



VIEW  
PLAYERS  
WORLDWIDE.

# SPORTS CMS PROJECT

## AGILE PHASE ONE REPORT

May 2019

# Index

1 Foreword.....	1
2 Site Design - Login & Inspiration .....	2
2.1 Site Design - Site Map .....	3
2.2 Site Design - Homepage .....	4
2.3 Site Design - Player & Match Uploads .....	5
2.4 Site Design - Login & Inspiration .....	6
3 Technical Development .....	7
3.1 Achievements to date .....	7
3.2 Technical difficulties and scheduling .....	10
4. User Testing .....	11
4.1 Methodology .....	11
4.2 Analysis, reflection and summary of results .....	12
5 Technical Testing .....	14
5.1 Methodology .....	14
5.2 Analysis, reflection and summary of results .....	14
6. Client feedback .....	16
6.1 Interview .....	16
6.2 Reflection .....	16
7 Future Work .....	17
8 References .....	18

Appendix one - User tests

Appendix two - Technical tests

## 1. Foreword

Over the past six weeks, the Sports CMS team has worked well to achieve the tasks and milestones set in the Phase one development cycle. Despite various minor setbacks, the team is currently ahead of schedule, with plans to implement user test advice in the coming days in order to maintain the Phase two development schedule as planned.

The project constraints consist of:

1. Client absence for the majority of the initial development cycle
2. Lack of real development server for technical testing
3. Initial lack of clarity surrounding standards of work; and
4. A general lack of team project experience

In the past few weeks, however, several team leaders have emerged and taken greater responsibilities in both their own roles, and within the broader project team; assisting the team in setting and delivering greater quality of work, within improved timelines.



## 2. Site Design - Login & Inspiration

The client requested a site which is colourful like Tennis Australia but with similar functionality to RatingsCentral.com. With this information, the Sports CMS team sought inspiration from several additional sites, including: JetStar, Qantas, ESPN, DOTA Rankings, and Tennis.com. The team noticed that the sites most appealing to us as users, were those with user friendly interfaces, bright colours, and advanced functionality which was easily accessible to even laymen users.

The working site design incorporates several design principles, inspired by Apple's Human Interface Guidelines, UI Design Do's and Don'ts, iOS User Experience Guidelines, and Don Norman's design principles. These principles are:

### Header

- **Keep Navigation Consistent** – We maintain a consistent navigation bar at the top of each page
- **Use High Contrast** – Navigation bars use distinct deep colours compared with the rest of the site to ensure ease of navigation for users with impaired vision.

### Footer

- **Keep Navigation Consistent** – We maintain a consistent navigation bar at the top of each page
- **Maintain Voice and Branding** – The footer maintains the colour features and tone of language consistent with the rest of the site. This will assist users in identifying the page's end.

### Images

- **High resolution** – Images are displayed in the highest resolution possible to improve the user experience and site professionalism. All slider images are designed for 1080p site viewing
- **Optimize the File Size of Your Images** – File sizes are minimised to improve the viewing experience. Large files will reduce both site performance and increase user downloads. Images are presented as jpegs to reduce the image quality/file size trade off
- **Use Images to Illustrate Concepts** – Images are not only for visual appeal but serve as a function of the site. For example, sliders are generally a call to action, or highlight unique aspects of the site.

### Text

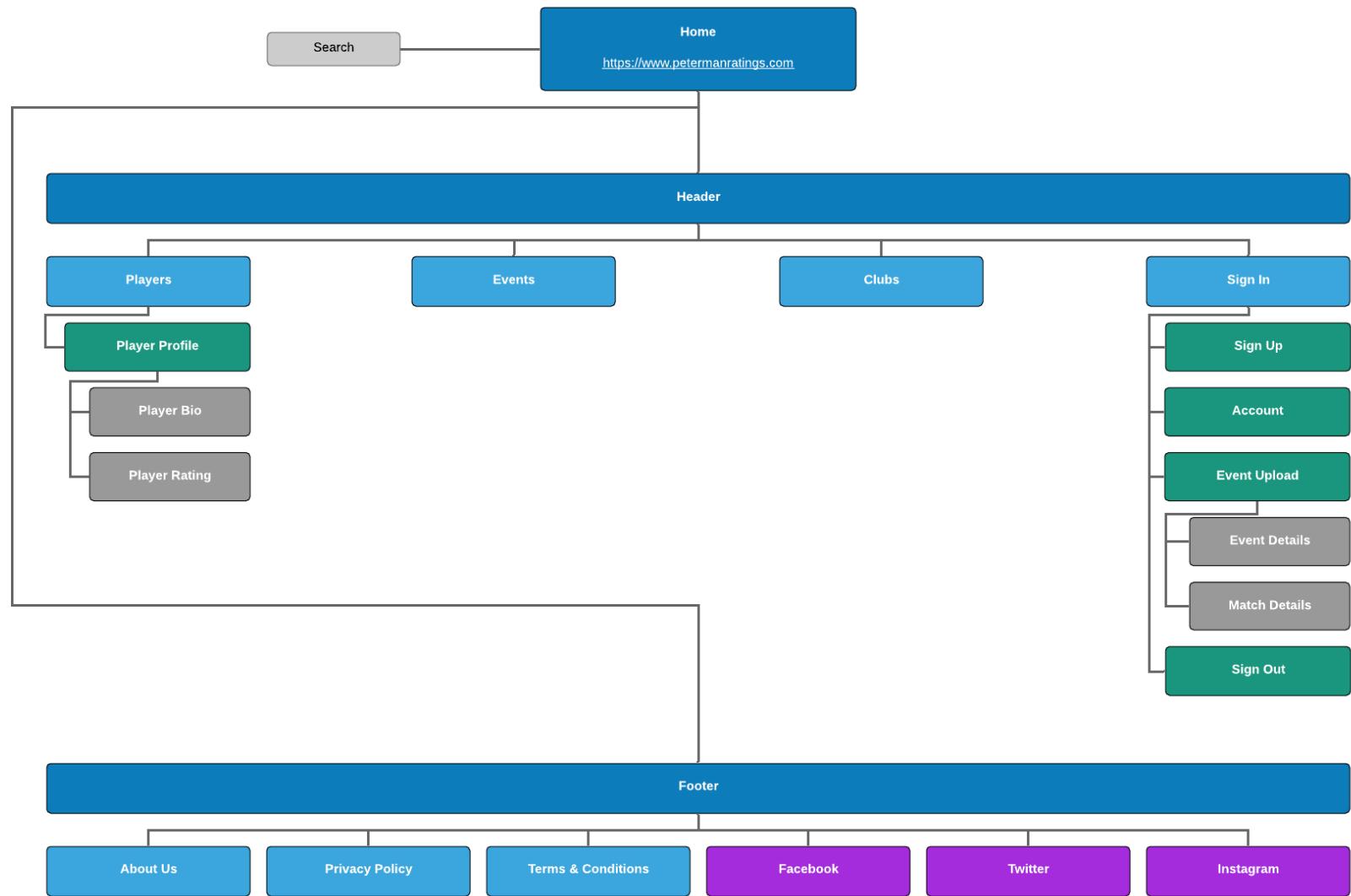
- **Use plain language** – The site's text does not contain techno-jargon or long-winded sentences. It is short, simple, and to the point
- **Structure content** – Despite its minimalistic design, text is usually displayed under headings, or sub-headings to improve readability and structure
- **Format text** – The text layout is designed to fit the user's screen. The font choice we have chosen to use throughout the site is Lato – a clean, professional looking text, which adds to the visual appeal of the site.

