Sports Concussion Assessment System Project

Phase I Part 1

Include your actor and major use case descriptions on this page. You may add pages if necessary.

Actors

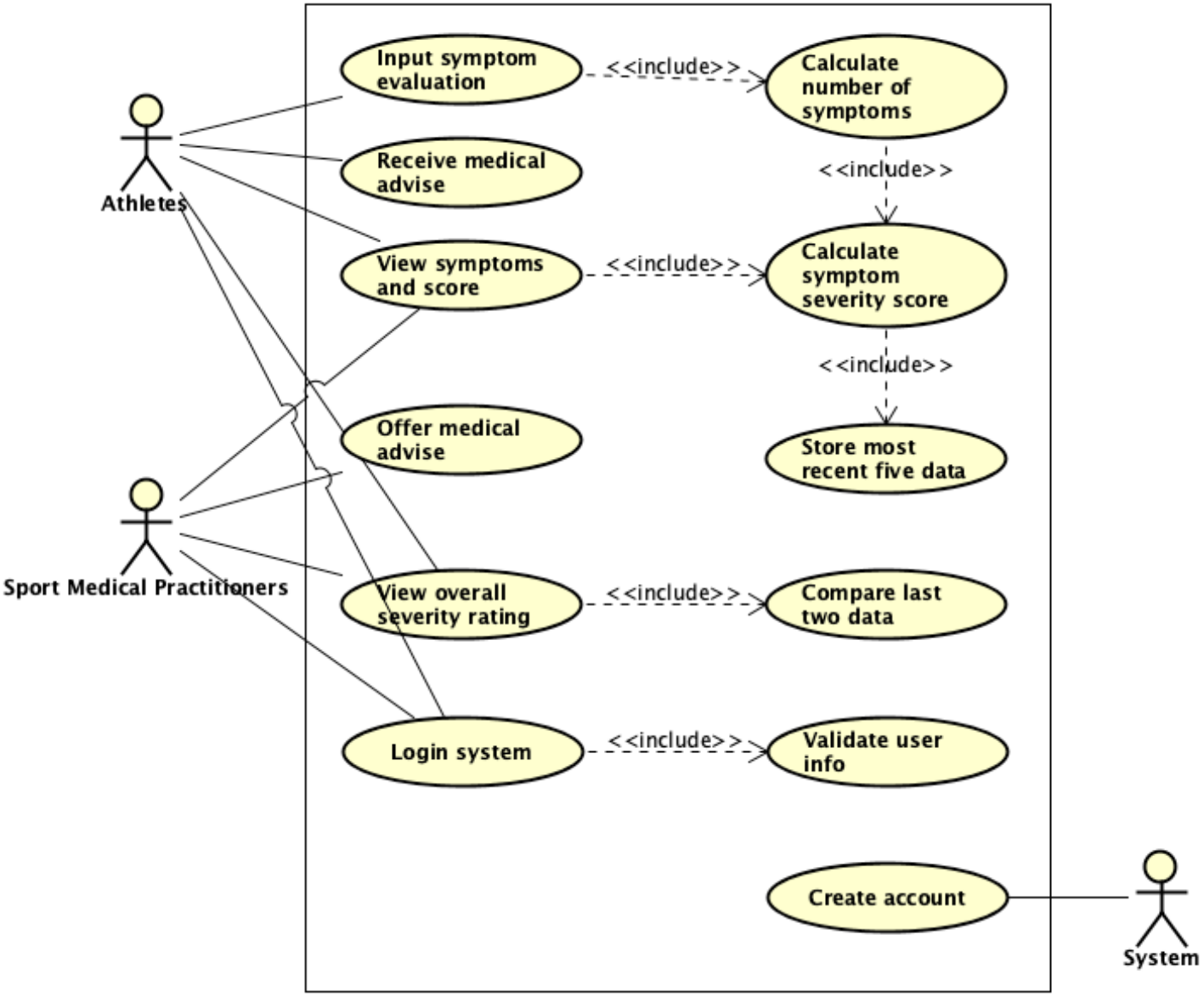
- Athletes
- Sport Medical Practitioners

