

Use Case & Software Requirements Specification Document

for

Sport League Administration Manager (SLAM)

Version 3.0 approved

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Revision History

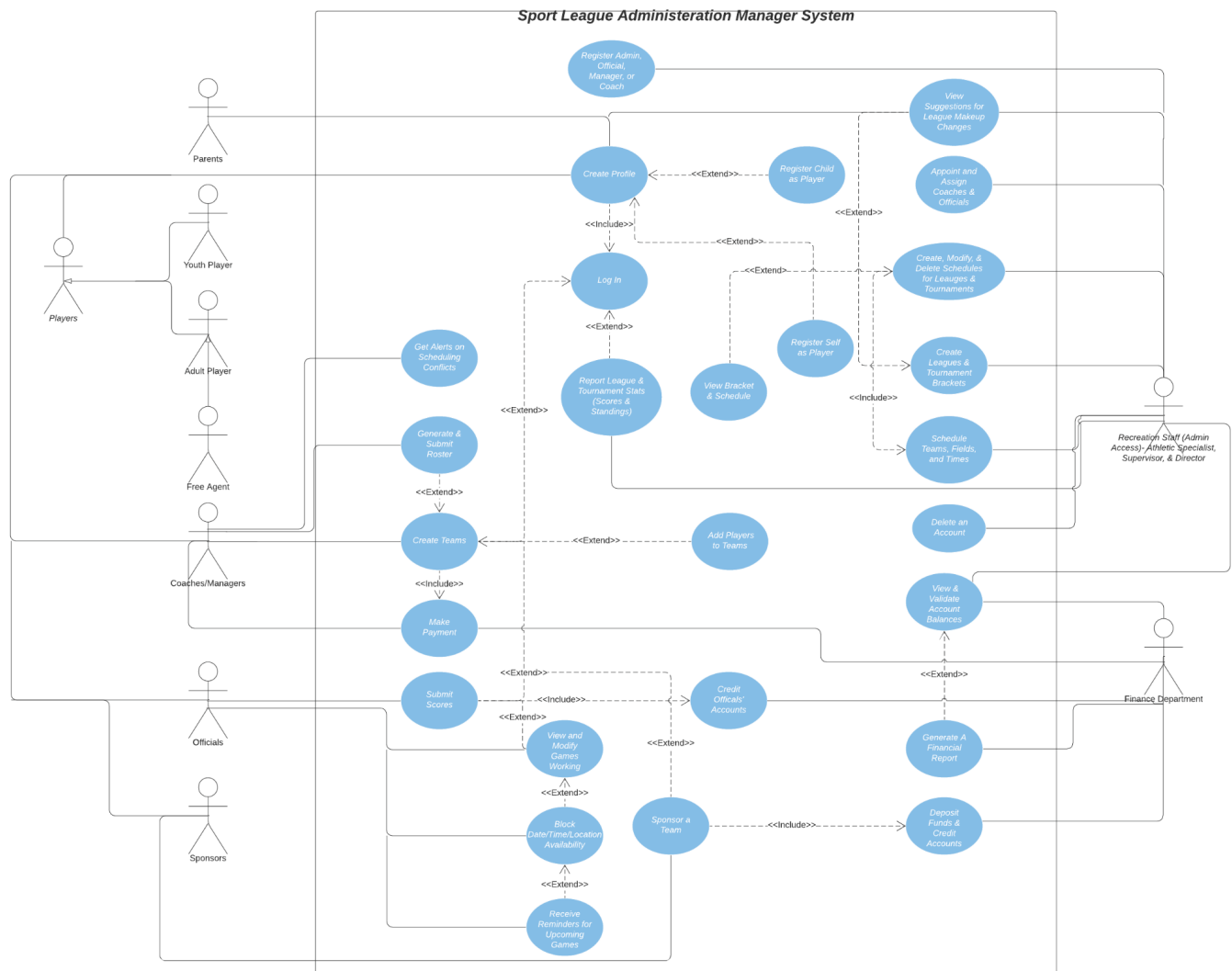
Initial Use Case and SRS document draft 2.0

Name	Date	Reason for Changes	Version
Angamuthu, Bowser, Masood, Tobisch	10-03-21	Initial Draft	1
Angamuthu, Bowser, Masood, Tobisch	10-19-21	Additional use cases and system requirements Addition of UML and sequence diagrams	2
Angamuthu, Bowser, Masood, Tobisch	11-7-21	System Specification. Requirements and use case, UML, and sequence diagram refinement	3

1. System Use Case Diagram

CSCI 5801 SLAM Use Case Diagram

Anushka Angamuthu | November 6, 2021



2. System Use Cases

2.1. Players, Parents, Sponsors, Park Staff

2.1.1. Create Profile

Summary: A new user registers in the SLAM system and must complete a profile

Actors: Staff, Player (Adult, Free Agent), Parent, Coach, Official, or Sponsor

Basic Course of Events:

1. The user interacts with the UI to indicate that they would like to register and creates a new account within the system
2. The user enters their personal information and identification
3. The user creates and verifies a password and/or form of authentication

Alternative Paths: An error message will be displayed and the registration process shall be suspended if:

1. In step 2, the user already exists within the system (determined by some form of unique identifier)
2. In step 3, the password entered does not meet some minimum, structural and syntactic criterion or if a form of authentication is unable to be validated

Extension Points: The user may then register themselves or a child (if a Parent actor) as a new player

Trigger: A user would like to register in the SLAM system

Assumptions: The user possesses unique personal information

Precondition: The system provides an interface mechanism that users can access in order to complete the registration process

Postcondition: The user receives a confirmation message regarding their registration in the system

2.1.2. Request New Role on Profile (of higher scope) (Grace)

Summary: Assuming an adult is already registered as a player or parent, the adult is able to request permission from admin to add an additional role of higher scope (official, coach, manager, admin)

Actors: Player, Free Agent, Parent

Basic Course of Events:

1. The user requests access for the specified role they wish to add to their profile higher than the user's current scope.
2. Admin can view a page of requests, and admin can accept or deny requests.

Alternative Paths: An error message will appear and the role will fail to be added to the profile

if:

1. The request is rejected by the admin (occurs in step 2)

Extension Points: Upon approval by admin, new permissions are given to the user (Ex: if approved as a coach, able to create teams)

Trigger: A user would like a second role in the system profile

Assumptions: The user is already in the system, the user is requesting a role of higher scope

Precondition: The system provides an interface feature that users can access to request an additional role of higher scope

Postcondition: The user receives a confirmation message that the role was added to their profile in the system

2.1.3.Add New Role on Profile (of same or lower scope) (Grace)

Summary: Assuming an adult is already registered as a player or parent, the adult is able to add a role to their profile that is of the same scope (without needing to request permission)

Actors: Player, Free Agent, Parent, Coach, Official, Manager, Admin

Basic Course of Events:

1. The user interacts with part of the interface that allows the addition of a role of the same scope to profile.
2. User specifies which role they would like to add to their profile (via the interface).

Alternative Paths: An error message will appear and the role will fail to be added to the profile if:

2. The user fails to select a specific role to add to the profile

Extension Points: Introduces new uses for the user (If the role of parent is added, the user can register their child. If the role of a player is added, a person can register themselves).

Trigger: A user would like a second role in the system profile

Assumptions: The user is already in the system

Precondition: The system provides an interface feature that users can add role of lower scope

Postcondition: The user receives a confirmation message that the role was added to their profile in the system

2.1.4 Modify Account Information (Grace)

Summary: Allows staff to modify schedules if there is ever a schedule change

Actors: Staff, Player (Adult, Free Agent), Parent, Coach, Official, or Sponsor

Basic Course of Events:

1. The user logs into SLAM system
2. The user selects the personal information they would like to change in their profile and inputs the new information.