### General site principles

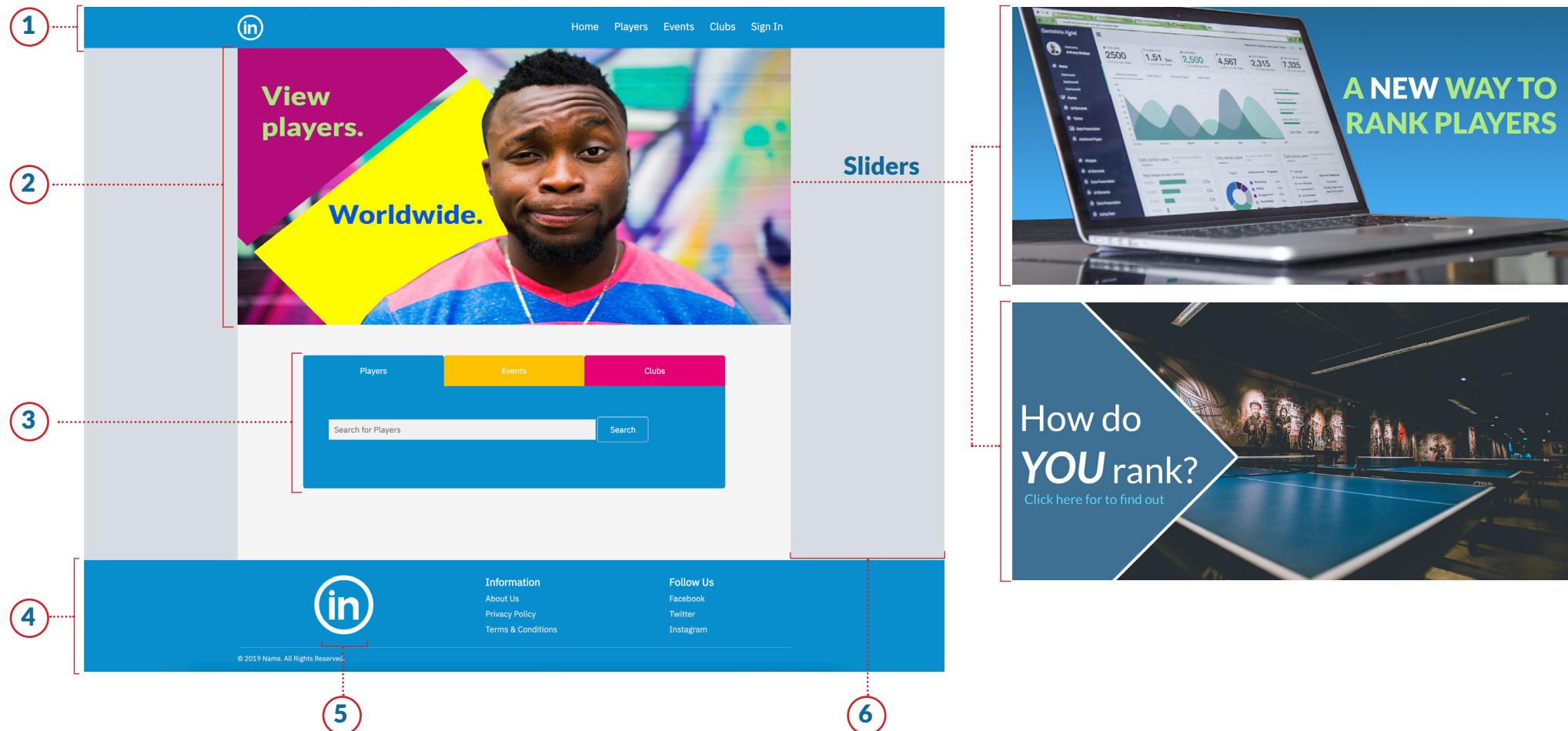
- **Visibility** – Bright colours and clearly labelled site elements improve the page's visibility to users
- **Feedback** – Performing actions - such as selecting a page from the header will provide visual feedback to the user by changing its colour, or highlighting the user selection
- **Affordance** – Site elements are spaced sufficiently to allow users easy selection on even small devices
- **Consistent use of UI elements** – All site elements perform the same on any page. User's selecting any site elements can expect consistent site behaviour
- **Efficient and satisfying** – Simple search bars, and short navigation paths provide a clear, easy, and satisfying user experience.

The site map and design principles in action are presented on the following pages.

## 2.1 Site Design - Site Map



## 2.2 Site Design - Homepage



**1. Header** - The header contains all pages likely to receive the most traffic, minimising user clicks for simplicity.

**2. Sliders** - High quality jpeg's, each designed with the site's primary colours in mind for consistency. Each slider is a call to action and underpins UC09 (colourful).

**3. Search Box** - The home page search box is a quick way for users to discover the content they are searching for as quickly as possible.

**4. Footer** - Like the header, the footer contains basic contact and site navigation information. This is location is consistent with what users expect of a professional website.

**5. Logo** - A placeholder logo is provided while the team negotiates a new logo with the client.

**6. Advertising Space** - The sides of the page are some of the highest traffic areas of the site, maximising user clicks while minimising its impact on the site. This area satisfies UC44 (advertising).

## 2.3 Site Design - Player & Match Uploads

The image displays two screenshots of a web application interface. The left screenshot shows a player's profile page with a blue header containing navigation links: Home, Players, Events, Clubs, Account. Below the header is a 'Player Details' section with fields for First Name (Sean), Last Name (Allen), Gender (M), Age (26), Country (Australia), State (Tasmania), Club (Launceston Badminton Club), and Sport (Badminton). To the right of these details is a green bar chart showing a 'Badminton Rating' of 2267 and a 'Standard Deviation' of 75. The right screenshot shows an 'Event Details' page with dropdown menus for Name (Badminton), Location (Australia, Tasmania), and Date. Below this is a 'Match Details' section with a table for entering match results. The table has columns for Event, Initial Rating, Point Change, and Final Rating. Three rows of data are shown for an A League match: Initial Rating 1043, Point Change +3, Final Rating 1046; Initial Rating 1046, Point Change -10, Final Rating 1036; and Initial Rating 1036, Point Change +5, Final Rating 1041. A 'View More' button with an arrow icon is at the bottom of the table.

**7. Colour cues** - Colour coding provides users visual feedback as to the accuracy of their rating. This satisfies UC2 (Standard Deviation colour coding).

**8. Dynamic updates** - Buttons allow players to quickly switch between sports, dynamically updating the player fields relevant to the user selection. This assists with UC45 (adding future sports).

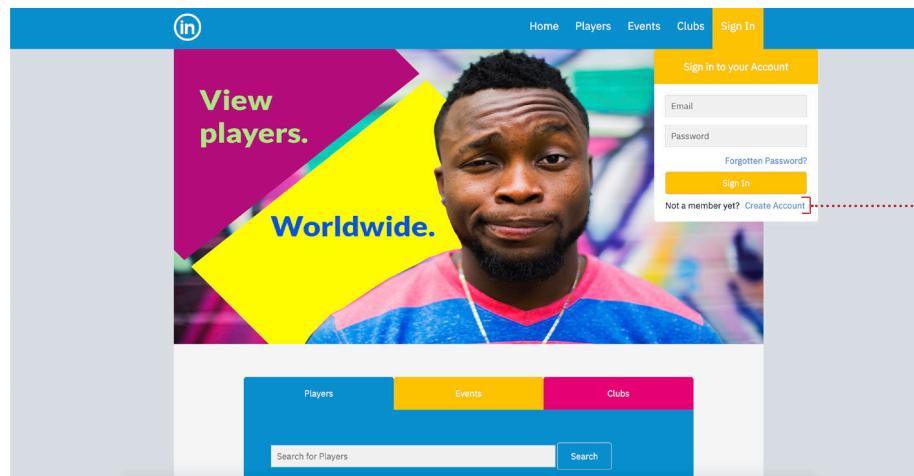
**9. Player History** - Users can view their playing history in a clean, easy to read table. This satisfies the requirements of UC15 (player history)

**10. Minimal data entry** - The site is designed to be as user friendly, by requiring users to enter the least amount of data as possible to get players and events ranked. This assists with the development of UC5 (accessibility).

