input type="checkbox"/> Oral presentation skill <input type="checkbox"/> Video Creativity <input type="checkbox"/> Teamwork			
Total			
SYSTEM PRESENTATION (Final web application project)			
System Security			
<input type="checkbox"/> Input form validation <input type="checkbox"/> Session Management			
Total			
System Functionality			
<input type="checkbox"/> 1: Create <input type="checkbox"/> 2: Read <input type="checkbox"/> 3: Update <input type="checkbox"/> 4: Delete <input type="checkbox"/> 5: Report (Analysis)			
Total			
Usability of user interface			
<input type="checkbox"/> Screen Design <input type="checkbox"/> Originality/Creativity			
Total			
MVC framework			
<input type="checkbox"/> Servlet <input type="checkbox"/> JSP <input type="checkbox"/> JavaBean <input type="checkbox"/> DAO			
Total			
Others			

<input type="checkbox"/> Report			
<input type="checkbox"/> Extra Features			
Total			

Grand Total		
--------------------	--	--

Rubric Web Project

Criteria	Poor (0)	Fair (1)	Good (2-3)	Excellent (4)
Security	No session management and no form validation.	Some sessions management present but not complete.	Sessions management is consistently coded. Form is easy to read and validate.	Sessions management is well managed. The form is well verified and validated.
Functionality (CRUD)	Code will not run. HTML will not display.	HTML will display a page but will not carry out CRUD functions.	Web application has consistent look and feel and will perform all CRUD functions.	Web application has consistent look and feel and will perform all CRUD functions. Some testing scenarios are provided.
Usability of user interface	Layout has no structure or organization.	Text broken into paragraphs and/or sections	Organized and consistent; good formatting.	Appearance of the page looks professional.
Extra features	No extra features.	Consist of 1-3 extra features.	Consist of 4-6 extra features.	Consist of more than 6 extra features.

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1. Introduction

The gymnastic rhythmic scoring system is designed to significantly enhance the overall management and execution of scoring in rhythmic gymnastics events. The previous system posed multiple challenges, including a lack of user-friendliness, difficulty in displaying essential data and scores, and general inefficiency. These issues often led to confusion and dissatisfaction among users, including staff, judges, and audiences.

Recognizing these limitations, we have developed a new system with a focus on several key improvements. The user interface has been redesigned to be more attractive and intuitive, ensuring that even those with minimal technical expertise can navigate it with ease. Accurate score calculation is a cornerstone of this new system, guaranteeing that all scores are computed precisely and transparently.

The system is also capable of displaying all important data efficiently, allowing guests and participants to access real-time information seamlessly. Its faster processing capabilities ensure that updates and results are provided without delay, enhancing the overall experience of the event. Additionally, the system is designed to be highly responsive and easy to use, making it accessible to all users involved. To address security concerns, robust measures have been implemented to safeguard data and ensure the system's integrity.

The system accommodates three types of users: clerks, head judges, and the public. Clerks and head judges are required to log in to perform their respective tasks, ensuring secure access and data management. The public, however, does not need to log in to view all publicly available data, allowing for easy and open access to event information. The workflow involves staff adding all event details and registering the clerks responsible for the event day. The clerks will then register all gymnasts, teams, coaches, judges, and the head judge. The head judge is tasked with entering scores from all judges for each performance. The system calculates the final scores and arranges the rankings, accordingly, ensuring a fair and efficient process.

2. Current Business Operation

As for the existing system, the scoring system only enables the user to view the data that has been inserted to the system. This view features only enable the user to search and view the sorted information by searching some data such as the year of the event, the date of birth of the gymnast and the state. The existing system does not provide any additional features as it only allows the user to print the details of the data that has been sorted. Other than that, the interface of the existing system does not provide any features to interact with the user to use or to visit the system in the feature. For example, the table for the data is not user friendly as the data in the table is not properly organized making the user feel it is hard to understand the gymnast's score. Next, the color chosen for the system also makes the system bored to be use again. The example of the system is shown in the figure below:

2015 AA FH+Ball - Older (2015) - Results

By Apparatus

2015

Jan-Jun, Jul-Dec

Choose Age

Choose State

Choose awardin

Print result





Final	Place	State	Name/Club	Year	D	A	E	Ded.	Score
	1.	 SGP	6 - Toh Claudia Bianka Panova Sport & Art Academy	2015	17.050 (1)				17.050
					2.400	7.000	7.650	-	
	2.	 SGP	9 - LEE Emmalyn Rhythm & Groove (Singapore)	2015	16.700 (2)				16.700
					1.900	7.100	7.700	-	
	3.	 SGP	4 - Tan Miroslava Harmony Karpenko Gymnastics Academy	2015	14.850 (3)				14.850
					1.300	6.650	6.900	-	
	4.	 SGP	7 - LEE RUO XUAN CHARLOTTE D'Gymnastique Academy	2015	14.300 (4)				14.300
					1.200	6.200	6.900	-	

Figure 1: Example of the current system

3. System objective

The objectives of the system are:

- To ensure efficiency in score entry and calculation.
- To maintain accuracy for fair and consistent scoring.
- To generate real-time reporting for live coverage.
- To analyze performance improvement.

4. Entity Relationship Diagram (ERD)

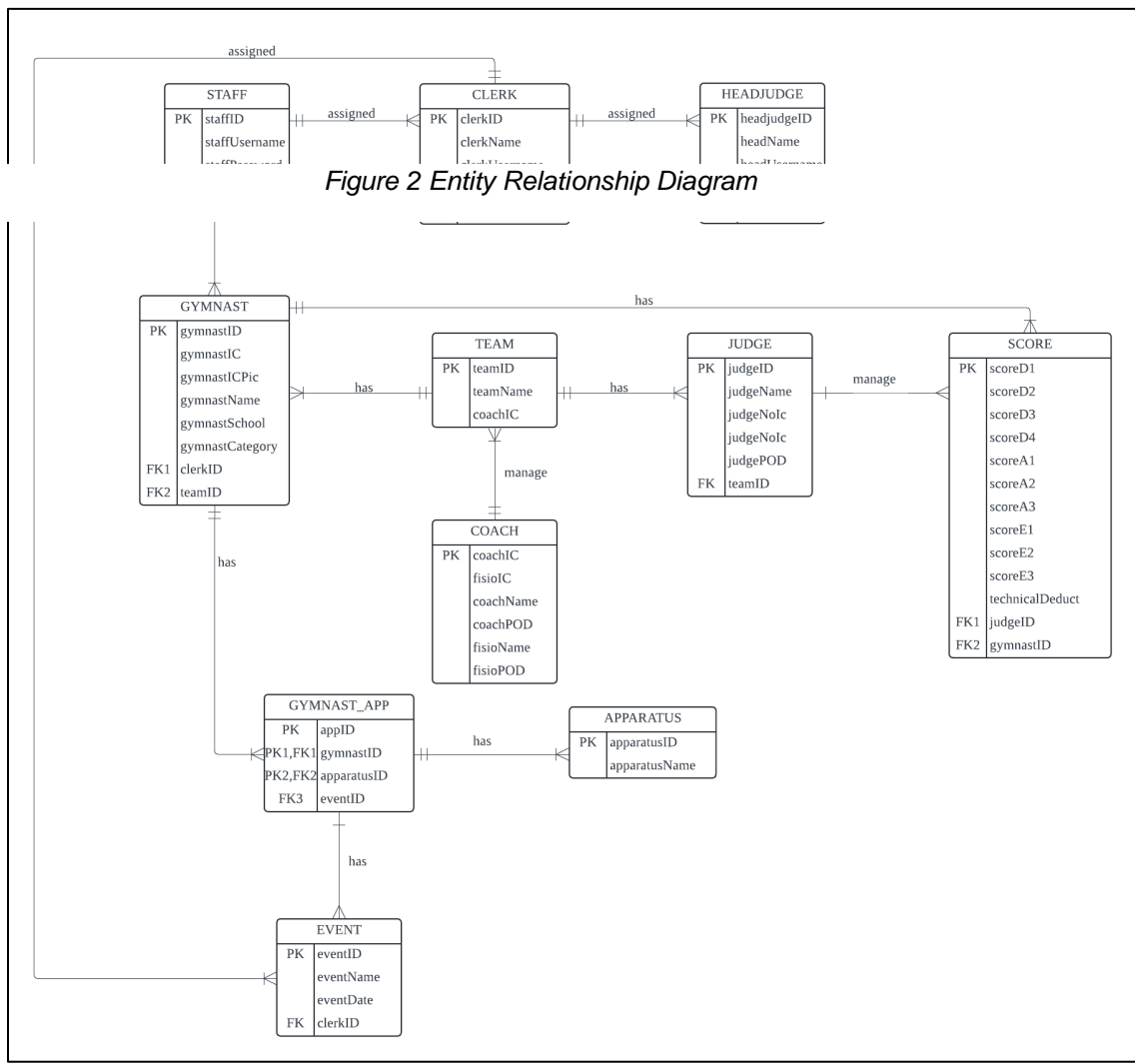


Figure 2 Entity Relationship Diagram

The
the
of the

figure
illustrates
structure
Rhythmic

Gymnastic Scoring System, highlighting ten (10) distinct entities: Staff, Clerk, Headjudge, Gymnast, Team, Judge, Score, Coach, Apparatus, Event and followed by one (1) bridge table which is the Gymnast_App. Each of these entities has different attributes that represent what data it will store. For example, the Gymnast table stored the individual data for every gymnast, while the Staff table holds the staff data. Same goes for the Headjudge, Gymnast, Team, Judge, Score, Coach, Apparatus and Event table that will store its related details. Each of these entities will have their own responsibility such as for the clerk's responsibility is to assign the headjudge to key in the score to the system, assign which staff will handle the registration of the gymnast, add the event to the system and assign all the gymnast to a team. Then the judge will take note of the score before the system automatically calculates it.