Alternative Paths: In step 2, an error message will be displayed if:

1. Any required information is left blank

2. If a user changes their password which does not fit the password criteria used to create an account
3. If a user changes or adds an email to their account information, and does not verify that email within 10 minutes

Extension Points: None

Trigger: A user needs to make changes to any personal information in their account

Assumptions: The user already has an account in the system

Precondition: The system provides an interface mechanism that allows users to change account information

Postcondition: The user receives a confirmation message that their account information has successfully been updated

2.2.Players, Parents, Coaches, Officials, Sponsors, Park Staff

2.2.1.Log In

Summary: A new or returning user logs into the SLAM system

Actors: Staff, Player (Adult, Free Agent), Parent, Coach, Official, or Sponsor

Basic Course of Events:

1. The user interacts with the UI to indicate that they would like to log into the system
2. The user enters their unique personal form of identification (username, id, email, etc.)
3. The user inputs their password created during the registration process
4. The system validates the information input and logs the user into the system

Alternative Paths: In step 4, if the system is unable to verify the user's credentials, an error message will be displayed and the user shall not be permitted to log in. The user shall also be prompted to register in the system if they do not have an existing account.

Trigger: A user would like to log into the SLAM system

Assumptions: The user has been successfully registered within the SLAM system

Precondition: The system provides an interface mechanism that users can access in order to log in

Postcondition: The user is redirected to their portal/profile where they can view various interactions available to them within the system

2.3.Players

2.3.1.Register Self as Player

Summary: An adult player registers themselves as a new player in the system
Actors: Players (Adult, Free Agent)

Basic Course of Events:

1. The player indicates through the UI that they would like to register as a new player
2. The player enters any personal information and new player preferences/options required by the system
3. The system registers the user as a new player in the SLAM system

Alternative Paths: In step 2, if the player already exists within the system (determined by some form of unique identifier), an error message will be displayed and the registration process shall be suspended

Extension Points: None

Trigger: An adult player would like to register as a player for one to many sports

Assumptions: The user has been successfully registered within the SLAM system and is able to log in

Precondition: The system provides an interface mechanism that users can access in order to register themselves as a new player

Postcondition: The user receives a confirmation message regarding their registration as a player

2.4.Parents

2.4.1.Register Child as Player (Grace)

Summary: A parent registers their child as a new player in the system

Actors: Parents

Basic Course of Events:

1. The parent indicates through the UI that they would like to register their child as a new player
2. The parent creates a new player account for their child and enters any personal information and new player preferences/options required by the system
3. The system registers the child as a new player in the SLAM system
4. The system inquires if the parents would like to register additional children as new players
5. Once the parent indicates that they would not like to register additional children, they are redirected out of the child registration interface

Alternative Paths:

1. In step 2, if the player already exists within the system (determined by some form of unique identifier) An error message will be displayed and the registration process shall be suspended
2. In step 4, if the parent indicates that they would like to register additional children, event flow returns to step 2

Extension Points: None

Trigger: A parent would like to register one to many of their children as a player for one to

many sports

Assumptions: The Parent has been successfully registered within the SLAM system and is able to log in

Precondition: The system provides an interface mechanism that parents can access in order to register children as new players

Postcondition: The Parent receives a confirmation message indicating that the registration for their child was successful

2.5.Park Staff

2.5.1. Register Admin, Official, Coach, or Manager User (Grace)

Summary: An Admin registers a new user (Admin, Official, Coach, Manager) in the SLAM system

Actors: Staff with Admin access

Basic Course of Events:

1. The Admin interacts with the UI to indicate that they would like to register a new user in the system
2. The Admin enters their unique id and password in order to log into the system
3. The Admin enters the information of the user they would like register and the system shall auto-generate a password
4. An email is sent to the user with a link for this profile for them to complete with the remaining information and change the auto-generated password

Alternative Paths: An error message will be displayed and the registration process shall be suspended if:

1. In step 2, the user already exists within the system (determined by some form of unique identifier)

Extension Points: None

Trigger: An Admin would like to register a user (Admin, Official, Coach, Manager) in the SLAM system

Assumptions: The user possesses unique personal information

Precondition: The system provides an interface mechanism that users can access in order to complete the registration process. The Staff attempting to register the user has Admin privileges

Postcondition: The Admin Staff receives a confirmation message regarding their registration of the new user in the system and the user receives an email with the link to the newly set up profile so they can access their account

2.5.2.Appoint and Assign Coaches & Officials (Grace)

Summary: Parks and Recreation Staff identify users as Coaches and Officials and assign them to games and teams

Actors: Recreation Staff

Basic Course of Events:

1. The Staff log into SLAM system
2. The Staff locate the accounts of the users identified as Coaches and Officials then marks them as such in the system
3. The Staff pairs Coaches with their respective teams
4. The Staff pairs Officials with the tournaments and leagues they shall be working

Alternative Paths:

1. The Staff exits the system after steps 2 or 3 and returns to the course of events at a later time
2. The Staff performs step 4 before step 3
3. The Staff may mark a user as both a Coach and an Official

Extension Points: None

Trigger: Park Staff would like to appoint users as Coaches and Officials and assign Coaches to teams & Officials to tournaments and leagues

Assumptions: The Park Staff possess a collection of Coaches and Officials. The Park Staff have a means of determining which Coach will be paired with which team and which Officials shall work in which leagues and tournaments. The Park Staff are registered in the SLAM system and are able to log in

Precondition: The users identified by the Park Staff as Coaches and Officials have been successfully registered within the SLAM system

Postcondition: The Staff receive confirmation of their actions in the system. Both Officials and Coaches are notified of their appointment. Officials are notified of the leagues and tournaments they shall work in. Coaches are notified of the team(s) they shall manage

2.5.3.Create Leagues & Tournament Brackets

Summary: Parks and Recreation Staff create sports leagues and tournament brackets **Actors:** Recreation Staff

Basic Course of Events:

1. The Staff log into SLAM system
2. The Staff create new leagues in the SLAM system by inputting all the system required parameters
3. The Staff pair the system required actors with their respective leagues
4. The Staff create new tournament brackets in the SLAM system by inputting all the system required parameters
5. The Staff pair the newly created tournament brackets with leagues

Alternative Paths:

1. In step 3, if an actor deactivates their account, they shall be removed from the league
2. In step 5, if a tournament is canceled, it shall be removed from the associated league

Extension Points: View Suggestions for League Makeup Changes

Trigger: Park Staff would like to set up leagues and tournament brackets

Assumptions: The Park Staff possess a collection of league and tournament names. The Park Staff have a means of determining which tournaments and actors will be paired with which leagues. The Park Staff are registered in the SLAM system and are able to log in

Precondition: The users identified by the Park Staff as actors in leagues and tournaments have been successfully registered within the SLAM system

Postcondition: The Staff receive confirmation of league and tournament creations in the system. All actors are notified of the leagues and tournaments they have been associated with

2.5.3.Create Leagues

Summary: Parks and Recreation Staff create sports leagues

Actors: Recreation Staff

Basic Course of Events:

1. The Staff log into SLAM system
2. The Staff create new leagues in the SLAM system by inputting all the system required parameters
3. The Staff pair the system required actors with their respective leagues

Alternative Paths:

1. In step 3, if an actor deactivates their account, they shall be removed from the league

Extension Points: View Suggestions for League Makeup Changes

Trigger: Park Staff would like to set up leagues brackets

2.5.4.Create Tournament Brackets

Summary: Parks and Recreation Staff create sports tournament brackets.