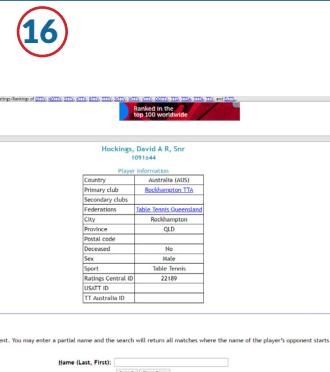
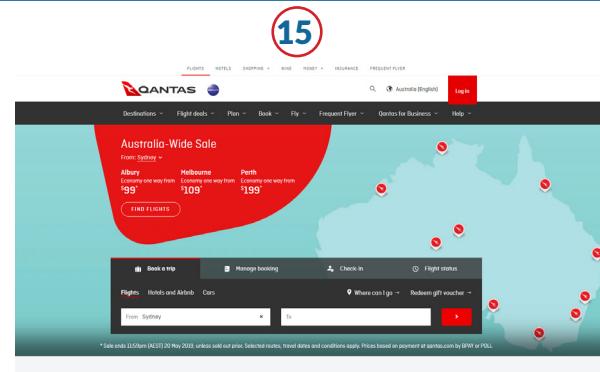
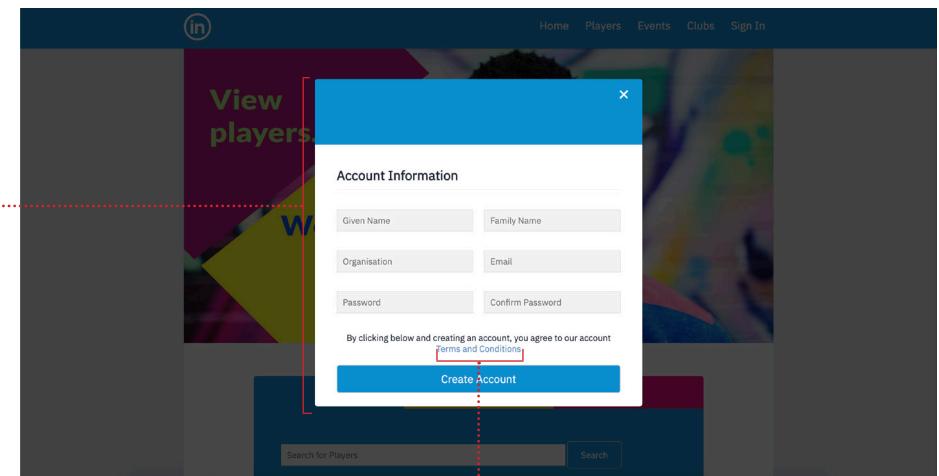
**11. Dynamic tables** - Tournament directors are able to quickly enter the number of matches played in a tournament and the match entry table is created to the correct size.

**12. Auto-complete** - To speed up the process of adding players, typing a player's name will trigger an autocomplete for previously entered and existing players. This assists with the completion of UC27 (autocomplete).

## 2.4 Site Design - Login & Inspiration



Selection



**13. Account Creation** - Users may quickly login to access elevated priveleges, satisfying UC25 (user logins), UC26 (reset password), and partial UC36 (verify users).

**14. Legal** - Terms and conditions are provided to users to ensure that users are informed of the terms of service.

**15. Layouts: Qantas** - The team felt that Qantas' simplistic design would appeal to users as a user friendly site

**16. Functionality: Ratings Central** - As a competitor in the sports ratings space, Ratings Central was reviewed to ensure competitive functionality could be delivered to the client.

**17. Colour and Feel: Tennis Australia** - At the clients request, the site is designed to be colourful and inviting like the current theme for Tennis Australia's website.

## 3. Technical Development

Over the past six weeks the team has worked together to achieve the outcomes and user stories negotiated within the phase 1 project timeline. These achievements are described below.

### 3.1 Achievements to date

The following table represents the completion of phase one tasks. If tasks are not fully completed, a note is provided as to the reason:

*Table 1. Phase one development task completion*

Phase 1		
Item Type	Completion Status (%)	Notes
<b>Site layout</b>	<b>93%</b>	
Basic site artwork	100%	
Basic site footer	100%	
Basic site header	100%	
Basic site layout - unpopulated	80%	Works to be continued in next 6 days
Basic site menu system	100%	
Basic website user instructions	80%	Awaiting completion of site layout
<b>Basic user functionality</b>	<b>90%</b>	
User login system	100%	
Match data upload	80%	Data till needs parsing to stop user errors
<b>Site infrastructure</b>	<b>100%</b>	
Server recommendation	100%	
<b>Maple</b>	<b>100%</b>	
Maple data input/output system	100%	
<b>Database</b>	<b>100%</b>	
Tables developed	100%	
User login information retrievable	100%	
Match data retrievable	100%	
<b>Integration</b>	<b>100%</b>	
Maple with Database	100%	
Database with site	100%	

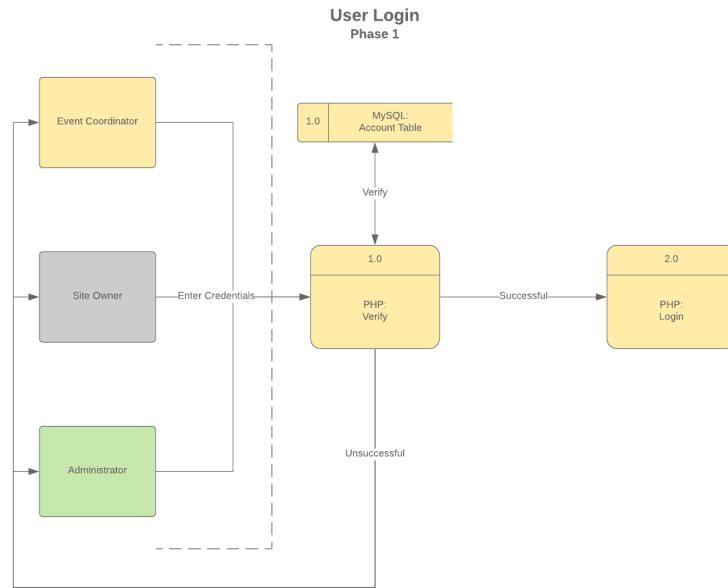
The following technical developments were undertaken during the phase one development cycle and provide further insight into the technical development of the site.

#### **Website**

The website was built from the ground up, utilising a combination of common web technologies such as HTML, CSS, PHP, SQL, Javascript and Ajax. Professional programming practices, such as the separation of site styles (CSS) from site content (HTML) were utilised to provide an easy pathway for further site amendments upon handover to the client. A site map is provided in section 2.1 Site Design - Site Map.

