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

1. Athlete:
   - The individual who plays a sport and uses the application to monitor or track their health condition. Right after each game or practice, the athlete inputs their symptoms and severity levels into the application.

2. Sports Medical Practitioner
   - A medical/health professional who monitors the athlete's health conditions through the app/system. They review submitted symptoms, assess the severity of changes, and provide advice based on the athlete's results.

Major Use Cases

- **Enter Symptoms**

- **View Symptom Summary**

- **Check Risk Status**

- **Review Athlete's Symptoms**

- **Advise Athlete**

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.
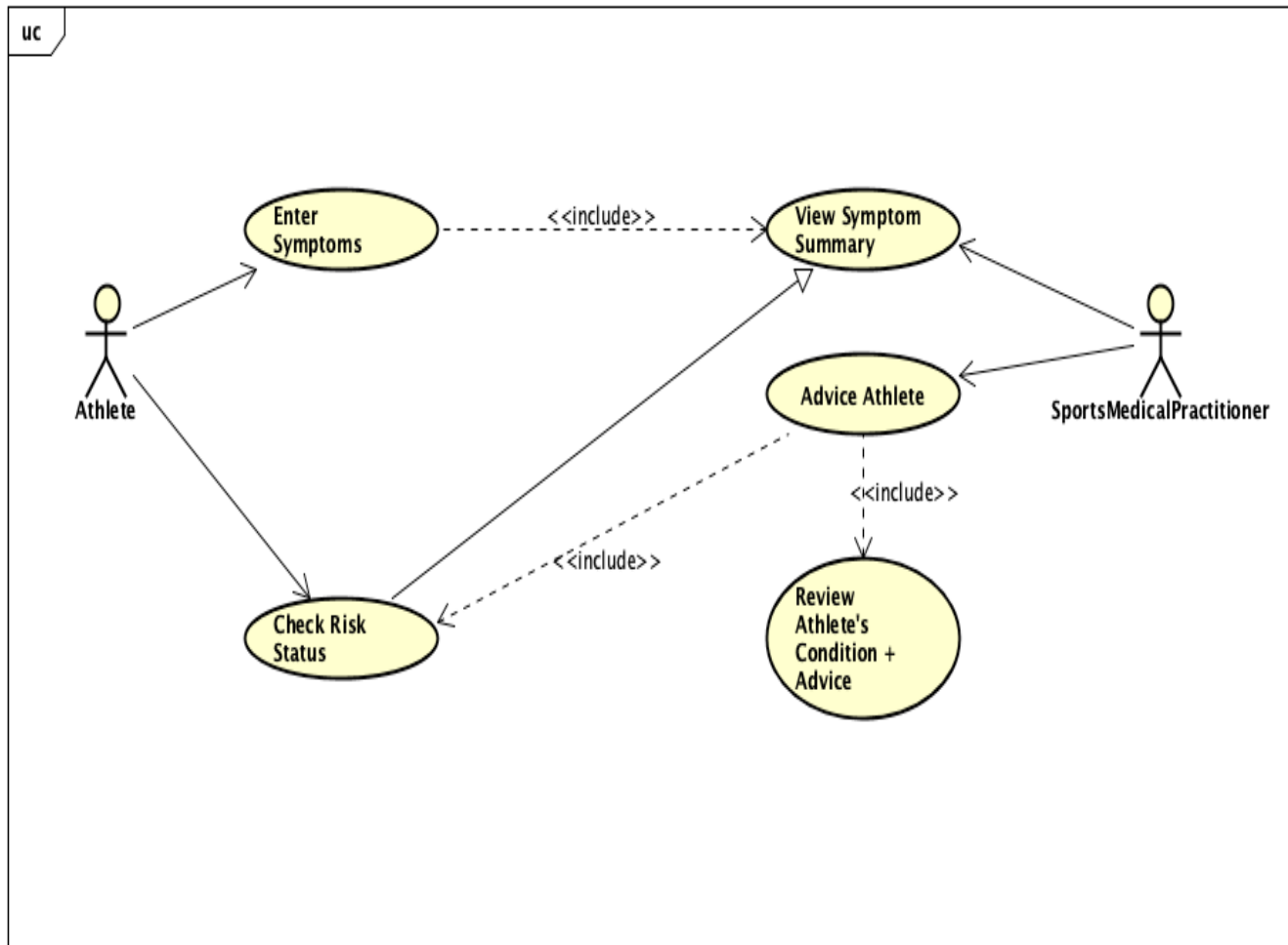
Phase II Part 1