Major Use Cases

Sport Concussion Assessment System is an app that designed for athletes and sports medical practitioners to evaluate possible concussion after each game. It caters primarily to two user categories: athletes and sport medical practitioners. Athletes promptly log their health conditions and potential symptoms post each game or training session. This input revolves around a well-structured symptom evaluation, and athlete can record symptoms based on a pain scale ranging from 0 (no pain) to 6 (severe pain). The system dynamically analyzes the input, contrasting it against prior game data, and generates a comprehensive symptom summary. This summary encompasses the total symptom count, the cumulative severity score, and a rating reflecting deviations compared to the preceding game's metrics. Sport medical practitioners possess the capability to scrutinize these symptom submissions. The platform's "risky condition indicator" feature is pivotal for practitioners, highlighting athletes demonstrating substantial symptom severity alterations across successive games. This indicator, labeled as "very different," facilitates practitioners in delivering apt medical advisories to athletes. A prominent functionality accessible to athletes is the "Am I at Risk?" feature. By activating this option, athletes receive visual feedback, with color-coded images (green, yellow, or red) indicating their current health state. This assessment is contingent on the differences in symptoms and severity scores between their last two game sessions.

Phase I Part 2

Use Astah to draw a use case diagram. Use proper UML notation. Take a clear screenshot of your completed diagram and paste it on this page.



Phase II Part 1

Include your use case descriptions on this page. You may add pages if necessary.

Use Case Description for Athlete

- **Use case name:** Input symptom evaluation
- **Description:** Input symptom evaluation on Sport Concussion Assessment System
- **Primary Actor:** Athletes
- **Basic Flow:** After the user choses symptom entry from the system's main UI, user enter his/her health conditions or concerns based on the provided symptoms and rate their pain levels on a scale from 0 (no pain) to 6 (severe pain). Then system calculate symptom severity score and store the data. Finally, user will be prompted to main UI.

- **Use case name:** View overall severity rating
- **Description:** View overall severity rating when selects the "Am I at Risk?" button
- **Primary Actor:** Athlete
- **Basic Flow:** After the user choses "Am I at Risk?" button from the system's main UI, system will compare the last two data and display the overall severity rating. If the rating is "No difference", UI will display a green image. If the rating is "Unsure", UI will display a yellow image. If the rating is "Very different", UI will display a red image.

Use Case Description for Sport Medical Practitioner

- **Use case name:** View overall severity rating
- **Description:** View overall severity rating when selects the "Risky condition" to advise each athlete as needed
- **Primary Actor:** Sport medical practitioners
- **Basic Flow:** After the user choses Risky condition from the system's main UI, system will compare the last two data and display the overall severity rating. If the rating is "No difference", UI will display a green image. If the rating is "Unsure", UI will display a yellow image. If the rating is "Very different", UI will display a red image. Finally, user will be prompted to main UI.

- **Use case name:** View symptoms and score
- **Description:** View symptoms and score when selects the "Display Symptoms Summary
- **Primary Actor:** Sport medical practitioners
- **Basic Flow:** After the user choses Display Symptoms Summary from the system's main UI, system will display athlete's symptoms summary included total number of symptoms, symptom severity score, and overall rating. If the athlete's data is less than two, system will display error message. Finally, user will be prompted to main UI.

Phase II Part 2

List the potential objects in the provided space. Use the template provided to create a CRC diagram for each object. You may add pages if necessary.

Potential Object

- Athlete
- Sport Medical Practitioner
- Symptom Evaluation
- Risk Assessment
- System

Class: Athlete	
Responsibilities **Input symptom evaluation** **View symptom summary** **Receive medical advice** **View risky condition** **Register/login**	**Collaborators** **Symptom evaluation** **Risk assessment** **Sport Medical Practitioner** **System**

Class: Sport Medical Practitioner	
Responsibilities **View symptom summary** **View risky condition** **Offer medical advice** **Register/login**	**Collaborators** **Athlete** **Risk assessment** **System**

Class: Symptom evaluation	
Responsibilities **Store data** **Calculate number of symptoms** **Calculate symptom severity score**	**Collaborators** **Athlete** **Risk assessment**

Class: Risk assessment	
Responsibilities **Compare last two data** **Generate result for athletes and practitioners**	**Collaborators** **Athlete** **Sport Medical Practitioner** **Symptom evaluation**

Class: System	
Responsibilities **Validate user info**	**Collaborators** **Athlete** **Sport Medical Practitioner**

Phase II Part 3

Use Astah to draw the class diagram. Use proper UML notation. Take a clear screenshot of your completed diagram and paste it on this page.