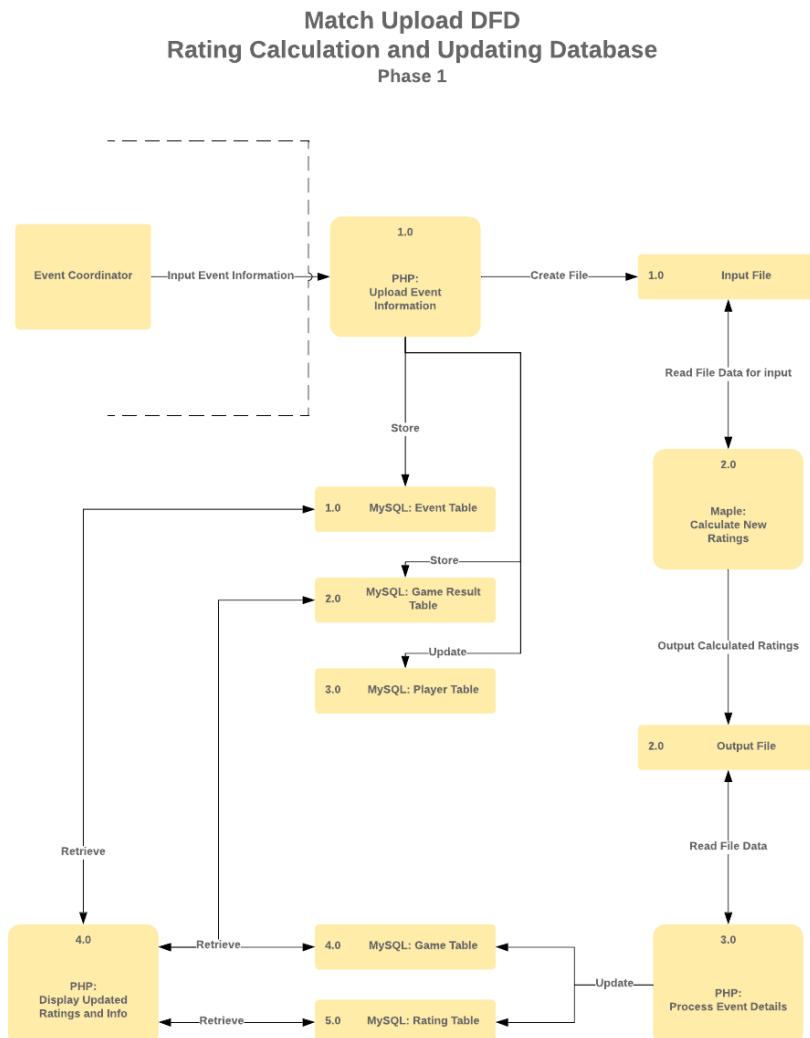
The site user login is functional, and has been developed under the following schema:

### Schema 1. Phase one user login



Additionally, the Match upload system has been developed (however its page is currently under revision) under the following schema:

### Schema 2. Phase one match upload



## Site content

Site content, such as images, logos, links and worded content has been achieved to the standard required of the phase one development cycle.

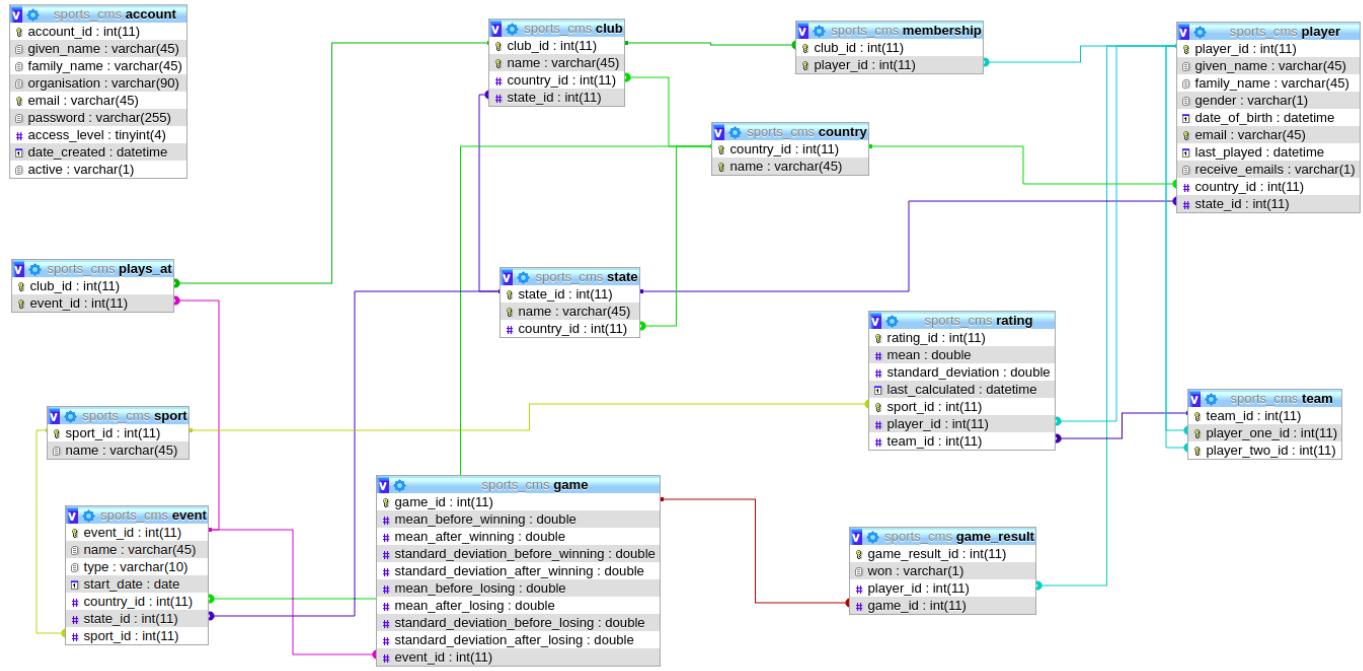
All images have been developed in Photoshop, using colours which match the sites primary colour scheme. Homepage slider images are developed to a minimum of 1080p resolution, and primarily use free for commercial use images.

Placeholder text and logos are provided throughout the site, and will be amended upon confirmation with the client in future stages.

## Database

The site database schema has been developed (shown below), and implemented in its entirety.

*Schema 3. Phase one database*



The database is currently used during the following circumstances:

- Storing user login information
- Establishing a connection and session with site users for logging in
- Storing match and player data, including:
  - Player data
  - Event data
  - Country and date time data

## Maple

Maple code provided by the client has been amended to integrate with the site database. Users can now upload match data to be processed by Maple. Maple will output the correct match data values (e.g. user sports ratings) to the site database, allowing those match scores to be viewed on the site, where a connection between the site and database exists. Additionally, user errors are parsed to Maple which serves as an error correction system.

### Server selection

As part of the project, the team provided the client with a recommendation for a VPS server solution which is compatible with the requirements of the site, and scalable to meet potential site traffic and growth in future. Several server solutions and hosts were reviewed as part of this process, with the team recommending X as the best value for service server.

## 3.2 Technical difficulties and scheduling

The team is ahead of schedule in several areas of the project, including:

- Artwork assets developed for the site (scheduled for phase 2)
- Player search is underway (scheduled for phase 2)
- Admin login underway (scheduled for phase 2)

While these features are not currently evident on the site, the development of these items will assist the team in prioritising some of the more difficult aspects of development. These items include:

- Match upload design layout - the best method for users to upload match data has been difficult for the team to design. User feedback will assist in the development of this task.
- Maple input - parsing user data into the database has required the team to develop a “fix” as the system does not easily catch user errors, resulting in crashes.