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

Use Case Description for Athlete

Use Case: Enter Symptoms
- **Description**: Allows the athlete to enter symptoms and severity levels after each game to track their condition.
- **Primary Actor**: Athlete
- **Basic Flow**:
    1. Athlete opens the application.
    2. Athlete selects the "Enter Symptoms" option.
    3. The system displays a form for entering symptoms and severity levels (e.g., headache, dizziness with score from 0 to 6).
    4. Athlete answers all 22 questions.
    5. The system saves the data and confirms the submission.

Use Case: View Symptom Summary
- **Description**: Allows the athlete to view a summary of their recorded symptoms from the last five games.
- **Primary Actor**: Athlete
- **Basic Flow**:
    1. Athlete opens the application.
    2. Athlete selects the "View Symptom Summary" option.
    3. The system retrieves the athlete's past symptom data, if it already has data to compare. Else display "No summaries available".
    4. The system displays a summary, including total number of symptoms, severity score, and overall rating of no difference, unsure, or very different.
    5. Athlete reviews the summary.

Use Case: Check Risk Status
- **Description**: Allows the athlete to determine their risk level based on changes in symptoms between games.
- **Primary Actor**: Athlete
- **Basic Flow**:
    1. Athlete opens the application.
    2. Athlete selects the "Am I at Risk?" option.
    3. The system compares current and previous symptom data.

4. The system calculates the risk level and displays a color-coded text (green for no difference, yellow for unsure, red for very different) if it has data to compare. Else, it will display "Not enough data for risk assessment."
5. Athlete views the risk status and takes note of the result.

Use Case Description for Sport Medical Practitioner

Use Case: Review Athlete's Symptoms
- **Description**: Allows the sports medical practitioner to review the symptoms reported by athletes to monitor their condition.
- **Primary Actor**: Sports Medical Practitioner
- **Basic Flow**:
    1. Practitioner opens the application.
    2. Practitioner selects the "View Symptoms Summary" option.
    3. The system displays athlete with recent symptom data.
    4. The system displays the athlete's symptoms and severity over the last five games.

Use Case: Advise Athlete
- **Description**: Allows the sports medical practitioner to provide advice or recommendations to athletes based on their symptom data.
- **Primary Actor**: Sports Medical Practitioner
- **Basic Flow**:
    1. Practitioner opens the application.
    2. Practitioner selects the "Advise Athlete" option.
    3. Practitioner writes a recommendation or advice based on the "Risky Condition" being displayed.
    4. The system saves the advice of athlete's account for review.

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, Symptom Data, Symptom Summary, Risk Calculator, Sports Medical Practitioner, Advice.

Class: Athlete	
Responsibilities	**Collaborators**
- Enter symptoms after each game. - View symptom summary. - Check risk status.	- Symptom Data - Symptom Summary - Risk Calculator

Class: Symptom Data	
Responsibilities	**Collaborators**
- Store symptom entries. - Maintain symptom records for the last five games.	- Athletes - Symptom Summary. - Risk Calculator.

Class: Symptom Summary	
Responsibilities	**Collaborators**
- Generate a summary of symptoms over recent games. - Calculate total number of symptoms and severity score. - Compare current and past symptom data.	- Symptom Data - Athlete - Risk Calculator

Class: Risk Calculator	
Responsibilities	**Collaborators**
- Compare symptom data between successive games. - Determine if there is a significant change in symptoms. - Provide a risk status such as "No difference," "Unsure," "Very different".	- Symptom Summary. - Symptom Data. - Athlete.

Class: Sports Medical Practitioner	
Responsibilities	**Collaborators**
- Review symptom summaries of the athletes. - Assess the athlete's risk status. - Provide advice based on symptoms and risk levels.	- Symptom Summary. - Risk Calculator. - Advice.

Class: Advice	
Responsibilities	**Collaborators**
- Store recommendations or the advice given to athletes. - Provides advice history to athletes when requested upon.	- Sports Medical Practitioner - Athlete

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.