Actors: Recreation Staff

Basic Course of Events:

1. The Staff log into SLAM system
2. The Staff create new tournament brackets in the SLAM system by inputting all the system required parameters
3. The Staff pair the system required actors with their respective tournament

Alternative Paths:

1. In step 3, if an actor deactivates their account, they shall be removed from the tournament bracket

Extension Points: View Suggestions for Tournament BracketMakeup Changes

Trigger: Park Staff would like to set up tournament brackets

2.5.5.Create and Maintain Schedules for Leagues

Summary: Parks and Recreation Staff create schedules for leagues

Actors: Recreation Staff

Basic Course of Events:

1. The Staff log into SLAM system
2. The Staff determine the times that teams shall compete against each other, who they shall compete against, the duration of the games, the frequency of the games, the location of the games, and any other parameters desired by Staff
3. The Staff input these fields in the system for each round of the league

Alternative Paths: In step 2, a scheduling conflict may occur. Such conflicts are defined by the system. In the event of a conflict, the staff shall be unable to proceed with scheduling and shall receive an alert on the screen

Extension Points: Schedule Teams, Fields, and Times, Schedules

Trigger: Park Staff would like to set up schedules for leagues

Assumptions: The Park Staff have a means of determining and prioritizing how league games shall be scheduled. The Park Staff are registered in the SLAM system and are able to log in

Precondition: The players scheduled by the Park Staff in leagues have been successfully registered within the SLAM system

Postcondition: The players are notified of the leagues they have been scheduled for a league

2.5.6.Create and Maintain Schedules for Tournaments

Summary: Parks and Recreation Staff create schedules for tournaments

Actors: Recreation Staff

Basic Course of Events:

1. The Staff log into SLAM system
2. The Staff determine the times that teams shall compete against each other, who they shall compete against, the duration of the games, the frequency of the games, the location of the games, and any other parameters desired by Staff
3. The Staff input these fields in the system for each round of the tournaments

Alternative Paths: In step 2, a scheduling conflict may occur. Such conflicts are defined by the system. In the event of a conflict, the staff shall be unable to proceed with scheduling and shall receive an alert on the screen

Extension Points: Schedule Teams, Fields, and Times, Schedules

Trigger: Park Staff would like to set up schedules for tournaments

Assumptions: The Park Staff have a means of determining and prioritizing how tournament games shall be scheduled. The Park Staff are registered in the SLAM system and are able to log in

Precondition: The players scheduled by the Park Staff in tournaments have been successfully registered within the SLAM system

Postcondition: The players are notified of the tournaments they have been scheduled for

2.5.7. Report on League Statistics

Summary: Recreation Staff generate reports with statistics on leagues

Actors: Recreation Staff

Basic Course of Events:

1. The Staff log into SLAM system
2. The Staff identify fields of concern and perform statistical analysis on the collation of data points provided to them which may be from various sources
3. The staff generate reports utilizing statistical modeling software which report on key metrics and trends regarding leagues

Alternative Paths: None

Extension Points: None

Trigger: Staff would like to view stats on leagues

Assumptions: Staff have some basic knowledge regarding data analysis and report types they desire to view as well as how to interpret those reports

Precondition: Data points regarding fields of interest have been collected and staff have access to and training for data analysis software

Postcondition: Staff leverage the findings from the reports

2.5.8. Report on Tournament Statistics

Summary: Recreation Staff generate reports with statistics on tournaments

Actors: Recreation Staff

Basic Course of Events:

1. The Staff log into SLAM system
2. The Staff identify fields of concern and perform statistical analysis on the collation of data points provided to them which may be from various sources
3. The staff generate reports utilizing statistical modeling software which report on key metrics and trends regarding tournaments

Alternative Paths: None

Extension Points: None

Trigger: Staff would like to view stats on tournaments

Assumptions: Staff have some basic knowledge regarding data analysis and report types they desire to view as well as how to interpret those reports

Precondition: Data points regarding fields of interest have been collected and staff have access to and training for data analysis software

Postcondition: Staff leverage the findings from the reports

2.5.9. View Suggestions for League Makeup Changes

Summary: Recreation Staff view possible improvements that they could make to leagues through statistics presented in reports

Actors: Recreation Staff

Basic Course of Events:

1. The Staff log into SLAM system
2. The Staff identify fields of concern and perform statistical analysis on the collation of data points provided to them which may be from various sources
3. The staff generate reports utilizing statistical modeling software which report on key metrics and trends
4. The staff use the findings from these reports to determine potential improvements to league makeup

Alternative Paths: None

Extension Points: None

Trigger: Staff would like to view suggestions for league makeup improvements

Assumptions: Staff have some basic knowledge regarding data analysis and report types they desire to view as well as how to interpret those reports

Precondition: Data points regarding fields of interest have been collected and staff have access to and training for data analysis software

Postcondition: Staff use the findings from the reports in order to make improvements to league makeup

2.5.10. Modify or Delete Scheduled League Games

Summary: Allows staff to modify league schedules if there is ever a schedule change

Actors: Recreation Staff

Basic Course of Events:

1. The Staff log into SLAM system
2. The Staff determine the times of games that need to be rescheduled
3. The Staff input these the new times to the corresponding games

Alternative Paths: In step 2, it might be desired to remove a game entirely from the schedule. There will be an option for the staff to delete a game from the schedule. When the

delete option is selected, an alert will appear to confirm or deny the deletion.

Extension Points: None

Trigger: Park Staff would like to change the times for scheduled games, or to delete a game entirely

Assumptions: The Park Staff have a means of determining when a game needs to be rescheduled

Precondition: The games being modified or deleted have already been scheduled in the system

Postcondition: The players in the modified games are notified of the schedule changes

2.5.11. Modify or Delete Tournaments

Summary: Allows staff to modify tournament schedules if there is ever a schedule change

Actors: Recreation Staff

Basic Course of Events:

1. The Staff log into SLAM system
2. The Staff determine the times of games that need to be rescheduled
3. The Staff input these the new times to the corresponding games

Alternative Paths: In step 2, it might be desired to remove a game entirely from the schedule. There will be an option for the staff to delete a game from the schedule. When the delete option is selected, an alert will appear to confirm or deny the deletion.

Extension Points: None

Trigger: Park Staff would like to change the times for scheduled games, or to delete a game entirely

Assumptions: The Park Staff have a means of determining when a game needs to be rescheduled

Precondition: The games being modified or deleted have already been scheduled in the system

Postcondition: The players in the modified games are notified of the schedule changes

2.5.12. Delete Account

Summary: Allows staff to delete an account from the system

Actors: Staff

Basic Course of Events:

1. The staff logs into SLAM system
2. The staff determines that account they want to delete
3. The staff selects the account and chooses the option to delete the account. They have to select a confirmation message to delete the account

Alternative Paths: None

Extension Points: None

Trigger: An account needs to be deleted from the system

Assumptions: The staff has a way to determine which accounts to delete, and the account is already in the system

Precondition: The system provides an interface mechanism that allows users to delete an account

Postcondition: The staff receives a confirmation message that the account was deleted, and the user receives a notification that their account has been deleted.

2.6.Park Staff, Finance Department

2.6.1.View And Validate Account Balances

Summary: Staff view the account balances of users in the SLAM system

Actors: Park Staff, Finance Department

Basic Course of Events:

1. The Staff logs into the SLAM system
2. The Staff search for the user via various criterion determined by the system in order to locate their profile
3. The Staff locate the user's account balance

Alternative Paths: None

Extension Points: None

Trigger: Park Staff would like to verify that the balance of a user is as they expect so they would like to view it

Assumptions: The user the staff is trying to view the balance of exists as a registered user in the SLAM system

Precondition: The Staff is registered in the SLAM system and able to log in. The staff has sufficient access to view user account balances as determined by the designated Admins of the system

Postcondition: The Staff is able to view the user's account balance

2.6.2.Generate a Financial Report

Summary: Staff create and view reports about SLAM users and the system's finances

Actors: Park Staff, Finance Department

Basic Course of Events:

1. The Staff logs into the SLAM system
2. The Staff utilize available fields to generate a report which captures data and metrics of interest by leveraging report creation and statistical analysis software

Alternative Paths: None

Extension Points: None

Trigger: Park Staff would like to view a financial report

Assumptions: the staff is trying to view a report that can be generated based on the data they have available to them

Precondition: The Staff is registered in the SLAM system and able to log in. The staff has sufficient access to view user account balances and other sensitive financial information as determined by the designated Admins of the system

Postcondition: The Staff is able to view the financial reports and use them for decision making

2.7.Coaches

2.7.1.Create Teams

Summary: Coaches create teams in the SLAM system

Actors: Coaches/Managers

Basic Course of Events:

1. The Coach logs into SLAM system
2. The Coach creates a new team and inputs all the necessary parameters required by the system
3. The Coach associates all the player's accounts with the newly created team
4. The Coach places each player on the team roster and interacts with the interface to submit the roster once they are satisfied with player placements
5. The Coach deposits funds through the system interface to register the new team with the associated roster

Alternative Paths:

1. In step 2, the Coach may not be permitted to create a team if any Staff set system account constraints apply
2. In steps 3 and 4, if a player deactivates their account, they shall be removed from the team and the roster. The roster shall then be filled with a Free Agent Player
3. In step 4, if there are conflicts between team rosters, they shall be resolved by a Staff member
4. In step 5, if the Coach lacks sufficient funds, the team registration shall be aborted and the Coach shall be alerted

Extension Points: Add Players to teams, Generate and Submit Roster, Make payment

Trigger: A Coach would like to assemble a new team

Assumptions: The Coach possesses a list of team member names. The Coach has a method of determining where players should stand on the team roster. The Coach is registered in the SLAM system and able to log in.