As per 3.1 Achievements to date: *Table 1* the overwhelming majority of tasks have been completed fully one week earlier than anticipated. During this time, the team has focused on reporting, testing, and making a head start on problem solving phase two tasks.



## 4. User Testing

User & Technical tests were constructed to satisfy the successful completion of the following user stories below:

Table 2. User stories tested

Green = Full user story tested

Orange = Partial completion (some criteria not tested until future phases)

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	30
31	32	33	34	35
36	37	38	39	40
41	42	43	44	45

The data received from these tests was used to inform the test team of future changes to the project, and to ascertain the progress of those tested user stories.

### 4.1 Methodology

The methodology used to formulate and deliver tests consisted of five key phases;

- 1) Preparation
- 2) Introduction
- 3) Test
- 4) Post-test questionnaire
- 5) Debriefing

#### 1. Preparation

Tests were formulated based upon the user stories developed in the Project Planning report and the capability to delivery those tests based upon the deliverables expected to be achieved by the end of the project phase 1 schedule.

A total of four individuals (two males, two females; aged  $35 \pm 13$  years) were enrolled for testing. Subjects were selected based on having either one or more of the following characteristics:

- 1) Selected by the client as a potential site user - two subjects
- 2) A sports or tournament owner or director - two subjects
- 3) Experience with sports sites or a general interest in sports ratings - four subjects

Test subjects were sourced and informed of a location, date, and time for testing.

A mixture of both quantitative and qualitative assessments was developed for each test. Given the small user sample size, qualitative assessments were considered by the project team to be a useful controllable output for our consideration; a larger subject sample size would have likely resulted in a larger proportion of quantitative assessments.

#### 2. Introduction

Test subjects were introduced to the test team and asked to provide their personal details and participation consent by way of signing a test waiver form. Subjects were told the purpose and length of the tests. Subjects were also informed that the testing would provide subject de-identified data to the team for development purposes.

### 3. Test

Subjects were provided with a PC with the Sports CMS website operating and given a new task once the previous task was completed. Subjects completed a total of X tasks each. Subject feedback was provided to the testing team for recording at the end of each testing scenario. Testing was carried out in the Computing building of UTAS.

Test questions are provided in [Appendix 1](#). Test results are provided in section 4.2 *Analysis, reflection and summary of results*.

### 4. Post-Test Questionnaire

Subjects were provided with a post-test questionnaire which consisted of a series of both open, and closed questions such as:

- If you could change one thing about the site what would that be?
- Would you use this site yourself? – Yes or no

The results of these questionnaires are provided below.

### 5. Debriefing

Testing concluded with a debriefing where the test team asked test subjects about testing and if they had any further questions. Test subjects were thanked for their time in assisting us with testing and provided with our contact details for any further correspondence required.

## 4.2 Analysis, reflection and summary of results

The following results were received from users in user testing:

### Test 1 - Pass rate: 100%

**Goal:** Completion of this task will assess the user's ability to quickly discover the purpose and usability of the site.

**Subject comments:** Subjects were able to quickly find the pages needed to assess the purpose of the site. One subject found that only one slider had a sport - table tennis, and assumed the site was for table tennis only.

**Changes as a result of the test:** Additional sliders, or a "multi sport" slide will be developed showing the range of sports available on the site.

### Test 2 - Pass rate: 100%

**Goal:** Completion of this task will assess the user's ability to navigate the site and review its professional appeal.

**Subject comments:** Subject's found the site's homepage easy to use and to navigate. They found sliders to be well made, and professional looking. One subject found a grammatical error in one of the sliders. Three subjects (75%) rated the site's navigation and professional appeal as "Good". One subject rated the site as "Average" (25%).

**Changes as a result of the test:** Sliders will be reviewed for spelling and grammatical errors prior to release.

### Test 3 - Pass rate: 100%

**Goal:** Completion of this task will assess the user's ability to easily navigate commonly used pages.

**Subject comments:** No comments were made regarding this task. All subjects were able to complete the task within the allotted timeframe (45s) required to pass the task.

**Changes as a result of the test:** N/A

#### **Test 4 - Pass rate: 100%**

**Goal:** Completion of this task will assess the user's ability to search for themselves and others by multiple search criterion.

**Subject comments:** All four subjects rated the usability of the search system as "High". Subjects found the page neat and simple, and the information required easy to find. One subject believed that the ability to compare their ratings against another player one to one would be a good addition. Another subject didn't know what the ratings number represented (e.g. is 2000 a good or bad rating?)

**Changes as a result of the test:** An option to compare players on a one to one basis will be reviewed. A system for clarifying ratings to users will be reviewed.

#### **Test 5 - Pass rate: 100%**

**Goal:** Completion of this task will assess the sites ability ensure secure pages are accessible only to those with privileged accounts.

**Subject comments:** All four subjects rated their confidence in the security and accessibility of pages as "High". One subject recommended adding welcome text on the page. Another subject questioned whether an admin could also be a tournament director, and how that would work.

**Changes as a result of the test:** The team will review the possibility of adding a personal welcome text in the navigation bar.

#### **Test 6 - Pass rate: 50%**

**Goal:** Completion of this task will ensure that Tournament Directors are able to upload match data quickly and intuitively.

**Subject comments:** Two subjects (50%) rated the usability of the match upload page as "Medium", and two (50%) as "Low". There was a general lack of clarity around the use of the various buttons, and how to add more matches. Additionally, several users noted the lack of warning notifications when attempting to submit matches which had no data entered.

**Changes as a result of the test:** The match upload page will be reviewed in its entirety to ensure user ease of use when uploading matches.

#### **General Comments**

Subject 1: Subject would use the site themselves. Subject felt that the site was clear to them based on previous experience, but that it may not be intuitive to new users (particularly the match upload page).

Subject 2: Would use this site themselves. Subject is currently using ratings central. Ratings central calculates the ranking only for tournaments but it does not calculate the ratings for local clubs.

Subject 3: Would use the site themselves for their league if other local clubs did also, and if it remained free. Enjoyed the look and feel of the site and thought it was well made and easy to use.

Subject 4: Subject felt like the site looked professional. Subject felt like the match upload page was the only let down, but that it was the most important to get right if the site wants to attract Tournament Directors.

## 5. Technical Testing

Technical tests were constructed to satisfy the successful completion of the user stories shown in 4. *User Testsing - Table 2. User stories tested.* The data received from these tests was used to inform the test team of future changes to the project, and to ascertain the progress of those tested user stories.

### 5.1 Methodology

Technical tests were developed and initiated in a white box testing environment. As the initial phase of development produced minimal site user input, the team felt that the scope for site testing was small enough to warrant white box testing. Additionally, given the small window into the internal workings of the site, the team also felt that there would be a greater emphasis, and ergo knowledge required, of the internal workings of the site, database and Maple.

Some minor tests were performed on site input to ensure all bugs/glitches were revealed during the earlier stage of development.

Technical testing was conducted by the programmers, with tests developed by various members of the team to ensure tests were not encapsulated to each tester's knowledge domain.

Test questions are provided in [Appendix 2](#). Test results are provided in the following section.

### 5.2 Analysis, reflection and summary of results

The following results were received during technical testing:

#### Test 1 - Success: Failure

*Goal:* Completion of this task will assess the stability of the sites input fields.