5. MVC Framework

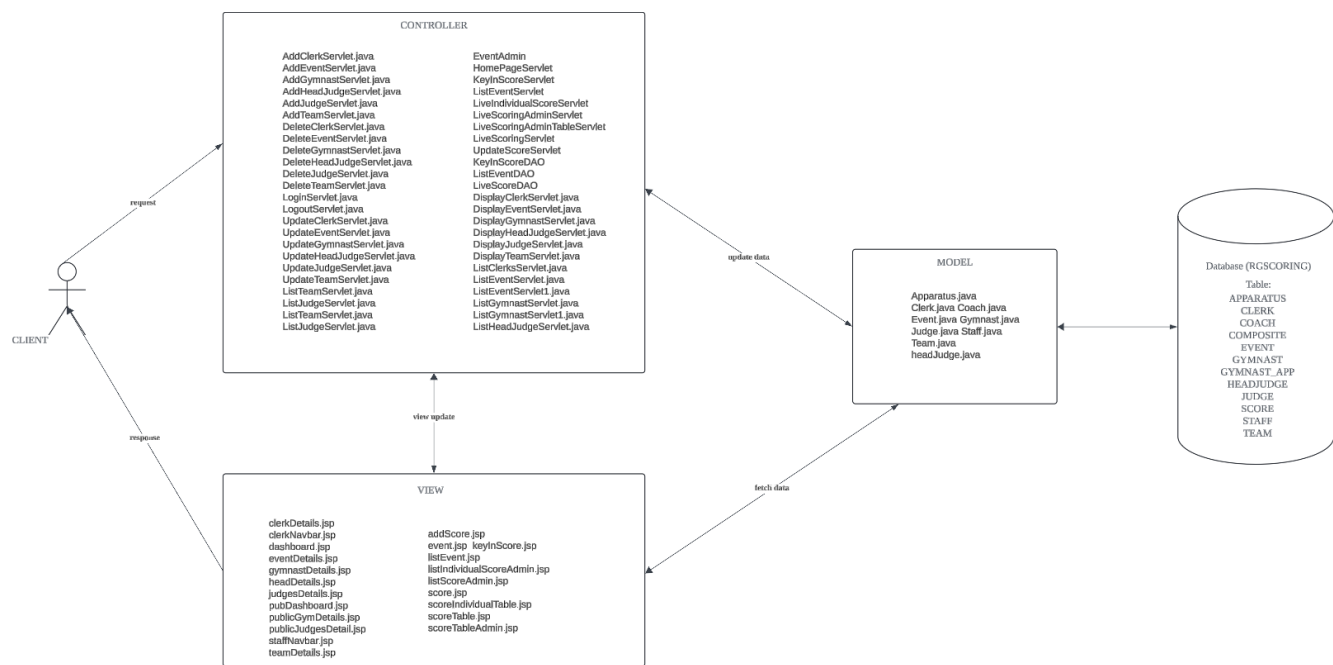


Figure 3: MVC

6. Storyboard (Screen design for web application)

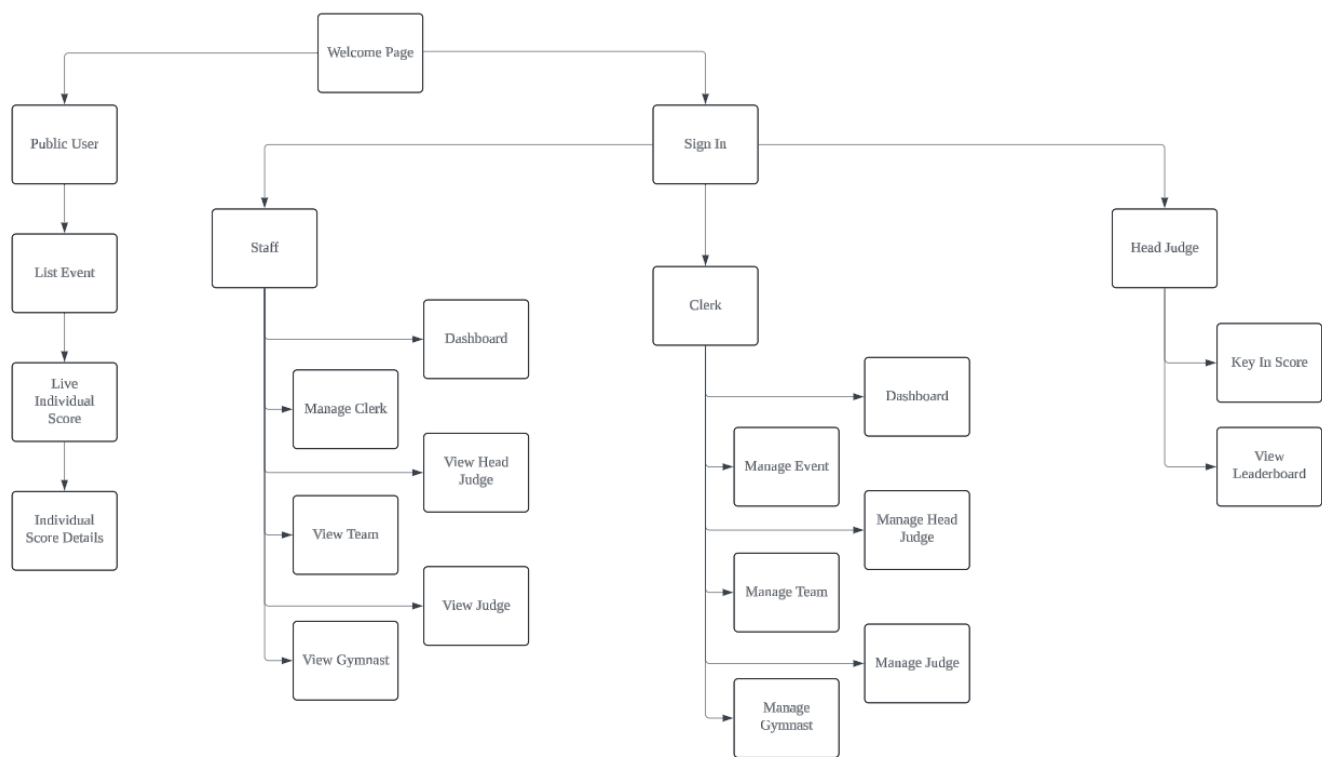


Figure 4: User Site Map

Welcome Page

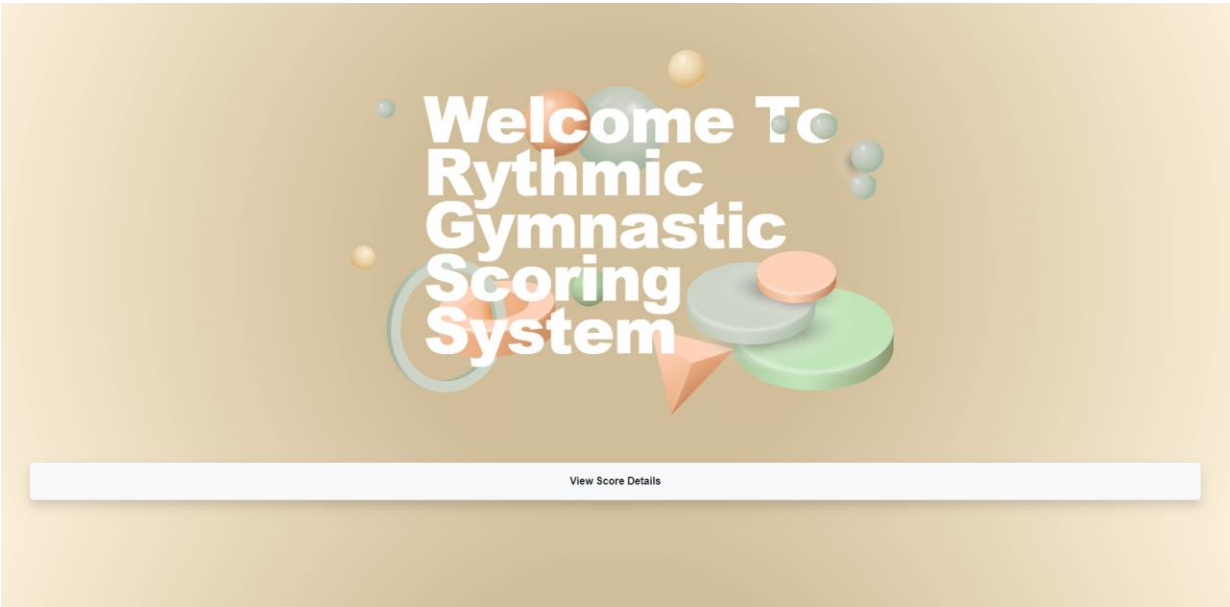


Figure 5: Welcome Page

List Event Page

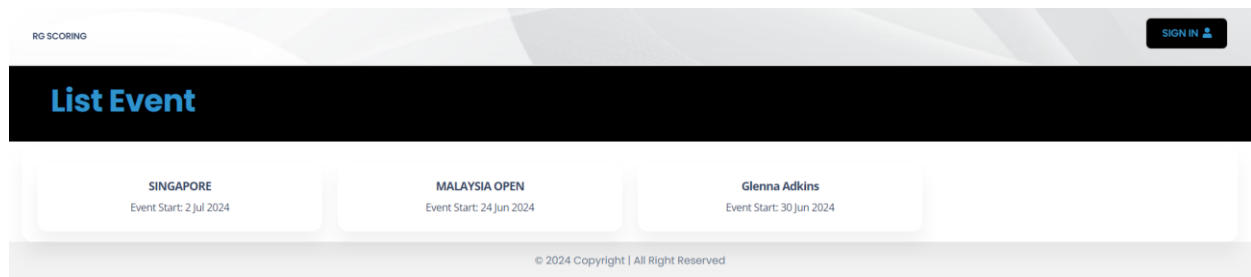


Figure 6: List Event Page

Rankings Page

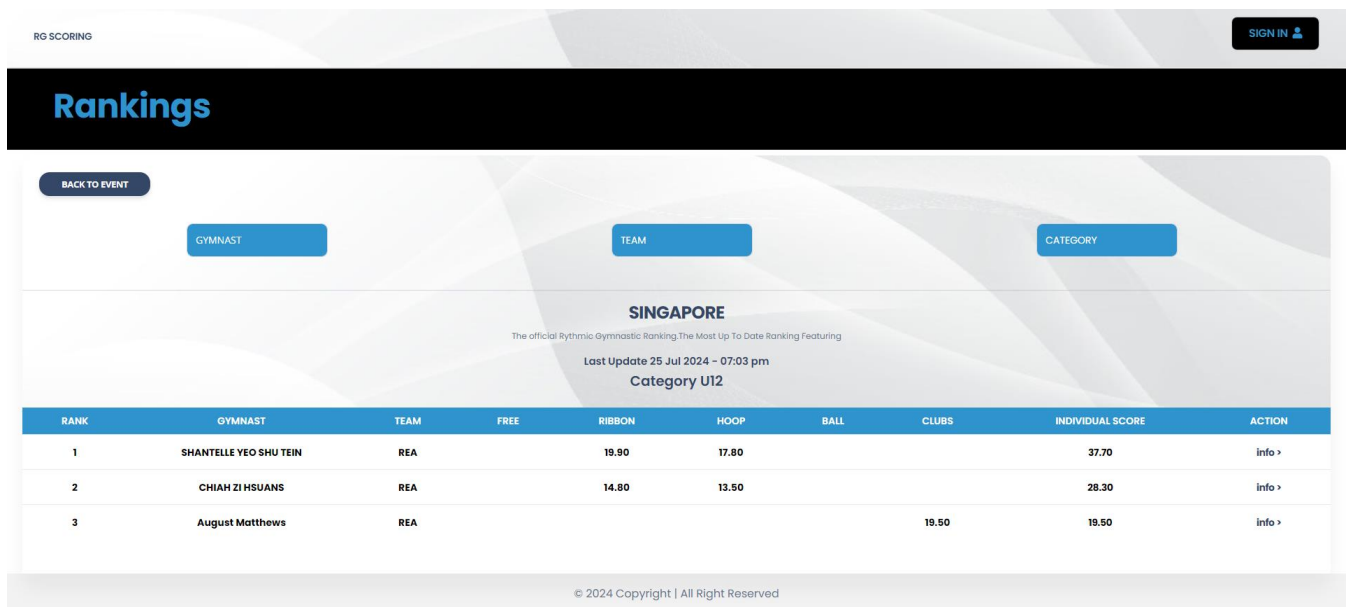


Figure 7: Ranking Page

Individual Score Page

RG SCORING

SIGN IN

SCORE DETAILS

SINGAPORE

The official Rhythmic Gymnastic Ranking. The Most Up To Date Ranking Featuring

Last Update 27 May 2024 - 08:40 pm UTC

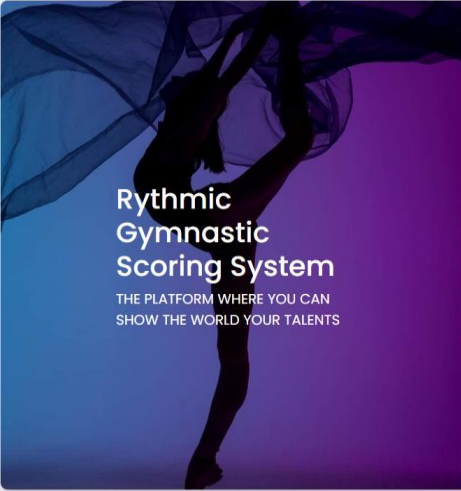
SHANTELE YEO SHU TEIN

BACK TO INDIVIDUAL SCORE

BIL	GYMNAST	CLUB	APPARATUS	SCORE			TOTAL SCORE	PENALTY	FINAL SCORE
				D	A	E			
1	SHANTELE YEO SHU TEIN	REA	Ribbon	4.90	7.50	7.50	19.90	0.00	19.90
2	SHANTELE YEO SHU TEIN	REA	Hoop	5.30	5.80	6.70	17.80	0.00	17.80