Precondition: The users identified by the Coach as team members desired on their roster have been successfully registered within the SLAM system

Postcondition: The Coach receives a copy of their submitted roster in the system as well as confirmation for their payment. Players and Parents (if youth players) are notified of their

appointment to the team

2.8.Officials

2.8.1.Manage Games Working

Summary: Officials block their availability for games, view which ones they are working and receive reminders about upcoming ones

Actors: Officials

Basic Course of Events:

1. The Official logs into SLAM system
2. The Official interacts with the system in order to input the various constraints that the system accepts to block their scheduling availability. This may include and is not limited to: dates, times, leagues, and locations
3. The Official shall be able to view the dates, times, locations, and other system defined parameters for games that they are currently scheduled to work for

Alternative Paths: In step 2, if the Official has blocked work under a system accepted constraint, they may not be scheduled for a game which violates the constraint

Extension Points: Block Availability, Receive Reminders for Upcoming Games

Trigger: Officials would like to manage the schedule of games they work

Assumptions: The officials are registered in the SLAM system and are able to log in

Precondition: The staff have determined a means of notification for receiving reminders

Postcondition: The Official is sent an alert about any upcoming games they are scheduled to work for via their preferred method of communication

2.8.2.Get Alerts on Schedule Conflicts

Summary: Officials receive notifications on conflicts in their schedule

Actors: Officials

Basic Course of Events:

The Official shall receive a schedule conflict alert under various circumstances, which include but are not limited to the following:

1. The Official has been scheduled for more than one game in an overlapping time period
2. The Official has been scheduled for a game that falls under an indicated unavailability parameter
3. The Official has been scheduled for the same occurrence of a game multiple instances

Alternative Paths: None

Extension Points: None

Trigger: The system determines a conflict in the Official's schedule

Assumptions: None

Precondition: A conflict has occurred in the Official's schedule

Postcondition: The Official has been sent an alert of the conflict

2.8.3.Submit Scores

Summary: Officials must submit the final score for the games that they are working

Actors: Officials

Basic Course of Events:

1. The Official logs into the SLAM system
2. The Official selects the game from the list of games that they are working
3. The Official inputs the final score of the game for each time

Alternative Paths:

1. In step 3, if the conclusion of the game is atypical, this may be indicated in the system (tie, forfeit, rescheduled, etc.)
2. In step 3, if there is an inconsistency in the score reported by the Official, it may be changed by the Park Staff

Extension Points: Credit Officials' Accounts

Trigger: Officials would like to submit a game score into the SLAM system

Assumptions: The official is working the game that they submit a score for and the score which they submit into the system is correct

Precondition: The Official is registered in the SLAM system and able to log in

Postcondition: The score has been entered into the system and the Park Staff and Admins may view it

2.9.Sponsors

2.9.1.Sponsor a Team

Summary: Sponsors sponsor a team in the SLAM system

Actors: Sponsors

Basic Course of Events:

1. The Sponsor log into the SLAM system
2. The Sponsor selects the team that they would like to sponsor and determines the funds they would need to contribute in order to receive that status as being an official sponsor for that team
3. The system inquires if the Sponsor would like to sponsor any other teams
4. Once the Sponsor indicates that they would not like to sponsor additional teams, the Sponsor deposits the funds and the team accounts are credited

Alternative Paths:

1. In step 3, if the Sponsor indicates that they would like to sponsor additional teams, event process flow returns to step 2
2. In step 4, if the Sponsor does not have sufficient funds, the process is suspended and they

are unable to receive a sponsorship title

Extension Points: Deposit Funds & Credit Accounts

Trigger: A Sponsor would like to sponsor a team

Assumptions: The Sponsors are registered in the SLAM system and are able to log in. The sponsor know which team(s) they would like to sponsor

Precondition: The Sponsor has sufficient funds to sponsor the team(s) they would like

Postcondition: The team's account has been credited and the Sponsor is now an official sponsor for the team

3.Functional Requirements

3.1.Maintain user accounts and profiles

3.1.1.Create a profile

Use Case: 2.1.1

Rationale: In order for the user to perform all the necessary interactions within the system, they must be registered in it

Inputs: Personal identification, address, communication, and authentication information

Description: The system shall allow new users to register by creating a profile

- The system shall prompt the user to enter their first name, last name, gender identification, birthday, phone number, email, address, and a password

Specification:

- The password shall be verified by the user by entering it twice and shall be verified by the system to ensure it meets minimum structural security criterion including: having a length greater than seven characters, an uppercase letter, a number, and a special character
- If the passwords entered by the user are not equal or the password is inadequately secure given the above constraints, the password shall not be accepted
- The profile must have at least one role on it
- The profile must have one name
- The profile must have at least one email
- The profile must have one address
- The profile must have at least one phone number

Outputs: Registration confirmation

Related Requirements: 3.1.2

3.1.2.Log in

Use Case: 2.1.2

Rationale: In order for the user to perform all the necessary interactions within the system, they must be granted access to it

Inputs: User email and password

Description: The system shall allow new and returning users to log into it

- A user shall log into the system by providing the email and password associated with their account created during registration
- If no matching user account can be determined given the above inputs, the user shall not be permitted to log in and access the system

Specification:

- The system will return true if the login matches, and false if the login does not match.

Outputs: None

Related Requirements: 3.1.1, 3.1.3

3.1.3.Register (Admin)

Use Case: 2.5.1

Rationale: In order for users to be granted the roles of Official, Coach, Manager, or Admin they must be granted access to a higher level of privileges by an Admin who is a Park Staff

Inputs: Admin email and password, new user account information (name, email, role, privilege level)

Description: The system shall allow Admin to create new profiles for those roles within the system which require an elevated level of access

- An Admin user shall log into the system by providing the email and password associated with their account created during registration
- If no matching user account can be determined given the above inputs, the user shall not be permitted to log in and access the system
- The Admin shall then indicate that they would like to register a new user. They shall be prompted to select the role of user they would like to register and enter in the identification information for said user
- If a user with matching name and email is pre-existing in the system, the Admin shall not be permitted to move forward with the registration process

Specification:

- The password shall be verified by the user by entering it twice and shall be verified by the system to ensure it meets minimum structural security criterion including: having a length greater than seven characters, an uppercase letter, a number, and a special character

- If the passwords entered by the user are not equal or the password is inadequately secure given the above constraints, the password shall not be accepted
- The profile must have at least one role in it
- The profile must have one name
- The profile must have at least one email
- The profile must have one address
- The profile must have at least one phone number

Outputs: Registration confirmation, user notification sent

Related Requirements: 3.1.1, 3.1.2

3.1.4.Modify account information

Use Case: 2.1.4

Rationale: In order for account information to be updated as needed

Inputs: At least one or more of the following: first name, last name, gender identification, birthday, phone number, address, email, password

Description: The system shall allow users to update any information in their account

- No information being modified is allowed to be left blank
- If changing the password, it shall be verified by the user by entering it twice and shall be verified by the system to ensure it meets minimum structural security criterion including: having a length greater than seven characters, an uppercase letter, a number, and a special character
 - If the passwords entered by the user are not equal or the password is inadequately secure given the above constraints, the change will not be allowed
- If adding an email to the account, the new email shall be verified by sending a confirmation email

Specification:

- If the new email is not verified within 10 minutes, it will not be added to the account
- There must be at least one email verified for each account. If there is only one email tied to an account, a new email must be verified before the previous email is deleted

Outputs: Update confirmation

Related Requirements: 3.1.1, 3.1.2

3.1.5.Delete account

Use Case: 2.5.13

Rationale: In order for account information to be updated as needed

Inputs: Account

Description: The system shall allow staff to delete any accounts

- The user shall be logged into their account at the time they choose to delete their account.
- There will be a feature on the interface that indicates a delete profile option.
- A message will appear to confirm the deletion of an account in order to avoid accidental deletions
- Once an account is deleted, the user of the account will be notified that their account has been deleted.