*Test comments:* The following errors were reported during testing:

- Adding over 2,000 matches to an event significantly impacts page performance
- Exceptionally large numbers added to the match field crashes the site
- Adding matches doesn't deal with decimals - it appears to always round up the number
- Match details allows entering of any data including players not in the database, this causes an unreported crash and if data is not entered, Maple will fail
- Most errors are caught client side.

*Changes as a result of the test:* Matches will be limited to 200 per event. Decimal places will be removed as acceptable input. The system will not allow the uploading of non-registered players.

#### Test 2 - Success: Pass

*Goal:* Completion of this task will ensure that each site link is valid.

*Test comments:* All site links are valid, with the exception of social media accounts, which only exist as placeholders (with the exception of Facebook).

*Changes as a result of the test:* Social media links will be removed if no valid site is provided.

#### Test 3 - Success: Failure

*Goal:* Completion of this task will ensure that each site image and layout scales appropriately to a user's PC device.

*Test comments:* This test is not due until phase two, however it has been added as a test for assessing site behavior on different devices in its current state. Header disappears on devices with 500px or lower resolution. Pages do not currently scale, rather page elements are no longer visible.

*Changes as a result of the test:* N/A.

#### Test 4 - Success: Pass

*Goal:* Completion of this task will assess the user's ability to register as a Tournament Director.

*Test comments:* This test passed successfully. Registration details were stored in the database correctly.

*Changes as a result of the test:* N/A

#### Test 5 - Success: Pass

*Goal:* Ensure the site is secure from network attacks.

*Test comments:* All passwords are hashed in database with salt used.

SQL injection tests recommended by W3Schools were utilised and passed (injections failed).

Note: limitations of this test include testing via the website and not by trying to post malicious data direct to server - this will need to be done in subsequent development phases.

*Changes as a result of the test:* N/A

#### Test 6 - Success: N/A

*Goal:* Completion of this task will provide a secure directory to store sensitive data.

*Test comments:* Unable to be completed as no server has been provided. However, system is designed with Maple source code stored in separate directory structure to web server.

*Changes as a result of the test:* N/A.

### General Comments

Several tests were unable to be completed in their entirety due to the lack of a true server environment requested in the Technical Request section of the Sports CMS Planning Report. A significant portion of the site development in the initial phase was site design, and setting up the integration between the database, site, and Maple. As such, fewer than expected technical tests existed in the initial phase of site development.

In the next two phases of development, significant site features will be implemented (e.g. administrator features) which will require additional technical testing to ensure that the correct details are correctly parsed within the site, database, and Maple.



## **6. Client feedback**

The client was engaged in later stages of development to provide site feedback.

### **6.1 Interview**

Upon reviewing the site with members of the team, the following questions were provided to the client to gauge feedback:

#### **1. What do you like about the site?**

Client liked the overall layout and high usability. Client was pleased with color co-ordination as this was a feature highlighted as important when discussing site design.

#### **2. What could be improved about the site?**

Client suggested that:

- “Table Tennis” be replaced with “Tennis” in both drop-down list of Event Details page and the Table Tennis board picture in the homepage.
- When the Event Director enters the winner’s and loser’s name during Event Entry form, client wants to search for players both from inside and outside the state (currently the drop down list also shows player name that is specific to region but client mentioned what if a player from Melbourne comes to play in a Tasmanian event).
- In the player’s profile page - along with initial and final rating, client wants to see the standard deviation alongside the rating (e.g. 1200(+47)). The digits in the ratings will change its color when it exceeds its certain range.

#### **3. Are you pleased with the progress so far?**

The Client stated that he was pleased with the progress of the site thus far. Client did not indicate that they were concerned with the teams interpretation of the sites functionality, look or feel.

### **6.2 Reflection**

The Client’s suggestions for improvement were noted by the team, and deemed achievable. The team was pleased that the client’s suggestions for improvement were relatively minor, and did not incur significant structural changes during future development phases. Additionally, the team was pleased to hear that the client is satisfied with the site’s progress so far.

As the client’s availability will be increased from next semester, the team will engage the client on a more regular basis to ensure that new features are designed in a manner which develops the client’s vision for his site.

## **7. Future Work**

The first AGILE development phase has provided the team with the experience to plan tasks more effectively. The success of the initial phase has minimised the need to amend phase two schedules, with the exception of implementing changes received in user, technical, and client feedback.

The team believes workload distribution will be improved during phase two as the site development framework (CSS, layout, database, and Maple) is now provided for the team to undertake a multitude of smaller, individual tasks which may be assigned more dynamically.



## **8. References**

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World Wide Web Consortium 2016, Ensuring that a contrast ratio of at least 4.5:1 exists between text (and images of text) and background behind the text, Viewed on 11 May 2019  
<https://www.w3.org/TR/WCAG20-TECHS/G18.html>

### **Computer users Statement Sub-Image**

<https://www.pexels.com/photo/two-people-holding-macbook-pro-1181275/pexels-photo-1181275.jpeg>

### **Tennis Sub-Image 2**

<https://www.pexels.com/photo/close-up-photo-of-person-holding-tennis-racket-and-ball-1432039/pexels-photo-1432039.jpeg>

### **Tennis Sub-Image**

<https://www.pexels.com/photo/man-lying-beside-on-green-tennis-balls-1103833/pexels-photo-1103833.jpeg>

### **Project Background Sub-Image**

<https://www.pexels.com/photo/action-adult-athlete-business-341003/pexels-photo-341003.jpeg>

### **Header Image 2**

<https://www.pexels.com/photo/photo-of-group-of-people-in-a-meeting-1661004/pexels-photo-1661004.jpeg>

### **Header Image 3**

<https://www.pexels.com/photo/computer-desk-electronics-keyboard-238118/pexels-photo-238118.jpeg>

### **Header Image 4**

<https://www.pexels.com/photo/ball-court-design-game-209977/pexels-photo-209977.jpeg>

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## Appendix one: User Tests

UC	Task 1	You have been asked to visit <b>PetermanRatings.com</b> . What is the purpose of the site? Where could you find out how to use it?			
1	Goal	Completion of this task will assess the user's ability to quickly discover the purpose and usability of the site			
	Steps	1. Visit <b>PetermanRatings.com</b> 2. Assess the purpose of the site 3. Read the site instructions on the homepage			
	Input Data	N/A			
	Acceptance Criteria	<ul style="list-style-type: none"> <li>• The site's homepage or about page will feature descriptive wording to display its purpose</li> <li>• Basic instructions for website operation will be shown on the homepage</li> <li>• A dedicated page will have more advanced instructions, this page will be accessible through a link on the menus <b>[Agile Phase 2]</b></li> </ul>			
	User #	1	2	3	4
	Assessment: Time	40.33 s	34.43s	16s	38s
	Pass/Fail (<45s)	Pass	Pass	Pass	Pass
	User Comments	1. Layout straight forward like Facebook, Gmail. 2. Excellent use of graphics in design toolkit.	At the very beginning, user thought the site only ranks table tennis because in the slider only shows table tennis board; no hints for badminton and squash.	User found site very easy to discover its purpose.	User found site clear to use, primarily due to sliders
Test Notes					

UC	Task 2	You have heard of <b>PetermanRatings.com</b> . Does it look and feel professionally made? Is it easily navigable?			
5 & 9	Goal	Completion of this task will assess the user's ability to quickly discover the purpose and usability of the site			
	Steps	1. Visit <b>PetermanRatings.com</b> 2. Navigate the menu system 3. Take note of the look and feel of the site			
	Input Data	N/A			
	Acceptance Criteria	<ul style="list-style-type: none"> <li>• The site should be inspired by the design elements of the website: leagues.tennis.com.au</li> </ul>			