Figure 8: Individual Score Page

Login Page



Rhythmic Gymnastic Scoring System

THE PLATFORM WHERE YOU CAN SHOW THE WORLD YOUR TALENTS

LOGIN

Username

Password

Sign in

Figure 9: Login Page

Staff Dashboard Page

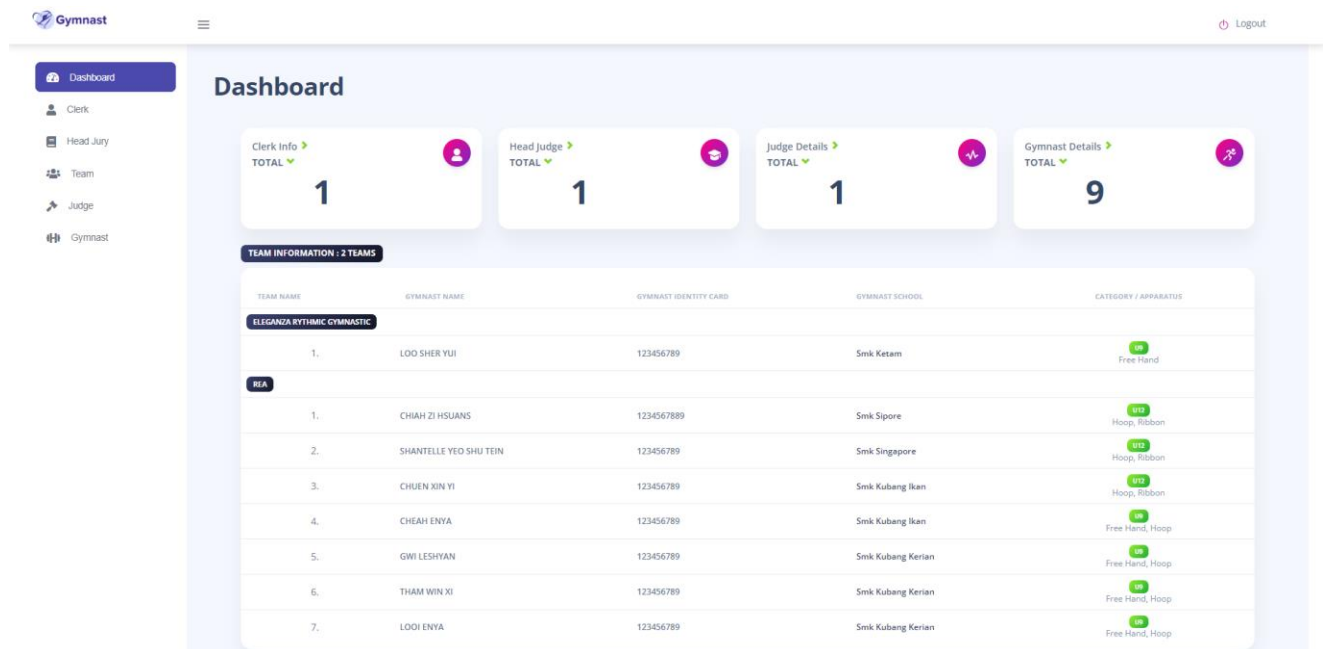


Figure 10: Staff Dashboard Page

Manage Clerk Page

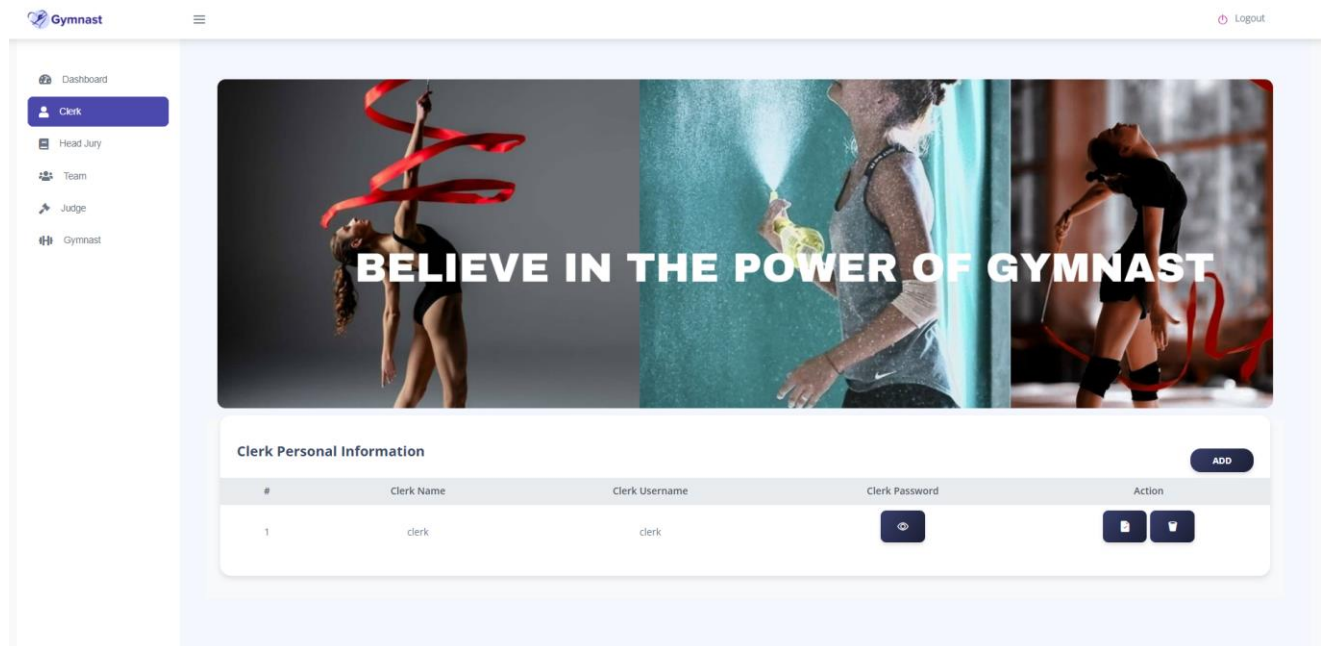


Figure 11: Manage Clerk Page

Add Clerk

Clerk Name

Clerk Username

Password

Confirm Password

SUBMIT

CLOSE

Figure 11.1: Add Clerk Modal

Update Clerk


Clerk Name

clerk

Clerk Username

clerk

Password

... 

Confirm Password

...

SUBMIT

CLOSE

Figure 11.2: Update Clerk Modal

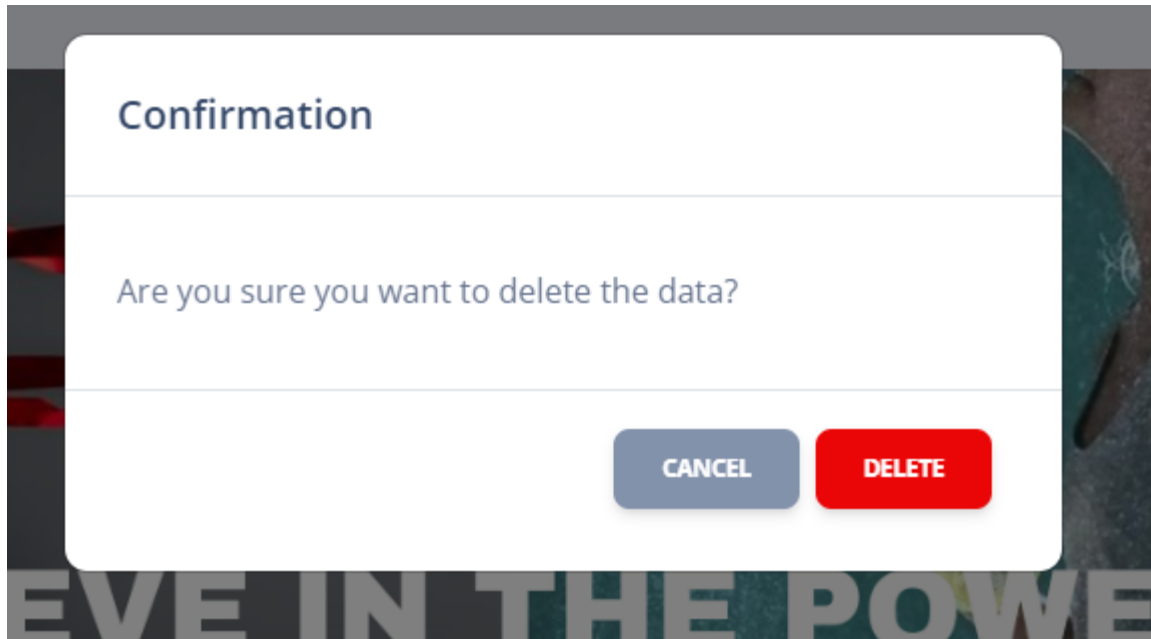


Figure 11.3: Delete Clerk Modal


View Head Judge Page

A screenshot of the "View Head Judge Page" in the Gymnast application. The page has a light blue header with the "Gymnast" logo and a "Logout" link. A sidebar on the left contains navigation links: "Dashboard", "Clerk", "Head Jury" (highlighted), "Team", "Judge", and "Gymnast". The main content area features a large banner with three images of gymnasts and the text "BELIEVE IN THE POWER OF GYMNAST". Below the banner is a section titled "Head Judge Information" containing a table with one row of data.

#	HeadJudge Name	HeadJudge Username	HeadJudge Password
1	headjudge	headjudge	123

Figure 12: View Head Judge Page

View Team Page



Dashboard

Clerk


Head Jury

Team

Judge

Gymnast

Logout




BELIEVE IN THE POWER OF GYMNAST

Team Information

#	Coach Details	Fisio Details	Team Name
1	-	-	REA
2	-	-	ELEGANZA RHYTHMIC GYMNASTIC

Figure 13: View Team Page

View Judge Page



Dashboard

Clerk


Head Jury

Team

Judge

Gymnast

Logout




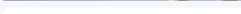
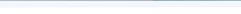
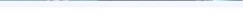
BELIEVE IN THE POWER OF GYMNAST

Judge Information

#	Judge Name	Judge Identity Card	Judge Place Of Duty	Team
1	MISS AFF	1234567889	Pahang	REA

Figure 14: View Judge Page


Gymnast

Gymnast Personal Information

#	Name	Identity Card	School	Category	Apparatus	Gymnast Team	Event
1	CHIAH ZI HSUANS	1234567889 VIEW	Smk Sipore	U12	Hoop, Ribbon	REA	SINGAPORE
2	SHANTELE YEO SHU TEIN	123456789 VIEW	Smk Singapore	U12	Hoop, Ribbon	REA	SINGAPORE
3	CHUEN XIN YI	123456789 VIEW	Smk Kubang Ikan	U12	Hoop, Ribbon	REA	MALAYSIA OPEN
4	CHEAH ENYA	123456789 VIEW	Smk Kubang Ikan	U9	Free Hand, Hoop	REA	MALAYSIA OPEN
5	GWI LESHYAN	123456789 VIEW	Smk Kubang Kerian	U9	Free Hand, Hoop	REA	MALAYSIA OPEN
6	THAM WIN XI	123456789 VIEW	Smk Kubang Kerian	U9	Free Hand, Hoop	REA	MALAYSIA OPEN
7	LOOI ENYA	123456789 VIEW	Smk Kubang Kerian	U9	Free Hand, Hoop	REA	MALAYSIA OPEN
8	LOO SHER YUI	123456789 VIEW	Smk Ketam	U9	Free Hand	ELEGANZA RYTHMIC GYMNASTIC	MALAYSIA OPEN