Specification:

- The account will be removed from the system. The user information will no longer be able to be found in the system.
- The system will return true if the account has been officially removed, and false if not

Outputs: Deletion confirmation and notification for user whose account was deleted

Related Requirements: 3.1.1, 3.1.2

3.1.6. Request access for role of higher scope

Use Case: 2.1.2

Rationale: If the role to be added to the user's profile is of higher scope, then the user will gain permissions they don't currently have. In order to prevent a user gaining permissions they should not have, the user will have to request for a role of higher scope.

Inputs: Request feature supported by the interface

Description: The system shall offer a request feature to allow users to request a role of higher scope on their profile.

- There will be an option on the interface the user can see that allows the user to request access.
- Once requested, admin will see a page of existing requests, and can approve or deny the requests.
- Once approved, the user will have that role and gain permissions that come with that role. If denied, no changes are made to the user's profile, and the user will be notified that their request was denied.

Specification:

- Higher scope will be specified by permission levels that are set for each role.
- Comparisons will be made between each of the permission levels to see if they are of higher or different scope.

Outputs: If approved, changes made to account. If denied, no changes made. Receive message of status whether or not request was accepted or denied.

Related Requirements: 3.1.1, 3.1.7

3.1.7. Add role of lower scope

Use Case: 2.1.3

Rationale: Since the role being added is of lower scope, then the user will already have the highest permissions on the account. Therefore, the user can add a role of lower scope without request.

Inputs: Add option with role to be added specified.

Description: The system shall offer an add feature on the interface that allows a user to add a role of lower scope to their profile.

- There will be an add option on the interface.
- On the add feature, there will be a list of roles that are of lower scope, or roles that don't have permissions the user currently doesn't have.

Specification:

- The user can then add as many of those roles on the list to their profile. If successfully added, a message will appear that the role was successfully added. If the role fails to be added, a message will appear that an error occurred.
- The number of roles to be added is limited to those on the list.
- The list of qualifying roles will be based on comparisons made between permission levels. If the permission level is lower or equal, then the role will appear on the list.

Outputs: If successful, changes made to account. If error occurs, no changes are made. Receive message of status whether or not changes are successful.

Related Requirements: 3.1.1, 3.1.6

3.2.Register players

3.2.1.Adult Players

Use Case: 2.2.1

Rationale: In order for players to be eligible to join a team and league as well as participate in a tournament or sponsorship, they must register as a player within the system

Inputs: System log in credentials, desired registration league, and *financial information* (in certain cases)

Description: The system shall allow adult players to register themselves as such

- Adults shall register themselves as players by indicating the league and associated sport they would like to register as a player for
- All personal identification shall be tied to the registration via the user's account in the system
 - If the user does not have an account created in the system, they shall not be permitted to register as a player
- The user may also be required to deposit a fee in order to register as a player
 - If the user does not have sufficient funds to pay any registration fees, they shall not be permitted to register as a player
- The user is then listed on the list of available players for the given league
- The system shall provide players with the option to register for multiple leagues

Specification:

- Request that profile is to be created.
- Enter user information (name, contact information, role, address, password)
- Verify that the password entered meets the security specifications.
- Verify that the user has a profile in the system
- Verify that the user is not already registered in the system.
- Finish creation and verify the profile was successfully created by receiving the confirmation message.

Outputs: Registration confirmation

Related Requirements: 3.1.1, 3.1.2, 3.2.2

3.2.2.Youth players

Use Case: 2.3.1

Rationale: In order for youth players to be eligible to join a team and league as well as participate in a tournament or sponsorship, they must register as a player by a legal guardian within the system

Inputs: System log in credentials, child first name, last name, birthday, gender identification, emergency contact information, desired registration league, and *financial information* (in certain cases)

Description: The system shall allow parents to register their children as youth players

- Parents shall register their children as youth players by entering their first name, last name, birthday, gender identification, emergency contact information, and desired registration league and associated sport they would like to register their child as a player for
- All personal identification information entered for the child during registration shall be tied to the parent's account within the system
 - If the parent does not have an account created in the system, they shall not be permitted to register their child as a player
- The parent may also be required to deposit a fee in order to register their child as a player
 - If the parent does not have sufficient funds to pay any registration fees, they shall not be permitted to register their child as a player
- The child is then listed on the list of available players for the given league and their associated age bracket
- The system shall provide parents with the option to register their children for multiple leagues

Specification:

- Request that profile is to be created.
- Enter user information (name, contact information, role, address, password)
- Verify that the password entered meets the security specifications.
- Verify that the user has a profile in the system
- Verify that the user's parent/guardian has a profile in the system.
- Verify that the user is not already registered in the system.
- Finish creation and verify the profile was successfully created by receiving the confirmation message.

Outputs: Registration confirmation

Related Requirements: 3.1.1, 3.1.2, 3.2.1

3.3.Appoint and assign coaches

3.3.1.Appoint coaches

Use Case: 2.4.1

Rationale: In order for leagues to host tournaments and championships, they must have appointed coaches for all teams

Inputs: System log in credentials, coach identifying account information, and identifying associated league information

Description: The system shall allow coaches to be appointed to a league

- Park staff shall log into the system and select the users' accounts they would like to appoint as coaches in addition to the league they would like to appoint them in
- Staff may assign coaches to multiple leagues
- If the user does not exist in the system, the staff shall not be permitted to assign them to the role of a coach

Specification:

- Request to appoint a coach to a league is received from the front-end functionality.
- Enter coach's identifying information into the system's search functionality.
- Search up the intended league.
- Send this coach's identifying information as an input to the coach appointment functionality.
- Verify that the coach's identifying information will be present in the intended league's coach field in the database.

Outputs: Appointment confirmation

Related Requirements: 3.1.1, 3.1.2, 3.3.2

3.3.2.Assign coaches to teams

Use Case: 2.4.1

Rationale: In order for teams to compete in tournaments and championships, they must have an assigned coach

Inputs: System log in credentials, coach identifying account information, and identifying associated team information

Description: The system shall allow coaches to be assigned to teams

- Park staff shall log into the system and select the users' accounts they would like to assign as coaches along with the team they would like to assign them to
- Staff may assign coaches to multiple teams
- If the user does not exist in the system, the staff shall not be permitted to assign them to a team
- If a team does not exist in the system, the staff shall not be permitted to assign the coach to them

Specification:

- Request to assign a coach to a team is received from the front-end functionality.
- Enter coach's identifying information into the system's search functionality.
- Search up the intended team.

- Send this coach's identifying information as an input to the coach assignment functionality.
- Verify that the coach's identifying information will be present in the intended team's coach field in the database.

Outputs: Assignment confirmation

Related Requirements: 3.1.1, 3.1.2, 3.3.1

3.4.Appoint and assign officials to games

3.4.1. Appoint officials

Use Case: 2.4.1

Rationale: In order for leagues to host tournaments and championships, they must have appointed officials

Inputs: System log in credentials, official identifying and account information, identifying associated league information, and assignment preferences

Description: The system shall allow officials to be appointed to a league

- Park staff shall log into the system and select the users' accounts they would like to appoint as officials in addition to the league they would like to appoint them in
 - Staff may assign officials to multiple leagues
 - If the user does not exist in the system, the staff shall not be permitted to assign them to the role of an official

Specification:

- Request to appoint an official to a league is received from the front-end functionality.
- Enter official's identifying information into the system's search functionality.
- Search up the intended league.
- Send this official's identifying information as an input to the coach appointment functionality.
- Verify that the official's identifying information will be present in the intended league's coach field in the database.