		<ul style="list-style-type: none"> <li>• Use of coordinated colours, images and fonts</li> <li>• Site easily navigable from centralised menu system</li> <li>• Website should be constructed according to the standard of W3C (w3.org, 2019)</li> <li>• The site will be free from typographical and grammatical errors.</li> </ul>		
User #		1	2	3
Assessment: Opinion (Bad/Average/Good)	Good	Average	Good	Good
Pass/Fail (avg or better)	Pass	Pass	Pass	Pass
User Comments	Liked the professional graphics	1. There is a typographical error in the slider in homepage. It should be “Click here to view players” instead of “click here <b>for</b> to view players”. 2. Nice color combination.	Looks very easy to use. Not too crowded	Looks pretty, friendly and inviting
Test Notes				

13	UC	Task 3	You want to visit the commonly used pages [Home page, EventPage, Profile page]. Visit them and ascertain their purpose	
	Goal	Completion of this task will assess the user's ability to easily navigate commonly used pages		
	Steps	1. From the header or footer select [Home page, Event page, Profile page ].		
	Input Data	N/A		
	Acceptance Criteria	<ul style="list-style-type: none"> <li>• Users can quickly navigate to commonly used pages</li> </ul>		
	User #	1	2	3
	Assessment: Time	18s	37s	25s
	Pass/Fail (<45s)	Pass	Pass	Pass
	User Comments			
	Test Notes	This test's acceptance criteria have been amended from being able to easily visit the homepage, to visiting all commonly used pages; to reflect the menu system redesign.		

	<b>UC</b>	<b>Task 4</b>	You have been ranked since your last tournament. Search for yourself to see who you have competed and what your ratings are before and after the event.		
<b>14</b>	Goal	Completion of this task will assess the user's ability to search for themselves and others by multiple search criterion			
	Steps	<ol style="list-style-type: none"> <li>1. Search for <b>yourself</b> by name</li> <li>2. Search for your <b>yourself</b> by age</li> <li>3. Note who you competed against</li> <li>4. Search for your <b>brother</b> by region</li> <li>5. Search for your <b>brother</b> by club</li> <li>6. Note his ranking</li> </ol>			
	Input Data	"Grant" - Brother			
	Acceptance Criteria	<ul style="list-style-type: none"> <li>• Players can be searched by any or all the following criteria: name, age, club, region, how recently they have competed and with whom they have competed</li> <li>• After searching for a player, the search results will list all the players matching their search criteria along with their age, club, region, when they last competed and their current ranking.</li> <li>• Their current ranking will be indicated in a bold font</li> </ul>			
	User #	1	2	3	4
	Assessment: Usability (low/medium/high)	High	High	High	High
	Pass/Fail (avg Medium)	Pass	Pass	Pass	Pass
	User Comments	Simple, easy to navigate. The navigation in this site is better than Ratings central.	The user wants to compare their ratings with a mate in two columns side by side in player's profile page.	User likes the look and feel of the page and site in general	Finds the system easy to use, but is unclear what the ranking numbers mean (e.g. 2000 out of what?)
	Test Notes				

	<b>UC</b>	<b>Task 5</b>	As a new site owner, you are given Tournament Director and Admin passwords to see which access they are given. Log in as one of these users at a time to view their privileged pages. Ask Test Staff for assistance logging in and out of these accounts if required.
<b>18 &amp; 25</b>	Goal	Completion of this task will assess the sites ability ensure secure pages are accessible only to those with privileged accounts.	
	Steps	<ol style="list-style-type: none"> <li>1. Navigate the site to attempt to amend or upload match data</li> <li>2. From the site header, select "log in"</li> <li>3. Enter Tournament Director details and log in</li> </ol>	

		<p>4. Navigate the site to view new pages previously inaccessible</p> <p>5. Repeat steps 2-4 as an admin</p>			
		<p><b>Tournament Director</b></p> <p>(NB: Change username to email. When anyone login in the site, it is written “email” in the placeholder instead of “username”).</p> <p>1.</p> <p>Username: <a href="mailto:testing@user.com">testing@user.com</a></p> <p>Password: 1234</p> <p>2.</p> <p>Username: <a href="mailto:test@user.com">test@user.com</a></p> <p>Password: abc123</p> <p>3.</p> <p>Username: <a href="mailto:test@user.com">test@user.com</a></p> <p>Password: Abc123</p> <p><b>Admin</b></p> <p>(Note: this will be different for you. Please put what's in your database).</p> <p>Username: <a href="mailto:asornob@utas.edu.au">asornob@utas.edu.au</a></p> <p>Password: Kit301\$</p>			
	Acceptance Criteria	<p>Users should have different access to pages, specifically:</p> <ul style="list-style-type: none"> <li>• Users will require a correct combination of email address and password to log in</li> <li>• Users not logged in should not be able to access privileged pages such as the <a href="#">match upload page</a></li> <li>• Only Tournament Directors should be able to access the <a href="#">match upload page</a> and;</li> <li>• Admin will have access to all pages.</li> </ul>			
User #		1	2	3	4
Assessment: <b>Confidence</b> <b>(low/medium/high)</b>	High	High	High	High	
Pass/Fail (avg Medium)	Pass	Pass	Pass	Pass	
User Comments	1. The test user finds it difficult to identify if they are already logged in or not. Wants a welcoming message when logging in. Suggested that the buttons like “upload event” and “administration”	1. User noticed the difference between login and logout (unlike test user 1) 2. Noticed the different privileges between event Director and Administrator.	User felt that once logged in, it is easy to use, however first-time use may be difficult for some users, as it is not clear how to do it.	User noticed the difference between accounts. User questioned whether an admin could also be a tournament director, and how that	

		<p>button for administrator should not be in the drop-down list in the navigation bar. Rather, it should be in the body.</p> <p>2. The user easily identified the difference of privileges between event director and administrator from the additional button that appears when logged in as administrator.</p>			would affect the system.	
	Test Notes					

	<b>UC</b>	<b>Task 6</b>	You have just finished hosting a tournament and want to enter the match scores. Navigate to uploads and enter the player data.
27	Goal		Completion of this task will ensure that Tournament Directors are able to upload match data quickly and intuitively.
	Steps		<ol style="list-style-type: none"> <li>1. Follow user steps in 18 &amp; 25</li> <li>2. Upload the data for provided in input field</li> </ol>
	Input Data		<ol style="list-style-type: none"> <li>1. Login (if you are not still logged in from previous test). Username: <a href="mailto:test@user.com">test@user.com</a> Password: Abc123.</li> <li>2. Enter the following match data: Match 1 [Winner] Gonzales Raymond Match 1 [Loser] Jeremy Perez Match 2 [Winner] Larry Martin Match 2 [Loser] Benjamin Miller</li> </ol>
	Acceptance Criteria		<ul style="list-style-type: none"> <li>• The website will allow tournament directors to enter the winners and losers matches played in a tournament</li> <li>• As the tournament director types, a list of players whose names match the entered text and whom are from the tournament director's region will be displayed, this will allow the tournament director to quickly enter accurate data</li> </ul>