Figure 15: View Gymnast Page

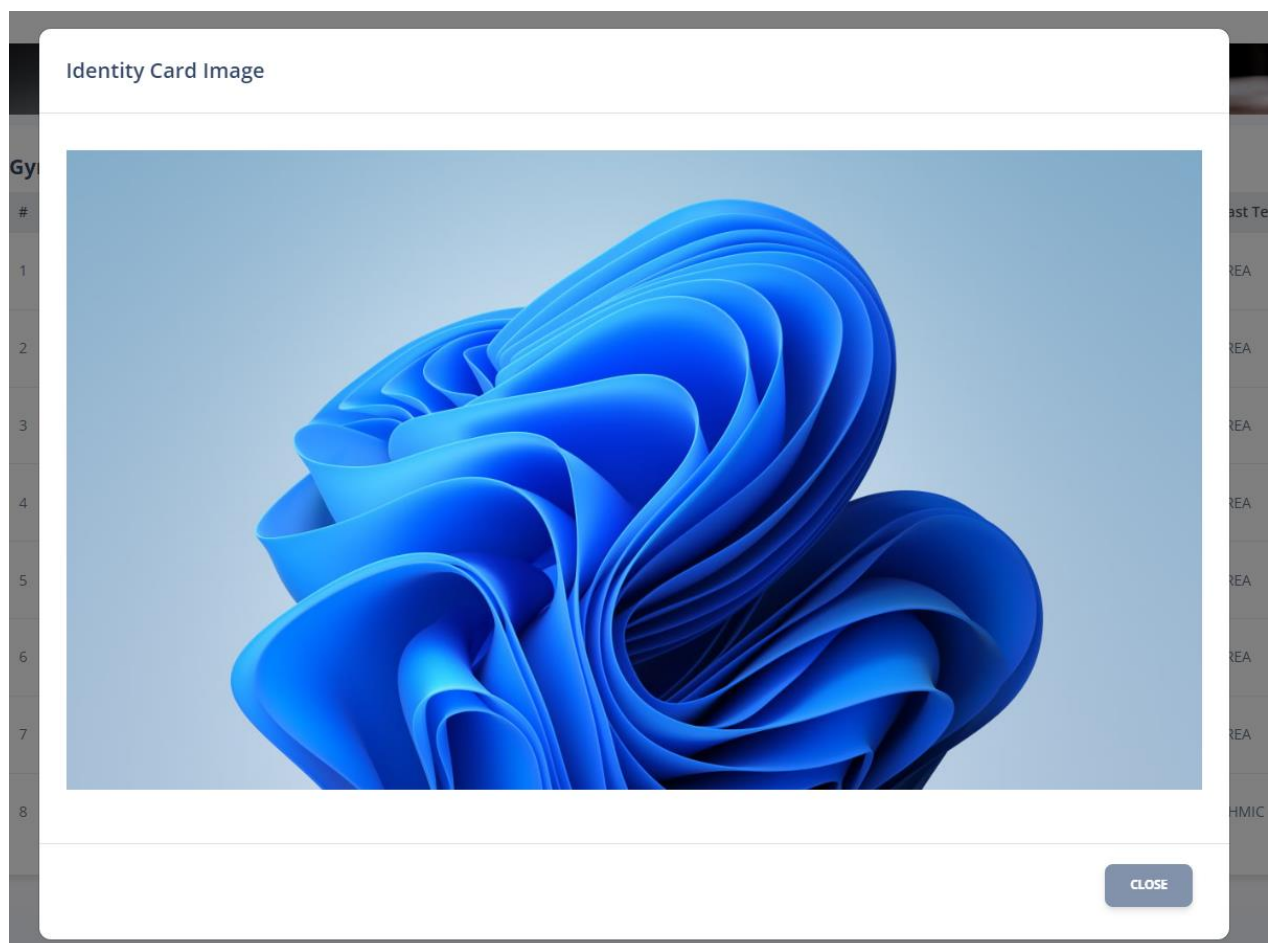


Figure 15.1: View Identity Card Image

Clerk Dashboard Page

The screenshot displays the Clerk Dashboard Page. On the left is a sidebar with navigation links: Dashboard, Event, Head Jury, Team, Judge, and Gymnast. The main content area is titled 'Dashboard' and features several sections. At the top, there's a 'Clerk Info' section with a 'TOTAL' count of 1. Below this is a 'TEAM INFORMATION : 2 TEAMS' section. The first team is 'ELEGANZA RHYTHMIC GYMNASTIC'. Underneath, there's a table with columns 'TEAM NAME' and 'GYMNAST NAME'. The table lists 7 gymnasts. A modal titled 'FLOW OF THE SYSTEM' is overlaid on the dashboard. It shows a flowchart with a central smartphone icon. The flow starts with 'Event' (checked), followed by 'Headjudge', 'Team', 'Judge', and 'Assign Gymnast'. The modal also includes a pink 'UNDERSTOOD' button at the bottom right.

TEAM NAME	GYMNAST NAME
1.	LOO SHER YUI
1.	CHIAH ZI HSUANS
2.	SHANTELE YEO SHU
3.	CHUEN XIN YI
4.	CHEAH ENYA
5.	GWI LESHYAN
6.	THAM WIN XI
7.	LOOI ENYA

GYMNAST SCHOOL	CATEGORY / APPARATUS
Smk Ketam	Free Hand
Smk Sipore	Hoop, Ribbon
Smk Singapore	Hoop, Ribbon
Smk Kubang Ikan	Hoop, Ribbon
Smk Kubang Ikan	Free Hand, Hoop
Smk Kubang Kerian	Free Hand, Hoop
Smk Kubang Kerian	Free Hand, Hoop
Smk Kubang Kerian	Free Hand, Hoop