Outputs: Appointment confirmation

Related Requirements: 3.1.1, 3.1.2, 3.3.1, 3.4.2

3.4.2.Assign officials to games

Use Case: 2.4.1

Rationale: In order for game scores to be submitted, an official must be assigned to the respective game

Inputs: System log in credentials, official identifying account information, and identifying associated game information

Description: The system shall allow officials to be assigned to games

- Park staff shall log into the system and select the users' accounts they would like to assign as officials along with the games they would like to assign them to

- Staff may assign officials to multiple games
- If the user does not exist in the system, the staff shall not be permitted to assign them to a game
- If a game does not exist in the system, the staff shall not be permitted to assign the official to it
- Officials may also be assigned to games via the referral of another user or based on parameters such as days and locations that may be input by park staff

Specification:

- Request to assign an official to a game is received from the front-end functionality.
- Enter official's identifying information into the system's search functionality.
- Search up the intended game.
- Send this official's identifying information as an input to the official assignment functionality.
- Verify that the official's identifying information will be present in the intended game's official field in the database.

Outputs: Assignment confirmation

Related Requirements: 3.1.1, 3.1.2, 3.4.1

3.5.Create leagues and league schedules

3.5.1. Create leagues

Use Case: 2.4.2

Rationale: In order to hold tournaments and create brackets, leagues must be created

Inputs: System log in credentials, league name, league sport, league constraints (type, age bracket, gender identification, division/level)

Description: The system shall allow staff to create leagues

- Park staff shall log into the system and create a new league by inputting the league name, sport, and constraints (type, are bracket, gender identification, division/level)
- If a league is preexisting in the system with an identical name and sport, the staff shall not be permitted to create the league

Specification:

1. Request to create a league is received from the front-end functionality.
2. League name is entered into the name field.
3. Team names list are entered into the teams field.
4. The league is stored in the system, sending a verification message to the front-end functionality.

Outputs: League creation confirmation

Related Requirements: 3.1.1, 3.1.2, 3.3.1, 3.4.1, 3.5.2

3.5.2.Create league schedules

Use Case: 2.4.3

Rationale: In order to maintain league games, a schedule must be created

Inputs: System log in credentials, league scheduling parameters (dates, times, locations, number of games per week & league, duration of games)

Description: The system shall allow staff to create league schedules

- Park staff shall log into the system and schedule games in a league by inputting the following information: game date, time, location, and duration

Specification:

- The system shall ensure that the parameters entered by park staff meet the following constraints: games scheduled must meet the number of games per week & league input
- If the game scheduled overlaps in date, time, team, or location with another scheduled game, the staff shall not be permitted to schedule the game

Outputs: Schedule creation confirmation and accessibility

Related Requirements: 3.1.1, 3.1.2, 3.3.1, 3.4.1, 3.5.1

3.5.3.Modify or delete scheduled league games

Use Case: 2.5.11

Rationale: In order to allow for any possible scheduling changes, there must be a way to modify or delete games in a schedule

Inputs: System log in credentials, games that need to be modified, game parameters needing modification (dates, times, locations, duration of games)

Description: The system shall allow staff to modify or delete games in league schedules

- Park staff shall log into the system and modify games in a league by first selecting a game to modify. Depending on the desired updates, at least one or more the following information will be inputted: date, time, location, and duration
- If a game is desired to be deleted entirely, there will be an option for this. When deleting a game, a message will appear to confirm the deletion of a game, in order to avoid accidental deletions.

Specification:

- The system shall ensure that the parameters entered by park staff meet the following constraints: games scheduled must meet the number of games per week depending on the league
- If the game scheduled overlaps in date, time, team, or location with another scheduled game, the staff shall not be permitted to schedule the game

Outputs: Confirmation of scheduling modifications, and notifications of changes to all users affected by scheduling updates

Related Requirements: 3.1.2, 3.5.1, 3.5.2

3.6.Generate tournament brackets and schedules

3.6.1. Create tournament brackets

Use Case: 2.4.2

Rationale: In order to hold a tournament, a bracket must be created

Inputs: System log in credentials, tournament name, associated league, tournament constraints, tournament type, tournament minimum qualifications, number of teams, and team names

Description: The system shall allow staff to create tournament brackets

- Park staff shall log into the system and create a new tournament by inputting the tournament name, associated league, tournament constraints, type, minimum qualifications, and number of teams
- The system shall then generate an empty bracket dependent on the tournament type selected by the park staff
- Park staff shall then enter the team names into the bracket which shall indicate the teams who shall be playing each other in the preliminary round of the tournament

Specification:

- If a tournament is preexisting in the system with an identical name and league, the staff shall not be permitted to create the league
- A tournament must have at least 2 teams
- The system shall allow each team to be input only once by the staff in the preliminary round of the bracket

Outputs: Bracket creation confirmation and accessibility

Related Requirements: 3.1.1, 3.1.2, 3.6.2

3.6.2. Create tournament schedules

Use Case: 2.4.3

Rationale: In order to maintain tournament games, a schedule must be created

Inputs: System log in credentials, tournament scheduling parameters (dates, times, locations, number of games per week & tournament, duration of games)

Description: The system shall allow staff to create tournament schedules

- Park staff shall log into the system and schedule games in a tournament by inputting the following information: game date, time, location, and duration

Specification:

- The system shall ensure that the parameters entered by park staff meet the following constraints: games scheduled must meet the number of games per week & tournament input
- If the game scheduled overlaps in date, time, team, or location with another scheduled game, the staff shall not be permitted to schedule the game

Outputs: Schedule creation confirmation and accessibility

Related Requirements: 3.1.1, 3.1.2, 3.6.1

3.6.3.Modify or delete tournaments

Use Case: 2.5.8

Rationale: In order to allow for any possible changes to a tournament, there must be a way to modify or delete tournaments

Inputs: System log in credentials, tournament parameters needing modification (dates, times, locations, duration of games, tournament name, associated league, tournament constraints, tournament type, tournament minimum qualifications, number of teams, and team names)

Description: The system shall allow staff to modify tournament schedules and other parameters

- Park staff shall log into the system and modify a tournament schedule by first selecting games that need to be modified. Depending on the desired updates, at least one or more of the following information will be inputted: game date, time, location, and duration
- The system will also allow for modifications to other following tournament parameters: tournament name, associated league, tournament constraints, tournament type, tournament minimum qualifications, number of teams, and team Names
- If a game, or the entire tournament, is desired to be deleted, the system will include an option for this. When making a deletion, a message will appear to confirm the deletion, in order to avoid accidental deletions

Specification:

- The system shall ensure that the parameters entered by park staff meet the following constraints: games scheduled must meet the number of games per week & tournament input
- If the game scheduled overlaps in date, time, team, or location with another scheduled game, the staff shall not be permitted to schedule the game
- The system shall ensure that any changes made to these parameters are consistent with the current tournament schedule

Outputs: Confirmation of any modifications, and notifications to all users involved with the tournament modified

Related Requirements: 3.1.2, 3.6.1, 3.6.2

3.7.Report league and tournament statistics

3.7.1. Report league and tournament scores

Use Case: 2.4.4

Rationale: In order to display team scores, staff must generate reports

Inputs: System log in credentials, Administrative access (granted to park staff and above), league and/or tournament

Description: The system shall allow staff to report on league and tournament scores

- Park staff shall log into the system where they shall be able to view all the scores submitted for the given games in a league or tournament

- The staff shall then have the capability to generate a report which displays all these scores which may be filtered and/or grouped by date, league, tournament, and/or team

Specification:

- If there are not matching results generated from the input criterion, the report shall be blank

Outputs: Report(s) on league and tournament scores

Related Requirements: 3.1.1, 3.1.2, 3.5.1, 3.5.2, 3.6.1, 3.6.2

3.7.2.Report league and tournament standings

Use Case: 2.4.4

Rationale: In order to display team standings, staff must generate reports

Inputs: System log in credentials, Administrative access (granted to park staff and above), league and/or tournament

Description: The system shall allow staff to report on league and tournament standing

- Park staff shall log into the system where they shall be able to view all the standings of teams in a league or tournament

- The staff shall then have the capability to generate a report which displays these standings which shall be dependent on the league and/or tournament parameter entered by the park staff

- The system shall also provide the capability for staff to sort the results based on team standing in the tournament and/or league

Specification:

- If there are not matching results generated from the input criterion, the report shall be blank

Outputs: Report(s) on league and tournament standings

Related Requirements: 3.1.1, 3.1.2, 3.5.1, 3.5.2, 3.6.1, 3.6.2

3.8.Advise staff on league makeup and suggest changes

3.8.1. Suggest league makeup changes

Use Case: 2.4.5

Rationale: In order for staff to ensure league makeup is optimized, the system must suggest improvements