		<ul style="list-style-type: none"> <li>Should the need arise for a player to be entered from another region the tournament director can select a more advanced search option where they may search all players in the database based upon any combination of their name, region, club or age <b>[Agile Phase 2]</b></li> </ul>		
User #	1	2	3	4
Assessment: Usability (low/medium/high)	Medium	Low	Medium	Low
Pass/Fail (avg Medium)	Pass	Fail	Pass	Fail
User Comments	<p>1. The placeholder “name” in the input field of event details should be changed to “Event name”.  2. The place holder “winner” and “loser” should be changed to “winner-name” and “loser name”.  3. The test user does not want the “add more matches” button. If they want to add one/ two more rows, they want to input the number of rows in the input field (e.g. the user has given 5 rows initially and then realized they need two more rows, then they</p>	<p>1. The test user wants something which will indicate which input field is missing while filling in the event upload form. They were not completely understanding which field they were missing (only through alert box). Suggested using something like the login and register page so that it indicates exactly what field is missing).</p> <p>2. The test user wants the “add more matches” and “submit” button at the very top. When there is ten rows and the user wants to add another row, they need to</p>	<p>The user feels like this page does not look or feel like the rest of the site – it is simple but overly so. Doesn’t understand why there are so many buttons. Figured out how to use it. Was entering their own name in the “Name” field.</p>	<p>User did not find the page easy to use. Didn’t understand why there was an “Add Matches” at the top and “Add Match” at the bottom. Felt like matches should be added to the top, and to use one button only to add matches.</p>

		<p>should type “2” in the input field so that it makes altogether “7”).</p> <p>scroll down for clicking “submit button” which is frustrating. New rows appear at the very top.</p> <p>3. Prefers the “dd--mm--yyyy” instead of “mm--dd--yyyy” in date format.</p>		
Test Notes	All test users were writing their own name in the field “name”			

General comments from test users:

- 1: The site should be tested with more than four test subjects as only four subjects are not enough. The test user should come from people of all ages.
- 2: Would use this site themselves. Subject is currently using ratings central. Ratings central calculates the ranking only for tournaments but it does not calculate the ratings for local clubs.
- 3: Would use the site themselves for their league if other local clubs did also, and if it remained free. Enjoyed the look and feel of the site and thought it was well made and easy to use.
- 4: Subject felt like the site looked professional. Subject felt like the match upload page was the only let down, but that it was the most important to get right if the site wants to attract Tournament Directors.

## Appendix two: Technical Tests

UC	Task 1	[Technical Testing] Input validation
General Site Testing	Goal	Completion of this task will assess the stability of the sites input fields
	Steps	1. Enter the following input data into each field of each live page
	Input Data	Numerals – length: 123456789098765432123456789 Numerals – short: 1 Numerals – decimals: 1.23 Numerals – irrationals: 9%  Letters - length: qwertyrewqwertytrewqwertyrewwqerty Letters - short: q Letters - combinations: q@w1
	Acceptance Criteria	<ul style="list-style-type: none"> <li>• All input data should be validated</li> <li>• All errors should be registered</li> </ul>
	Pass/Fail	Fail
	User Comments	<p>The following errors were found:</p> <ul style="list-style-type: none"> <li>• Add matches broken for large numbers</li> <li>• Add matches reports problem if negative number entered but still shows add match and submit button to page</li> <li>• Match details allows entering of any data including players not in the database, this causes an unreported crash and data is not entered, maple will fail</li> <li>• Add matches takes any number and can take a very long time if that number exceeds 2000 (Shouldn't exceed 200).</li> <li>• Add matches number doesn't deal with decimals. (inputting 1.5 creates 2fields, as does 1.2)</li> <li>• Otherwise all fields performed as expected</li> <li>• Worth noting is that most of the errors are caught client side.</li> </ul>
	Test Notes	

UC	Task 2	[Technical Testing] Site Links
General Site Testing	Goal	Completion of this task will ensure that each site link is valid
	Steps	1. Click each site link on each page
	Input Data	N/A
	Acceptance Criteria	<ul style="list-style-type: none"> <li>All site links should lead to a valid page</li> </ul>
	Pass/Fail	Pass
	User Comments	Social media links don't link to an account yet, only the main site, such as www.facebook.com
	Test Notes	

UC	Task 3	[Technical Testing] Site Images
General Site Testing	Goal	Completion of this task will ensure that each site image and layout scales appropriately to a user's PC device
	Steps	1. View each page in different screen resolutions on both PC and MAC
	Input Data	Test environment: Chrome Firefox Internet Explorer
		Resolution: 1024x768, 1280x960, 1440x1080, 1600x1200, 1920x1440
	Acceptance Criteria	<ul style="list-style-type: none"> <li>All pages should display correctly</li> </ul>
	Pass/Fail	Fail
	User Comments	Nav disappears when the screen width goes under 500px on all pages-No page's scale, rather you just lose visibility of page elements
	Test Notes	Not due for testing until Phase two

UC	Task 4	[Technical Testing] Ensure that visitors can register their details for approval
4	Goal	Completion of this task will assess the user's ability to register as a Tournament Director
	Steps	<ol style="list-style-type: none"> <li>Visit <b>PetermanRatings.com</b></li> <li>Register to the site</li> <li>Check database to ensure the user credentials are stored</li> </ol>
	Input Data	N/A
	Acceptance Criteria	<ul style="list-style-type: none"> <li>The website will have an option to register as a user. The user will be able to enter their credentials (name, and club), this entry will be added to the database.</li> <li>The user will not become active until such time as they are approved by another user <b>[Agile Phase 2 or 3]</b></li> </ul>
	Pass/Fail	Pass
	User Comments	
	Test Notes	

	<b>UC</b>	<b>Task 5</b>	[Technical Testing] Ensure the site is secure from network attacks
36	Goal	Completion of this task will ensure that the site is secure from malicious intent	
	Steps	<ol style="list-style-type: none"> <li>1. Scan database for unencrypted passwords</li> <li>2. Parse an SQL query into all site input fields</li> </ol>	
	Input Data	N/A	
	Acceptance Criteria	<ul style="list-style-type: none"> <li>• All passwords must be encrypted within the system and never stored in plain text</li> <li>• All queries to the database will be parsed through a procedure to prevent SQL injection attacks</li> <li>• The site must be hosted on a reputable server which has DDoS protection [<b>Agile Phase 3</b>]</li> <li>• All new users with login credentials must verify their account sign up by e-mail to ensure they are legitimate users [<b>Agile Phase 2 or 3</b>]</li> <li>• Site admins will need to be approved by another admin [<b>Agile Phase 3</b>]</li> </ul>	
	Pass/Fail	Pass	
	User Comments	<p>All passwords are hashed in database with salt used.</p> <p>SQL injection: tested attempt to run following statements DROP TABLE, INSERT and 1=1 while a bad reference these come from w3Schools. I checked for modifications in the database or unauthorised access.</p> <p>Login and create account: unable to enter sql injection attacks, caught before sql run by javascript</p> <p>Upload Match: unable to enter sql injection attacks, caught before sql run by javascript</p>	
	Test Notes	A limitation of this test is was only tested via the website and not by trying to post malicious data direct to server, this will need to be done in subsequent phases	

	<b>UC</b>	<b>Task 6</b>	[Technical Testing] Provide secure storage of sensitive data
42	Goal	Completion of this task will provide a secure directory to store sensitive data.	
	Steps	<ol style="list-style-type: none"> <li>1. Attempt to access sensitive data on the server from outside the site</li> <li>2. Attempt to access sensitive data on the server from the site</li> </ol>	
	Input Data	N/A	
	Acceptance Criteria	<ul style="list-style-type: none"> <li>• The source code for calculating rankings will be stored in a directory of the server that is not able to be accessed from the internet.</li> </ul>	
	Pass/Fail	N/A	
	User Comments		

	Test Notes	Unable to be completed as no server has been provided, however, system is designed with storing maple source code in separate directory structure to web server.
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