Figure 16: Modal System Flow

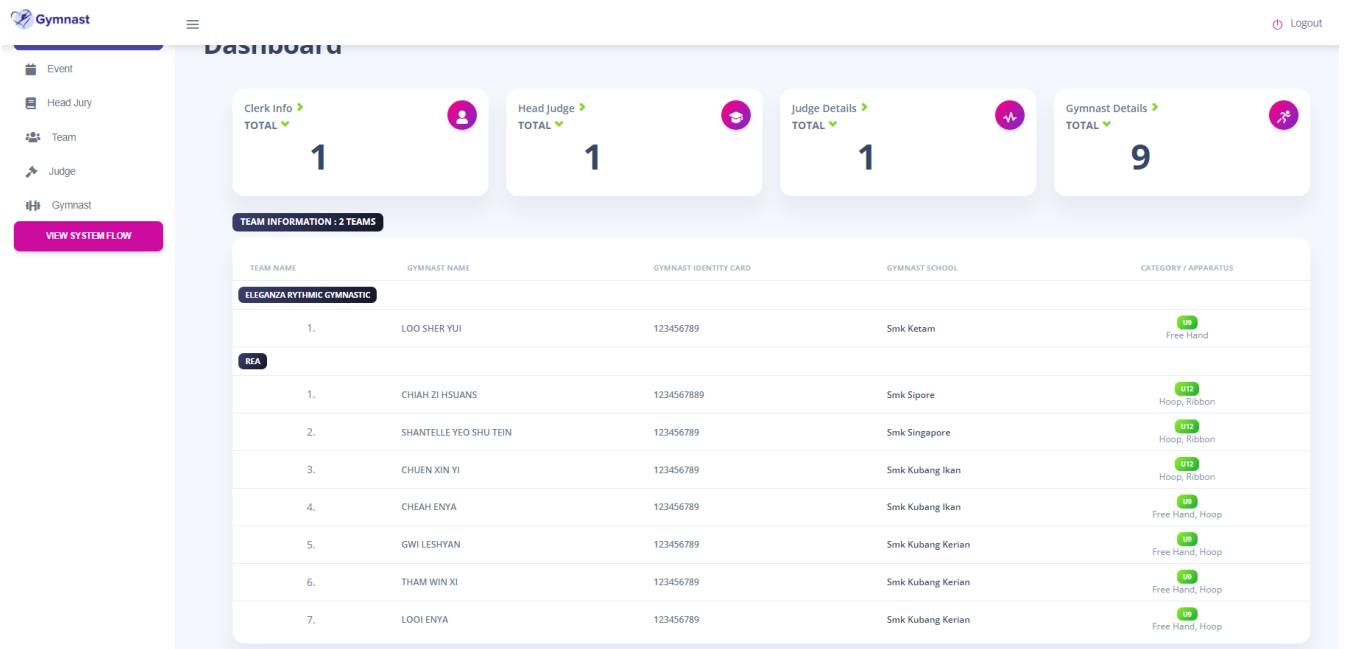


Figure 16.1: Clerk Dashboard Page

Manage Event Page

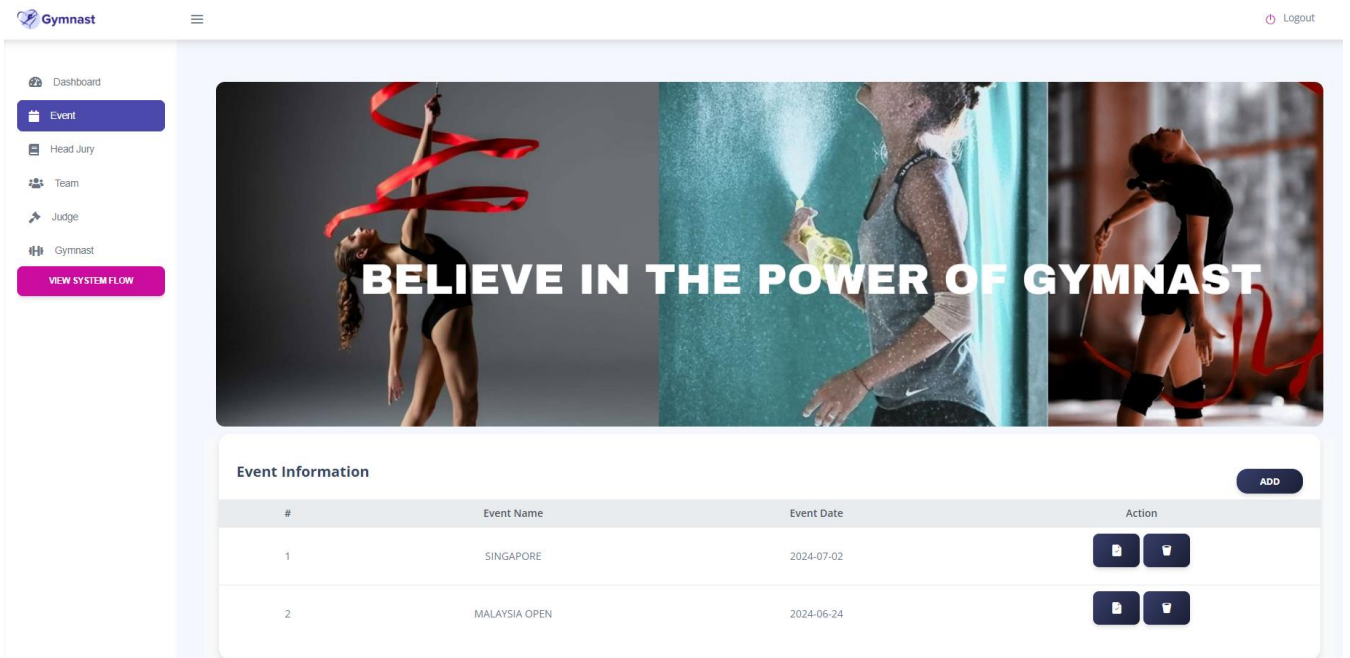



Figure 17: Manage Event Page

Manage Head Judge Page



Dashboard

Event

Head Jury


Team

Judge

Gymnast

VIEW SYSTEM FLOW

Logout



BELIEVE IN THE POWER OF GYMNAST

Head Judge Information

ADD

#	Headjudge Name	Headjudge Username	Headjudge Password	Action
1	headjudge	headjudge	<div></div>	<div></div> <div></div>

Figure 18: Manage Head Judge Page

Add Head Judge

HeadJudge Name

HeadJudge Username

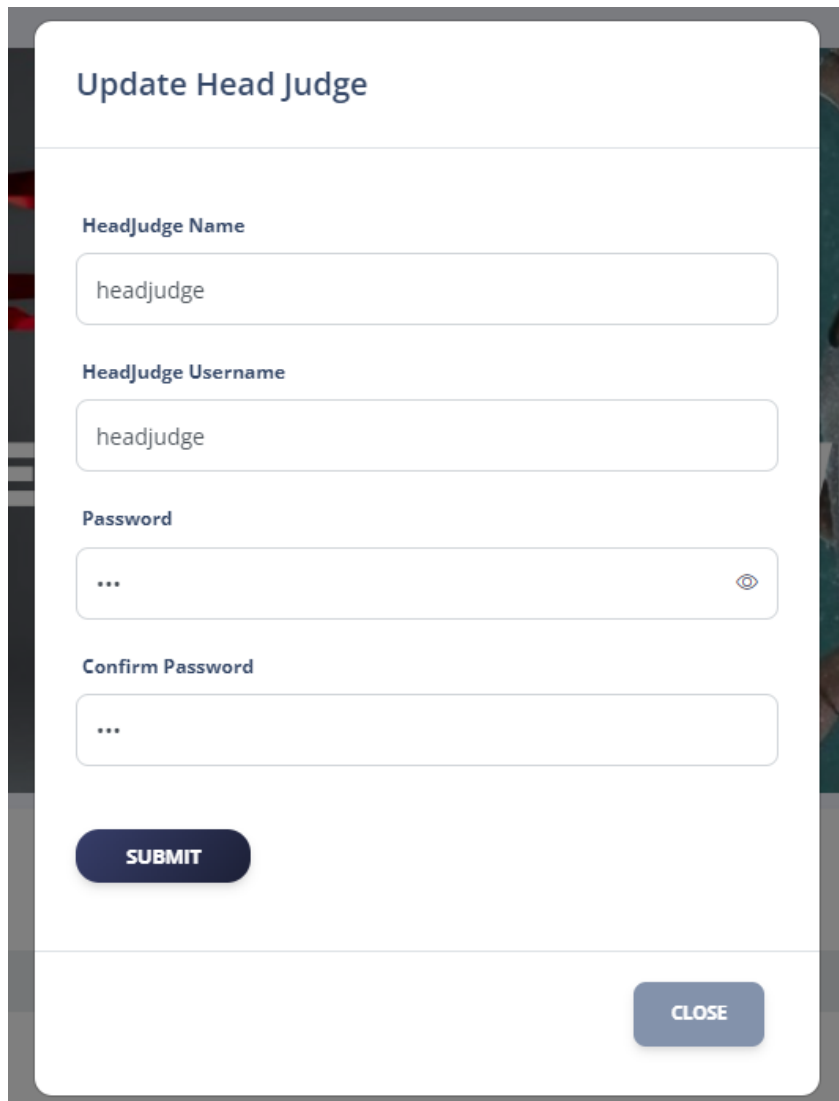
Password

Confirm Password

SUBMIT

CLOSE

Figure 18.1: Add Head Judge Modal



The modal is titled "Update Head Judge" in a dark blue font. It contains four input fields: "HeadJudge Name" with the value "headjudge", "HeadJudge Username" with the value "headjudge", "Password" with masked characters "...", and "Confirm Password" with masked characters "...". The password fields have a toggle icon on the right. At the bottom left is a dark blue "SUBMIT" button, and at the bottom right is a light blue "CLOSE" button.

Update Head Judge

HeadJudge Name

HeadJudge Username

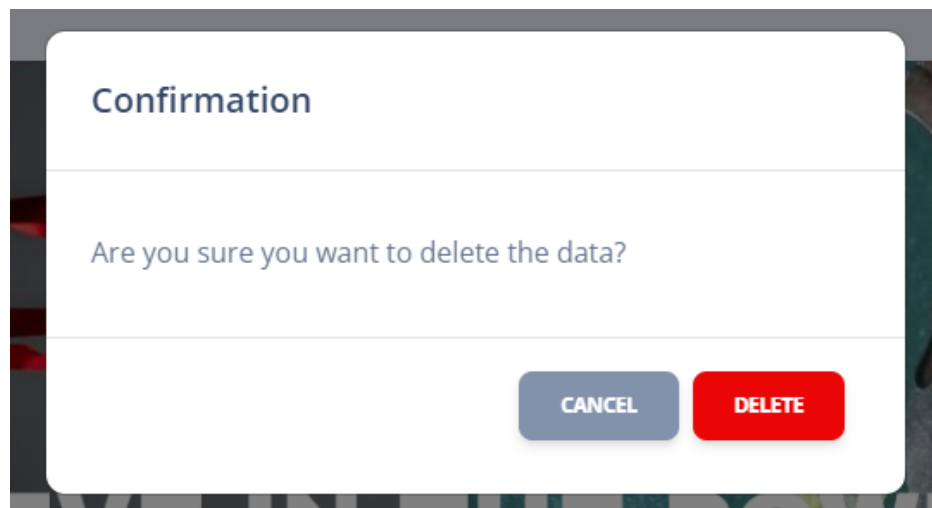
Password

Confirm Password

SUBMIT

CLOSE

Figure 18.2: Update Head Judge Modal



The modal is titled "Confirmation" in a dark blue font. It contains a single line of text asking for confirmation: "Are you sure you want to delete the data?". At the bottom right are two buttons: a light blue "CANCEL" button and a red "DELETE" button.


Confirmation

Are you sure you want to delete the data?

CANCEL DELETE

Figure 18.3: Delete Head Judge Modal

Manage Team Page



Dashboard

Event


Head Jury

Team

Judge

Gymnast

VIEW SYSTEM FLOW



Team Information

ADD COACH/TEAM





#	Coach Details	Fisio Details	Team Name	Action
1	Mr Coachy 123456789 Pahang	Mr Fisology 123456789 Pahang	REA	 
2	Mrs Judy 987654321 Terengganu	Mrs Fosly 987654321 Terengganu	ELEGANZA RYTHMIC GYMNASTIC	 

Figure 19: Manage Team Page

Coach Information

Coach Name

Coach Identity Card

Coach Place Of Duty

Fisio Name

Fisio Identity Card

Fisio Place Of Duty

Team Name

SUBMIT

CLOSE

Figure 19.1: Add Team Modal

Update Team

Coach Name

Mr Coachy

Coach Identity Card

123456789

Coach Place Of Duty

Pahang

Fisio Name

Mr Fisology

Fisio Identity Card

123456789

Fisio Place Of Duty

Pahang

Team Name

REA

SUBMIT

CLOSE

Figure 19.2: Update Team Modal

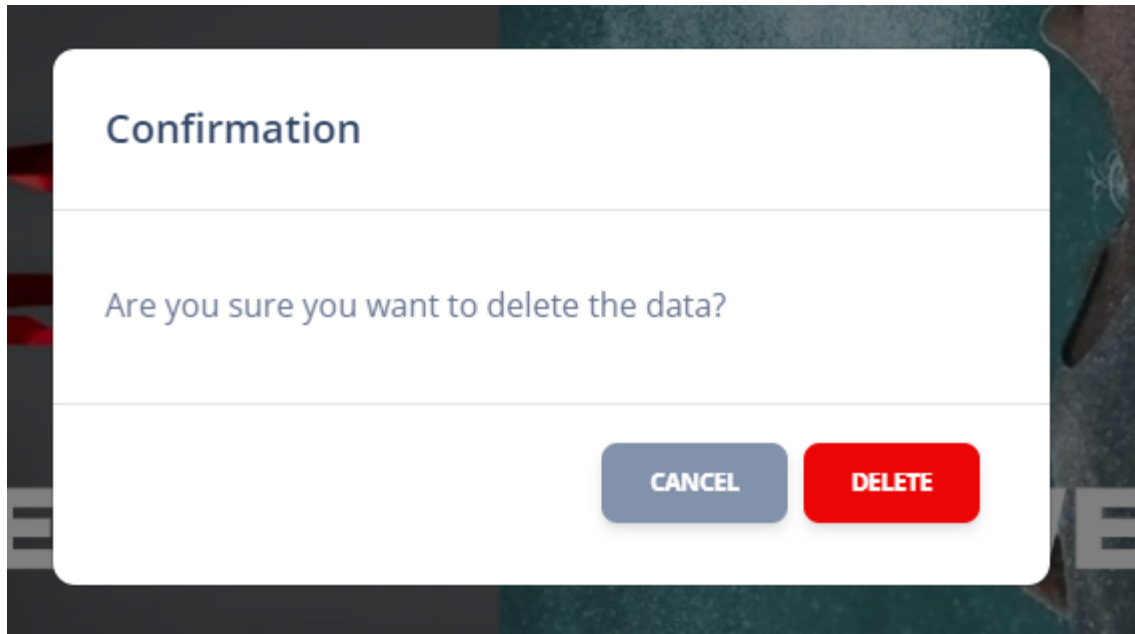


Figure 19.3: Delete Team Modal

Manage Judge Page

Logout

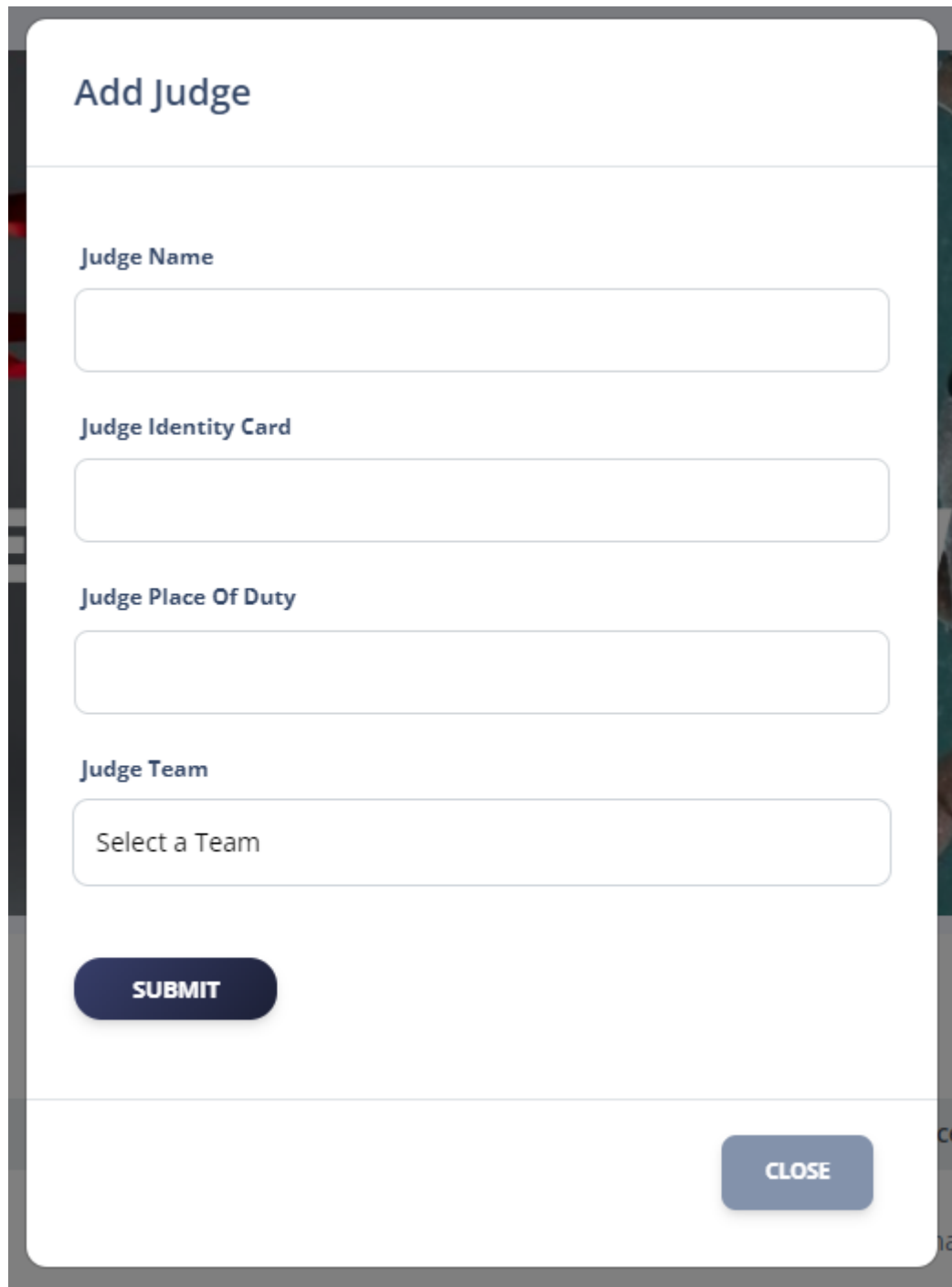
- Dashboard
- Event
- Head Jury
- Team
- Judge**
- Gymnast
- VIEW SYSTEM FLOW