Inputs: System log in credentials, league of choice

Description: The system shall suggest league makeup changes for staff

- Park staff shall log into the system where they shall indicate a given league which is present in the system and view suggestions by the system for changes on that

specific league's makeup

- This shall include suggestions on the following:
 - Increasing or decreasing the number of teams and players in a league
 - Increasing or decreasing the amount of games played, game frequency, and/or game duration in a given league

Specification:

- The system shall provide park staff with the capability to enact any subset of the system generated suggestions or none at all
- The system shall provide suggestions on all of the following suggestion criterion outlined above

Outputs: Qualitative and quantitative written suggestions for league makeup

Related Requirements: 3.1.1, 3.1.2, 3.7.1, 3.7.2

3.9.Maintain financial records and reports

3.9.1.View account balances

Use Case: 2.5.1

Rationale: In order to ensure payments, sponsorships, and account credits are valid, staff must view user account balances

Inputs: System log in credentials, Administrative access (granted to park staff and above)

Description: The system shall allow park staff to view and validate account balances

- Park staff shall log into the system and be provided with the capability to view the current account balance and transaction history for each registered user in the system
 - The transaction history shall include statement payments and refunds/credits
 - Each transaction shall include a short description detailing the transaction summary, examples of which include but are not limited to: sponsor payment, team account credit due to sponsorship, official paychecks, field payment, and free-agent payment. It shall also include the transaction amount, date, and initiating user
 - the system shall not permit any of the above fields to be null

Specification:

- The system shall allow park staff to have the ability to filter and/or sort transaction history by amount, date, initiating user, and transaction description
- The system shall not display any zero dollar transactions
- (+) shall indicate a statement credit and (-) shall indicate a statement debit
 - If any \$0 transactions have been submitted, they shall not be displayed by the system

Outputs: None

Related Requirements: 3.1.1, 3.1.2, 3.13.1

3.10.Create teams

3.10.1. Create teams

Use Case: 2.6.1

Rationale: In order to hold tournaments and championships, teams must be created to compete

Inputs: System log in credentials, identifying team information (team name, registered players information, league, sport, coach, division/level)

Description: The system shall allow coaches to create teams with some subset of its registered players

- Coaches shall log into the system and create a new team by inputting the team name, registered players information, league, sport, coach, and division/level
- If a team is preexisting in the system with an identical name and players, the system shall prevent the coach from creating the team

Specification:

- The system shall not permit any of the following input parameters to be null
- The system shall deliver the message to the coach the moment it has been created

Outputs: Team creation confirmation

Related Requirements: 3.1.1, 3.1.2, 3.2.1, 3.2.2, 3.3.2, 3.10.2

3.11.Maintain officiating standards

3.11.1.Manage games

Use Case: 2.7.1

Rationale: In order to maintain officiating standards, officials must be able to manage the games they are working

Inputs: System log in credentials, blocked times, dates, and/or locations

Description: The system shall allow officials to manage the games that they are working

- Officials shall log into the system. Officials shall sign a contract which outlines various officiating standards before they may be permitted to be assigned to a game
 - If officials do not sign the contract, the system shall not permit them to be assigned to work any games
- Officials shall be provided with the option to indicate any blocked times, dates, and/or locations before they are scheduled to work any games and after they sign the officiating contract
- Officials shall be able to view the games which they are scheduled to work along with their dates, times, teams, leagues, and locations

Specification:

- The system shall require officials to enter blocked times as a duration in hours and/or days of the week. The system shall require blocked dates to be input as calendar dates. Blocked times and dates may be input as recurring. Blocked locations shall be selected from a list.

Outputs: Schedule of official's games working, potentially alerts sent to official via their preferred communication method

Related Requirements: 3.1.1, 3.1.2, 3.4.1, 3.4.2, 3.11.2, 3.12.1

3.11.2. Provide alerts on scheduling conflicts

Use Case: 2.7.2

Rationale: In order to ensure that an official is always working a game, they must be alerted on any conflicts that occur during scheduling

Inputs: None

Description: The system shall provide officials with alerts on scheduling conflicts

- The official shall be sent an alert message if and only if at least one of the following is true:

1. The Official has been scheduled for more than one game in an overlapping time period
2. The Official has been scheduled for a game that falls under an indicated unavailability parameter
3. The Official has been scheduled for the same occurrence of a game multiple instances

- The body of the alert message shall contain the game(s) that have caused the scheduling conflict and the name of the scheduling conflict that has occurred

Specification:

- The system shall deliver the message to the official the moment it has detected a schedule conflict

Outputs: Schedule conflict message sent to official via their preferred communication method

Related Requirements: 3.1.1, 3.1.2, 3.4.1, 3.4.2, 3.11.1, 3.12.1

3.12. Allow officials to collect and submit scores

3.12.1. Submit scores

Use Case: 2.7.3

Rationale: In order for officials to be paid and tournament and/or championships scores and standings to be reported, officials must submit final game scores

Inputs: System log in credentials, identifying game information (teams, league, date, time), and game score

Description: The system shall allow officials to submit the game scores

- The official shall log into the system once the final score of the game has been

determined

- The official shall locate the game they would like to submit a score for based on its teams playing, league, date, and time
- The official shall enter the score of each team and indicate that they would like to submit the entered score
 - If the game results in a tie or any other abnormal termination, which does not result in a numerical score for each team, the official shall be provided with the option to indicate this and it shall be flagged for park staff to view and take an necessary determined action
 - Once the official has submitted the scores, they shall not be permitted to alter them. Following submission, only park staff shall be permitted to alter scores provided the existence of any inconsistencies or inaccuracies

Specification:

- The system shall only display the games which the given official is working
- The system shall provide a confirmation message to the official the moment the scores have been submitted

Outputs: Score submission confirmation and accessibility

Related Requirements: 3.1.1, 3.1.2, 3.4.1, 3.4.2, 3.11.1, 3.11.2

3.13.Coordinate sponsorship

3.13.1.Sponsor a team

Use Case: 2.8.1

Rationale: In order to support sponsorship coordination, the system must allow a user to sign up as a sponsor

Inputs: System log in credentials, team desired to sponsor, sponsorship amount, financial account information

Description: The system shall allow sponsors to sponsor a team

- The prospective sponsor shall log into the system and indicate that they would like to be a sponsor. They shall then select the team they would like to sponsor and the amount they would like to register their sponsorship for
 - Sponsors shall not be permitted to register as a sponsor for a team multiple times. However, they shall be permitted to add more to their sponsorship contribution
- The sponsor shall then be directed to input their financial account information and shall be charged the amount they indicated in the sponsorship form to the account selected
 - If the sponsor does not have sufficient funds, they shall not be permitted to register as a sponsor
- The team shall have a statement credit applied to their user account equivalent to the amount that the sponsor has registered to contribute

Specification:

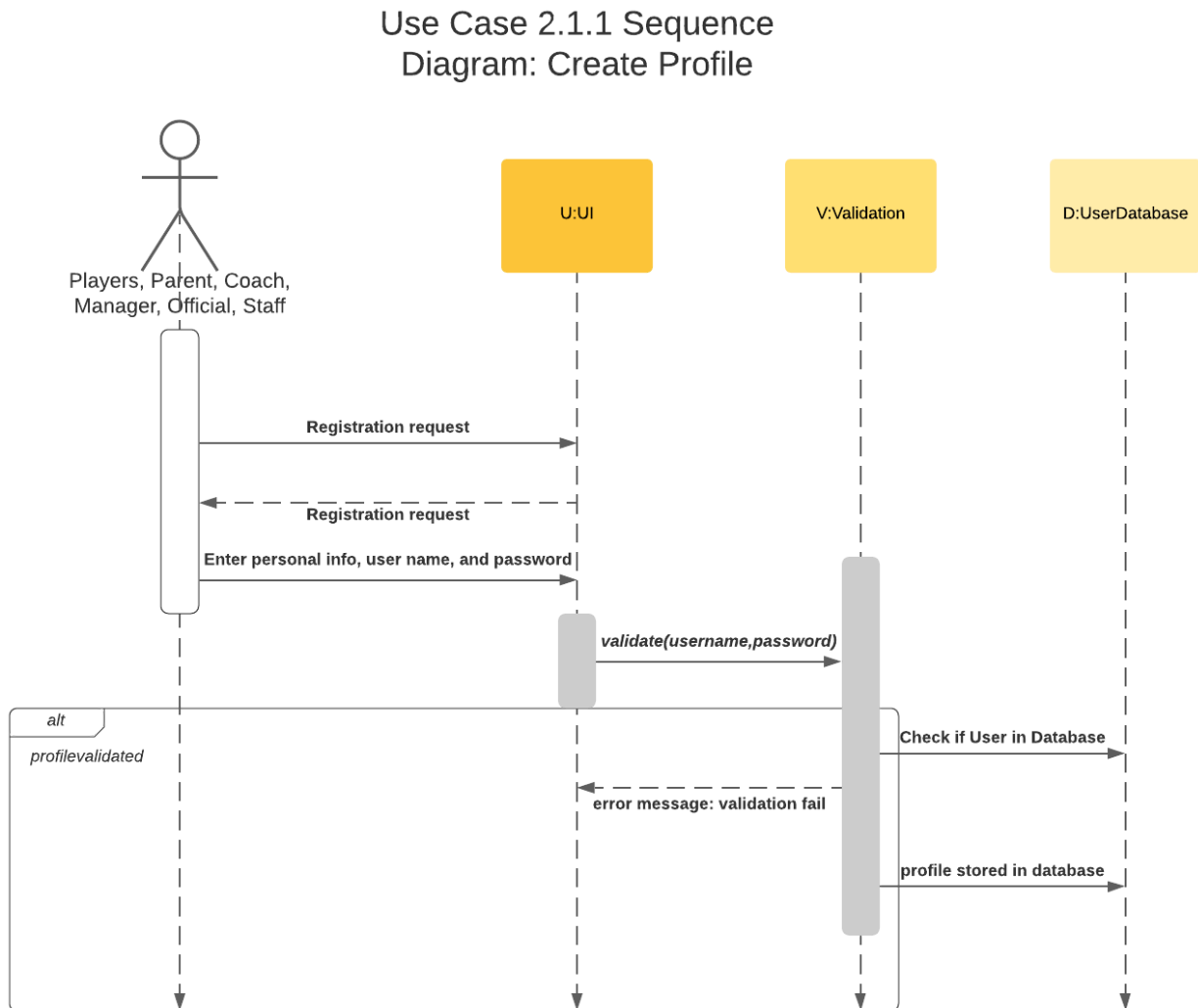
- The system shall permit the sponsor to sponsor multiple teams
- The system shall not limit the sponsor's financial contribution amount
- The system shall verify the sponsor's payment method information
- The system shall provide a confirmation message to the sponsor the moment their sponsorship has been submitted

Outputs: Sponsorship confirmation, Team account credit of funds

Related Requirements: 3.1.1, 3.1.2, 3.10.1, 3.10.2

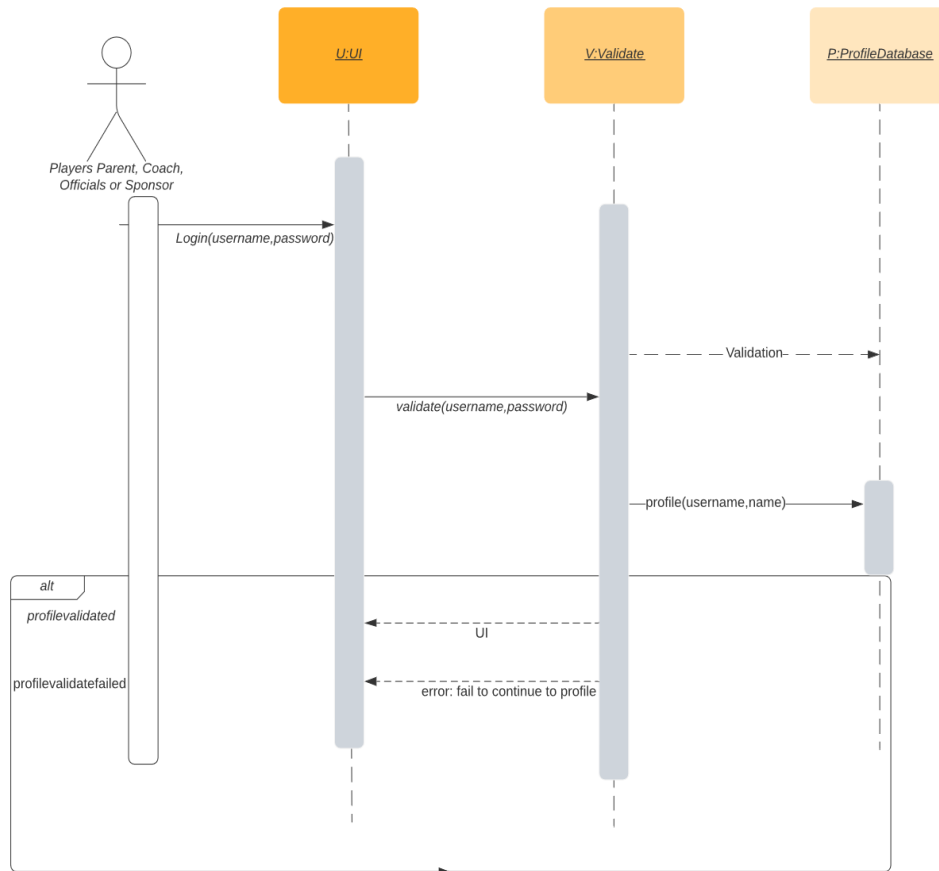
Appendix A. Interaction Diagrams

A.i Use-Case 2.1.1 Sequence Diagram



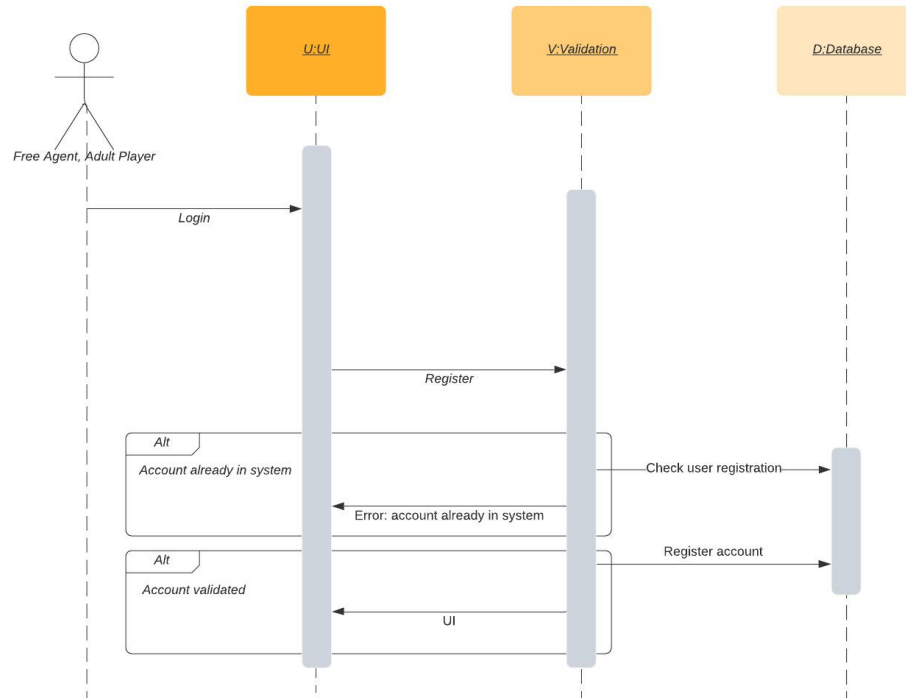
A.ii Use-Case 2.2.1 Sequence Diagram

Use Case 2.2.1 Sequence
Diagram: Log In



A.iii Use-Case 2.3.1 Sequence Diagram

Use Case 2.3.1 Sequence
Diagram: Register Self as Player



Appendix B. Conceptual Model

5801 SLAM System High-Level UML Diagram