Judge Information

ADD

#	Judge Name	Judge Identity Card	Judge Place Of Duty	Team	Action
1	MISS AFF	1234567889	Pahang	REA	

Figure 20: Manage Judge Page

A modal window titled "Add Judge" with a white background and rounded corners. It contains four text input fields, each with a label above it: "Judge Name", "Judge Identity Card", "Judge Place Of Duty", and "Judge Team". The "Judge Team" field has a dropdown menu with the text "Select a Team". At the bottom left is a dark blue "SUBMIT" button, and at the bottom right is a light blue "CLOSE" button.

Add Judge

Judge Name

Judge Identity Card

Judge Place Of Duty

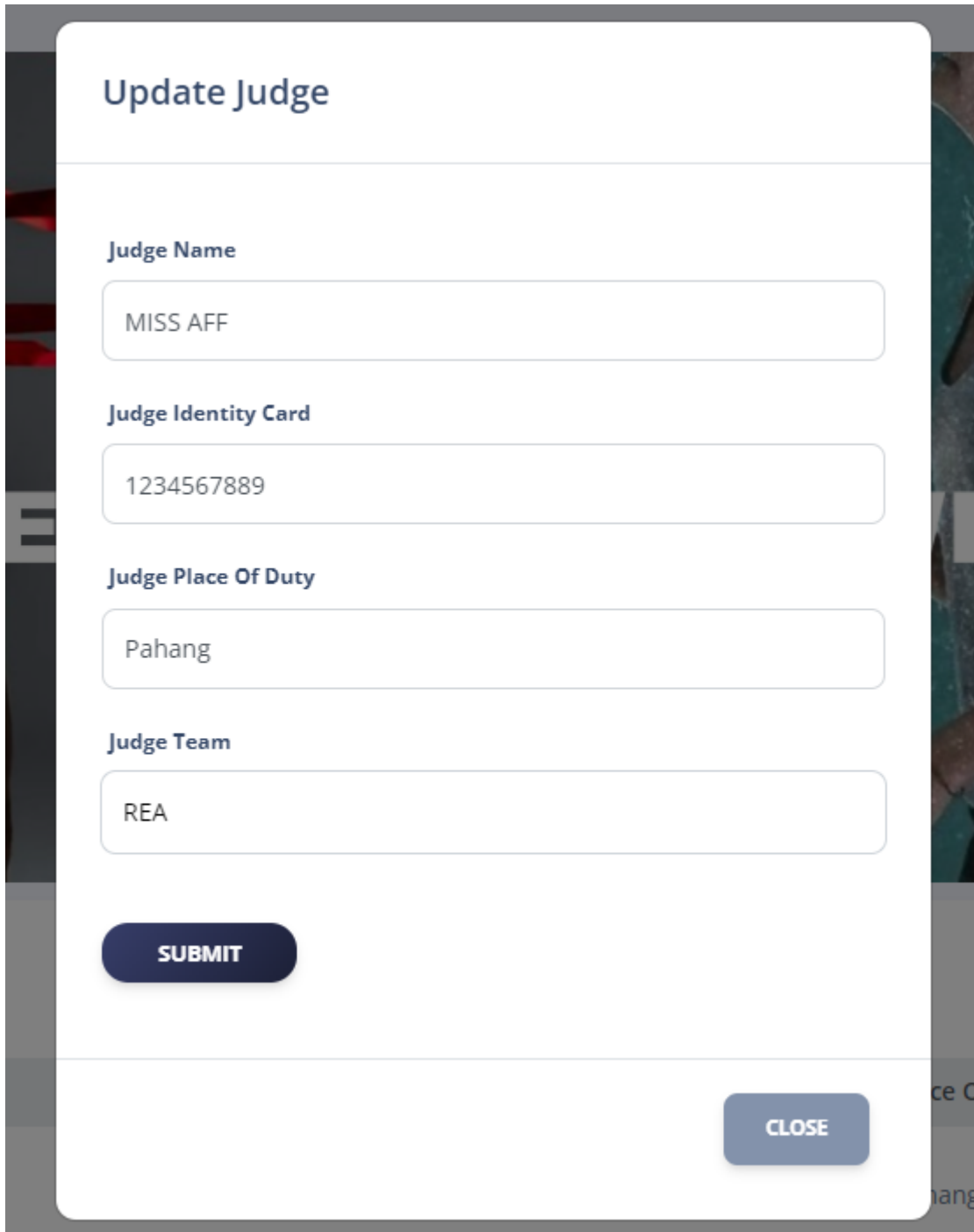
Judge Team

Select a Team

SUBMIT

CLOSE

Figure 20.1: Add Judge Modal



The image shows a modal window titled "Update Judge". It contains four text input fields with labels "Judge Name", "Judge Identity Card", "Judge Place Of Duty", and "Judge Team". The inputs contain the values "MISS AFF", "1234567889", "Pahang", and "REA" respectively. At the bottom left is a dark blue "SUBMIT" button, and at the bottom right is a light blue "CLOSE" button.

Update Judge

Judge Name

Judge Identity Card

Judge Place Of Duty

Judge Team

SUBMIT

CLOSE

Figure 20.2: Update Judge Modal

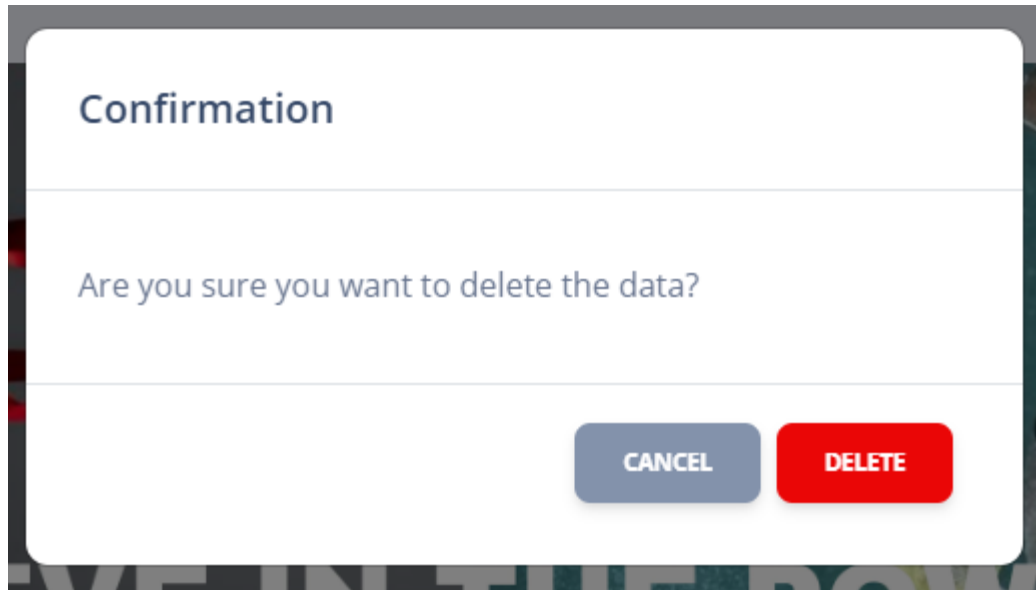


Figure 20.3: Delete Judge Modal

Manage Gymnast Page

Gymnast Logout

Gymnast Personal Information								ADD
#	Name	Identity Card	School	Category	Apparatus	Gymnast Team	Event	Action
1	CHIAH ZI HSUANS	123456789 VIEW	Smk Sipore	U12	Hoop, Ribbon	REA	SINGAPORE	Edit Delete
2	SHANTELE YEO SHU TEIN	123456789 VIEW	Smk Singapore	U12	Hoop, Ribbon	REA	SINGAPORE	Edit Delete
3	CHUEN XIN YI	123456789 VIEW	Smk Kubang Ikan	U12	Hoop, Ribbon	REA	MALAYSIA OPEN	Edit Delete
4	CHEAH ENYA	123456789 VIEW	Smk Kubang Ikan	U9	Free Hand, Hoop	REA	MALAYSIA OPEN	Edit Delete
5	GWJ LESHYAN	123456789 VIEW	Smk Kubang Kerian	U9	Free Hand, Hoop	REA	MALAYSIA OPEN	Edit Delete
6	THAM WIN XI	123456789 VIEW	Smk Kubang Kerian	U9	Free Hand, Hoop	REA	MALAYSIA OPEN	Edit Delete
7	LOOI ENYA	123456789 VIEW	Smk Kubang Kerian	U9	Free Hand, Hoop	REA	MALAYSIA OPEN	Edit Delete
8	LOO SHER YUI	123456789 VIEW	Smk Ketam	U9	Free Hand	ELEGANZA RHYTHMIC GYMNASTIC	MALAYSIA OPEN	Edit Delete

Figure 21: Manage Gymnast Page

Add Gymnast

Gymnast Name

Gymnast Identity Card

Please Select Your I/C Picture

Choose File

No file chosen

Gymnast School

Gymnast Category

Select a Category

Gymnast Apparatus

Gymnast Team

Select a Team

Event Name

Select a Event

SUBMIT

Figure 21.1: Add Gymnast Modal

Update Gymnast Information

Gymnast Name

CHIAH ZI HSUANS

Gymnast Identity Card

1234567889

Please Select Your I/C Picture

Choose File

No file chosen

Gymnast School

Smk Sipore

Gymnast Category

U12

Current Apparatus:

HOOP

RIBBON

Gymnast Apparatus

Gymnast Team

REA

Event Name

SINGAPORE

SUBMIT

Figure 21.2: Update Gymnast Modal

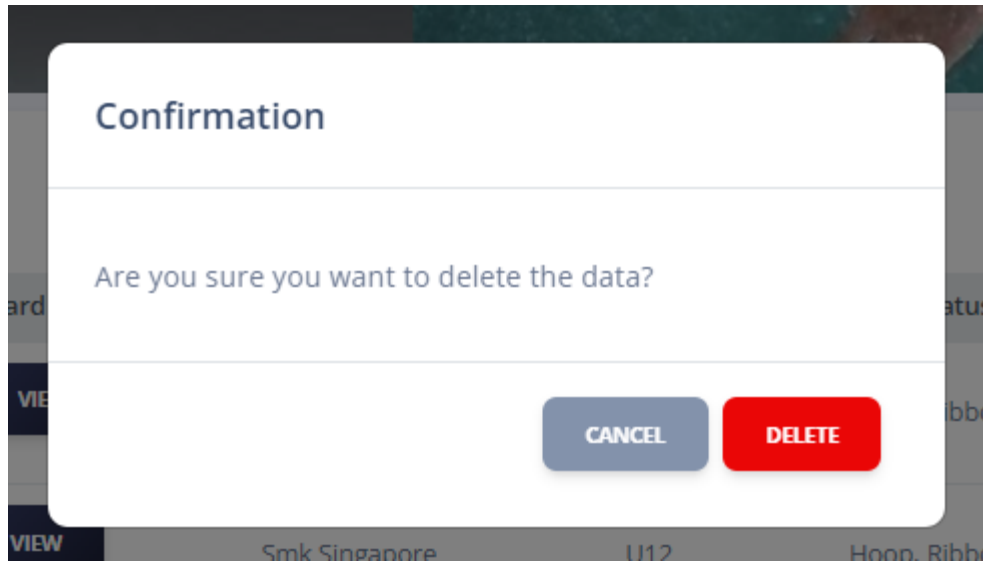


Figure 21.3: Delete Gymnast Modal

Key In Score Page

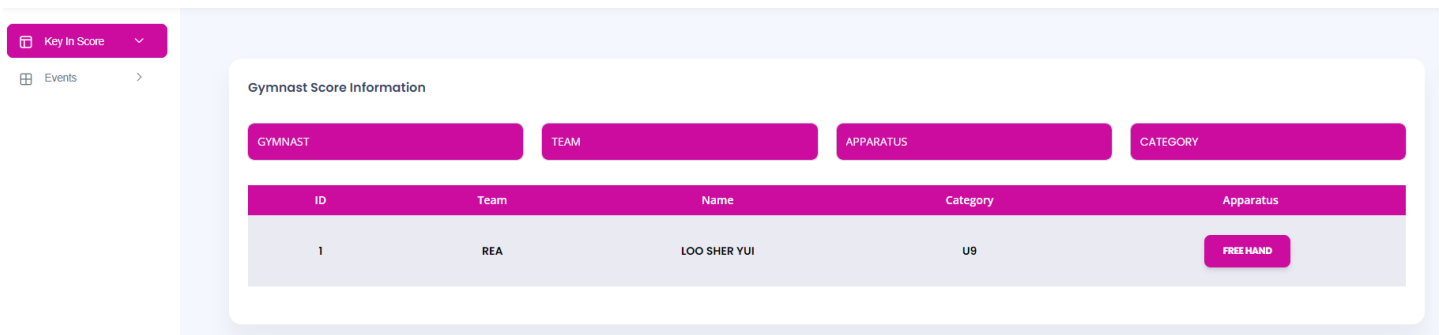


Figure 22: Key In Score Page

Gymnast LOO SHER YUI Score

Score D1:

Score D2:

Score D3:

Score D4:

Score A1:

Score A2:

Figure 22.1: Key In Score Modal

Score A3:

Score E1:

Score E2:

Score E3:

Penalty:

List Judge

MISS AFF

SUBMIT SCORE

Figure 22.1: Key In Score Modal

View Leaderboard Page

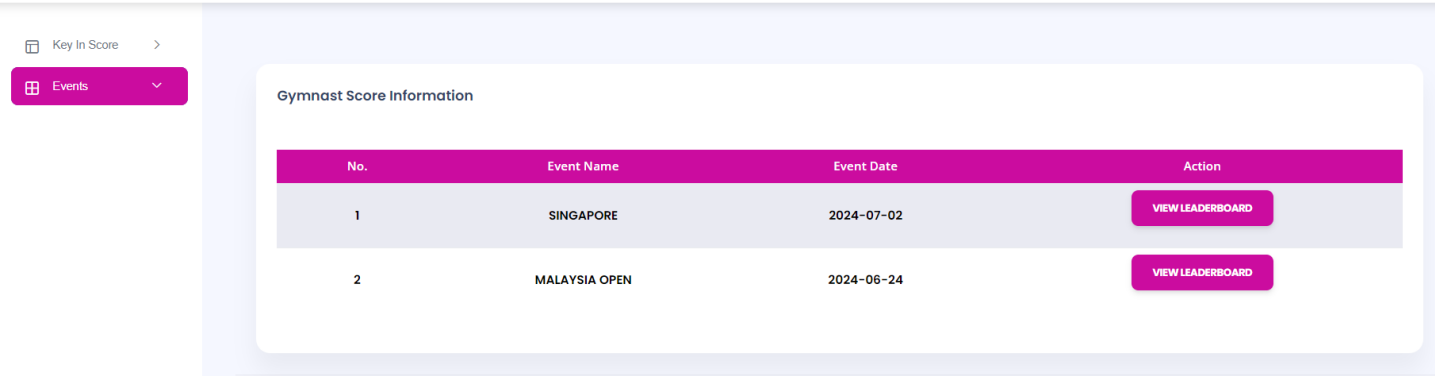


Figure 23: Gymnast Score Page

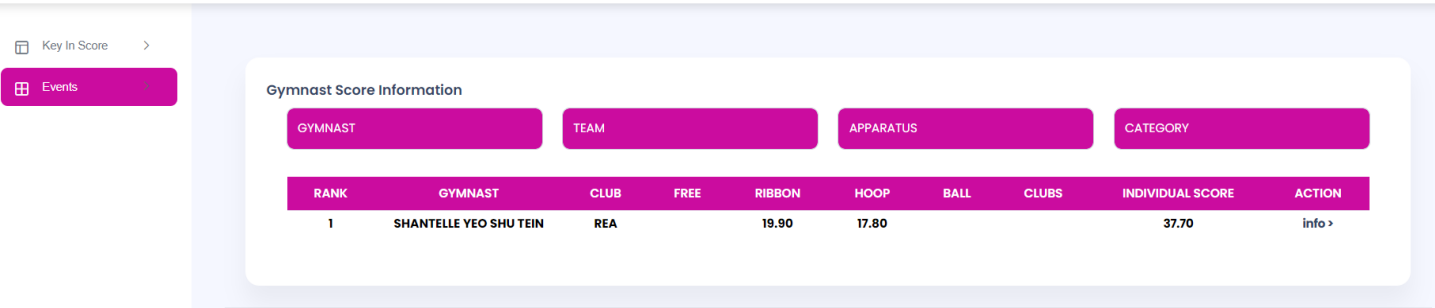


Figure 24: View Score

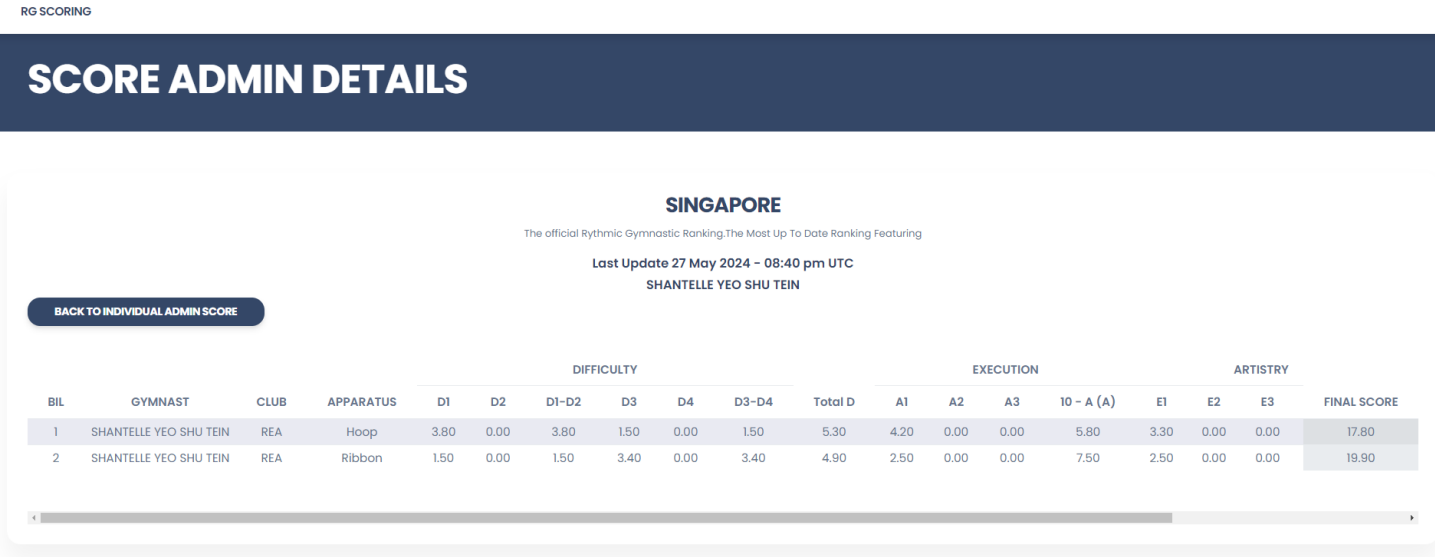


Figure 25: View Score Details

7. Extra Features

A list of extra features in your system. Prepare screen design and explain the purpose of the features that benefit the users of the system.

1. Integration

with

AJAX

```
$.ajax({
  type: 'POST',
  url: '../AddGymnastServlet',
  data: formData,
  processData: false,
  contentType: false,
  success: function (data) {
    try {
      var response = JSON.parse(data);
      var msg = response[0].msg;

      if (msg == 1) {
        const Toast = Swal.mixin({
          toast: true,
          position: "top-end",
          showConfirmButton: false,
          timer: 3000,
          timerProgressBar: false,
          iconColor: 'green',
          customClass: 'swal-wide',
        });
        Toast.fire({
          icon: 'success',
          title: '<b>Gymnast <span style="color: green;"> Added</span> Successfully!</b>'
        });
        $('#ajaxAddGymnast')[0].reset();
        $("#closeModal").trigger('click');
        fetchGymnastData();
      }
    }
  }
});
```

In our system, we have integrated Ajax to enhance the user experience by enabling asynchronous data operations such as insertion, updates, and deletion without requiring a page reload. This feature allows users to interact with the application more fluidly. For instance, when a form is submitted for adding new records, Ajax handles the data submission in the background, updating the relevant sections of the page dynamically. This approach not only improves the speed and responsiveness of the application but also provides a more seamless and engaging experience for the users. Additionally, the use of Ajax for updates and deletions ensures that any changes are instantly reflected on the page, thereby maintaining data integrity and enhancing real-time interactivity.

2. Implemented Select2 jQuery-Based

Gymnast Apparatus

Ball | ×

Clubs | ×

Free Hand | ×

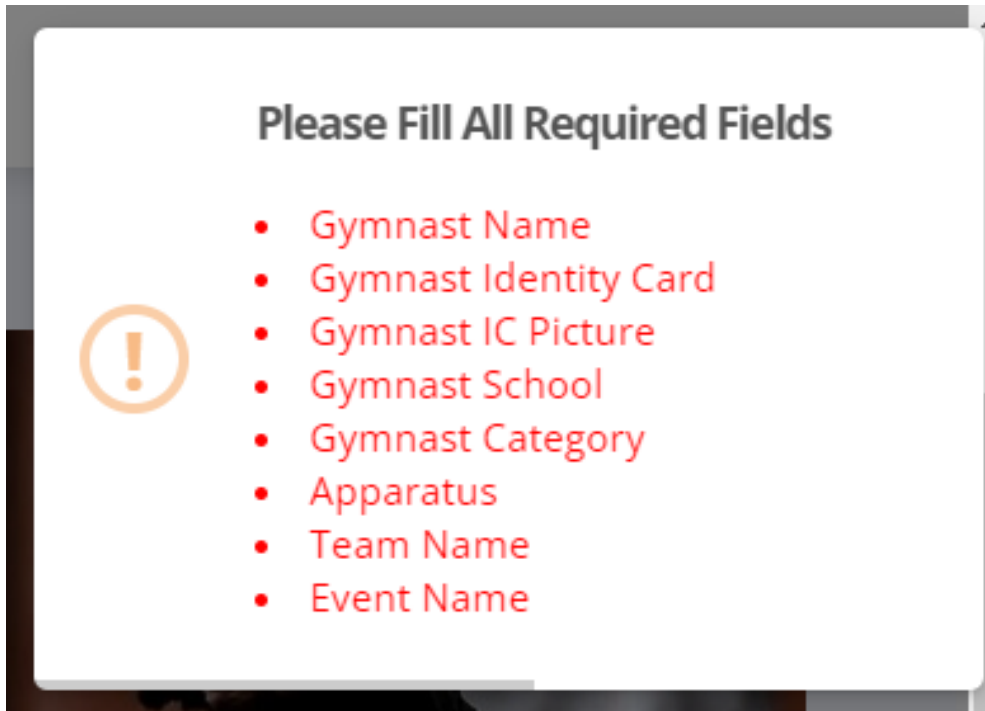
Hoop

Can Select More Than One

Ribbon

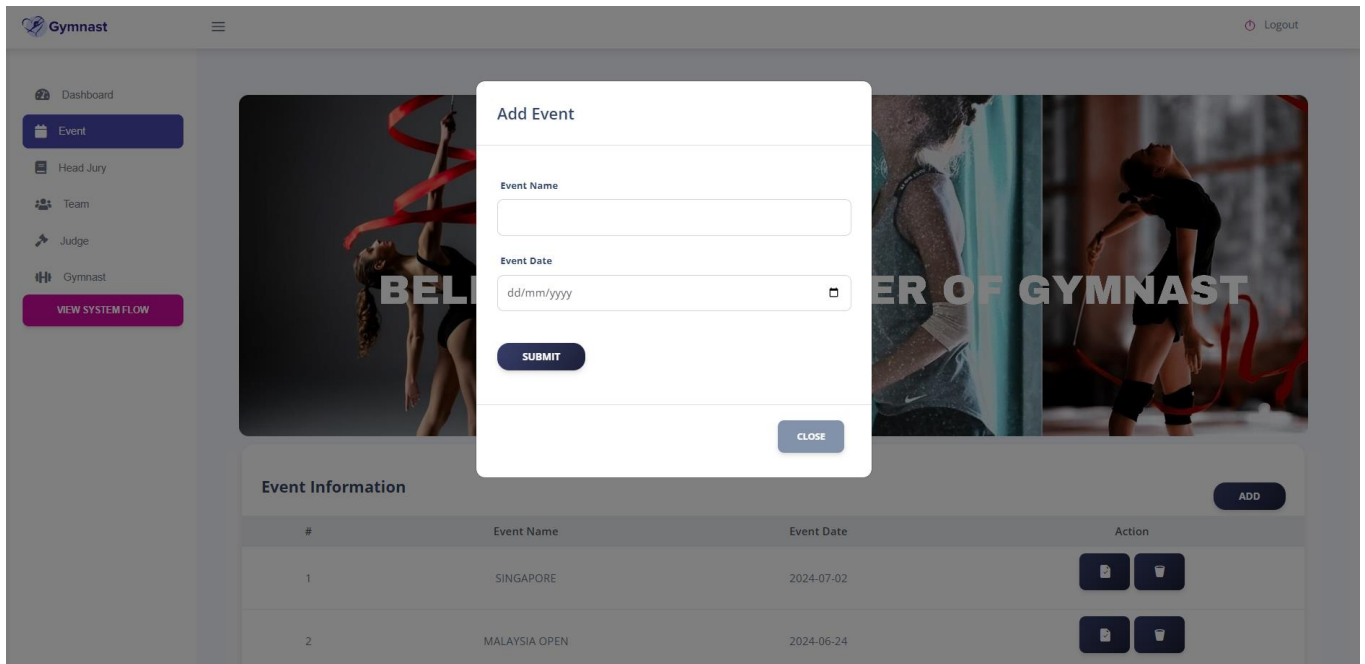
We have implemented Select2 in our system to enhance the functionality and user experience of our dropdown menus. Select2 is a jQuery-based replacement for select boxes, providing a more user-friendly and feature-rich interface. It supports searching, remote data sets, and infinite scrolling of results, which makes it highly suitable for handling large datasets efficiently. Users can easily find and select items through a search-enabled dropdown, which improves usability and reduces the time spent on navigating extensive lists. Furthermore, Select2 is highly customizable, allowing us to style the dropdown menus to match our application's design seamlessly. This tool significantly enhances the interactivity and accessibility of our forms, contributing to a more intuitive and efficient user experience

3. Implemented Input Validation Using Ajax



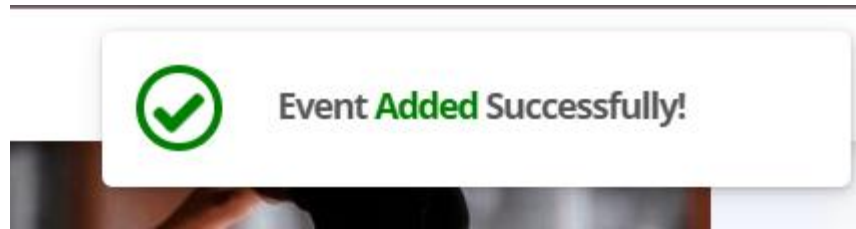
In our system, we have implemented input validation using Ajax to enhance data integrity and provide a seamless user experience. Ajax-based input validation allows for real-time validation of user inputs without requiring a full page reload. As users fill out forms, Ajax sends asynchronous requests to the server to validate the inputs against specific criteria. This immediate feedback helps users correct errors promptly, reducing frustration and improving the overall usability of the application. By leveraging Ajax for input validation, we ensure that only valid data is submitted, which enhances the quality and security of our system. This approach also minimizes server load and network traffic since only the relevant data is transmitted and processed, making the validation process efficient and responsive.

4. The Usage of Modal



In our system, we have incorporated the use of modals to facilitate easier and more efficient viewing of information. Modals, or dialog boxes, are overlay windows that can display content, forms, or messages without navigating away from the current page. This implementation enhances the user experience by allowing users to interact with content in a focused and contextually relevant manner. For example, when users need to view detailed information or perform actions such as editing or confirming operations, a modal can present this information clearly and concisely without disrupting their workflow. By using modals, we can reduce page reloads, maintain the user's context, and provide a more dynamic and responsive interface. This approach not only streamlines interactions but also improves the overall efficiency and intuitiveness of the application.

5. Usage of SweetAlert2 Toast



In our system, we utilize SweetAlert Toast to provide non-intrusive, elegant notifications to users. SweetAlert Toast is a feature of the SweetAlert library that displays small, customizable toast notifications in a corner of the screen. These toast notifications are ideal for conveying brief messages such as successful operations, error alerts, or informational updates without interrupting the user's workflow

6. Auto Calculation and Live Scoring

SINGAPORE									
The official Rhythmic Gymnastic Ranking, The Most Up To Date Ranking Featuring									
Last Update 25 Jul 2024 - 08:34 pm									
Category U12									
RANK	GYMNAST	TEAM	FREE	RIBBON	HOOP	BALL	CLUBS	INDIVIDUAL SCORE	ACTION
1	SHANTELE YEO SHU TEIN	REA		19.90	17.80			37.70	info >
2	CHIAH ZI HSUANS	REA		14.80	13.50			28.30	info >

In our system, we have implemented features for auto calculation and live scoring, which dynamically update rankings and sorting in real-time. These features are crucial for applications that require continuous data updates, such as competitive platforms or dashboards displaying dynamic data. Auto calculation ensures that any changes in the input data are instantly reflected in the computed results, providing users with accurate and up-to-date information without the need for manual refreshes.

8. Contribution

NAME	TASK
MUHAMMAD HAZIM BIN MOHD KHAIRI SHAM	<ul style="list-style-type: none"> - Documenter - Scoring Module Back End
DAYANG QAISARA BALQIS BINTI MASRANTI	<ul style="list-style-type: none"> - Documenter - Scoring Module Front End

MUHAMMAD IRFAN BIN ROZLAN	<ul style="list-style-type: none"> - Documenter - Registration Module Back End
WAN NUR FATIMAH AYUNI BINTI W ISMAIL	<ul style="list-style-type: none"> - Documenter - Registration Module Front End

9. Conclusion

The new gymnastic rhythmic scoring system represents a significant advancement over the previous version by addressing its shortcomings and providing a more efficient and user-friendly experience. The redesigned user interface ensures ease of navigation, making the system accessible to all users, from staff to audiences. The accuracy of score calculation guarantees fairness and transparency, crucial for maintaining the integrity of the competition.

Efficient data display allows guests and participants to stay informed with real-time updates, enhancing their overall experience. The faster processing speed ensures that results are available promptly, reducing wait times and increasing satisfaction. By making the system responsive and easy to use, we have ensured that it meets the needs of all users, regardless of their technical expertise.

Security has been a primary concern in the development of this system, with robust measures implemented to protect sensitive data and ensure safe usage. The comprehensive workflow, from staff registering event details to the head judge entering scores, has been streamlined to ensure a smooth and transparent process.

Additionally, the system's user management differentiates between clerks, head judges, and the public, providing secure login for clerks and head judges while allowing the public to freely access all publicly available data. This ensures that sensitive information is protected while maintaining transparency and accessibility for general event information.

In conclusion, the gymnastic rhythmic scoring system sets a new standard in the management and execution of rhythmic gymnastics events. By addressing the limitations of the previous system and incorporating significant improvements, we have created a solution that enhances user experience, accuracy, efficiency, and security. This system not only meets the current needs of rhythmic gymnastics competitions but also positions itself as a reliable and advanced tool for future events.

Appendices

Appendix A: User manual.

Clerk

webpage	Steps
Login	Clerk will login into the website using their username and password
Event	Clerk can add, view, edit and delete the event
Gymnast	Clerk can add, view, edit and delete the gymnast
Team	Clerk can add, view, edit and delete the Team
Judge	Clerk can add, view, edit and delete the Judge
Headjudge	Clerk can add, view, edit and delete the headjudge

Headjudge

webpage	Steps
Login	Headjudge will login into the website using their username and password
Key In Score Page	From this page , headjudge can sort the gymnast by the apparatus, gymnast name, team name and the category to see all the gymnast who are not have submitted score yet
Event Page	Headjudge can see all the event page and can choose the event to see ranking in the event selected only
Admin Score Individual Page	After select the event, all ranking and score detail will show in this page and headjudge also can sort the ranking by the category
Admin Score Individual Detail Page	Headjudge can see the score details for each gymnast only by selected the info button

Staff

webpage	Steps
Login	Staff will login into the website using their username and password
Event	Staff can view event
Gymnast	Staff can view the gymnast
Team	Staff can view the Team
Judge	Staff can view the Judge
Headjudge	Staff can view the head judge
Clerk	Staff can add, view, edit and delete the Clerk

Appendix B: Softcopy of your project, DDL and report (upload in Google Classroom)