



SC2006: Software Engineering

Lab#2 Deliverables

Lab Group - Z51 Team: 4 – Binary Brains

Project name: *Sport Spot - where the player meets place*

Team Members:

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1.0 Project Introduction

1.1 Mission Statement:

Sport Spot aims to be the most reliable source for recommending public sports facilities in Singapore for people of all age groups. Our website serves as a wellness resource for Singaporeans, offering a variety of opportunities for residents, communities, and societies to take part in and spread the joy of active living.

1.2 Scope:

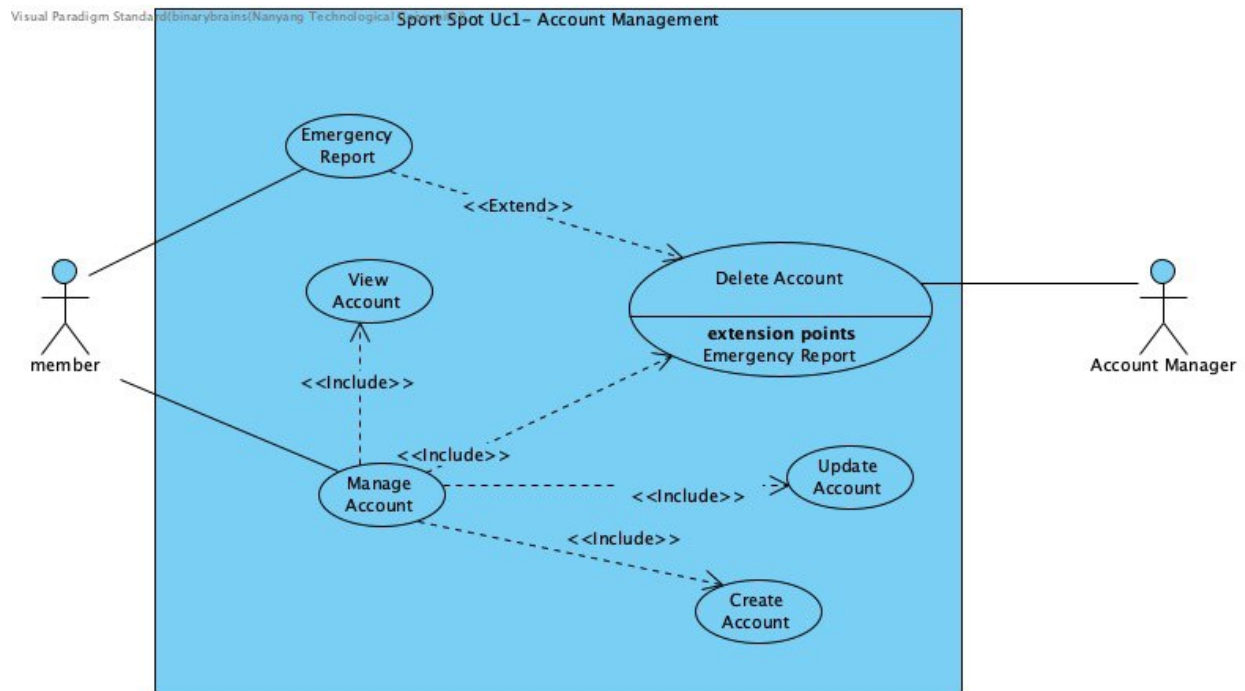
Our web application will allow users to find the nearest sports facility they are willing to go to.

1.3 Target Audience:

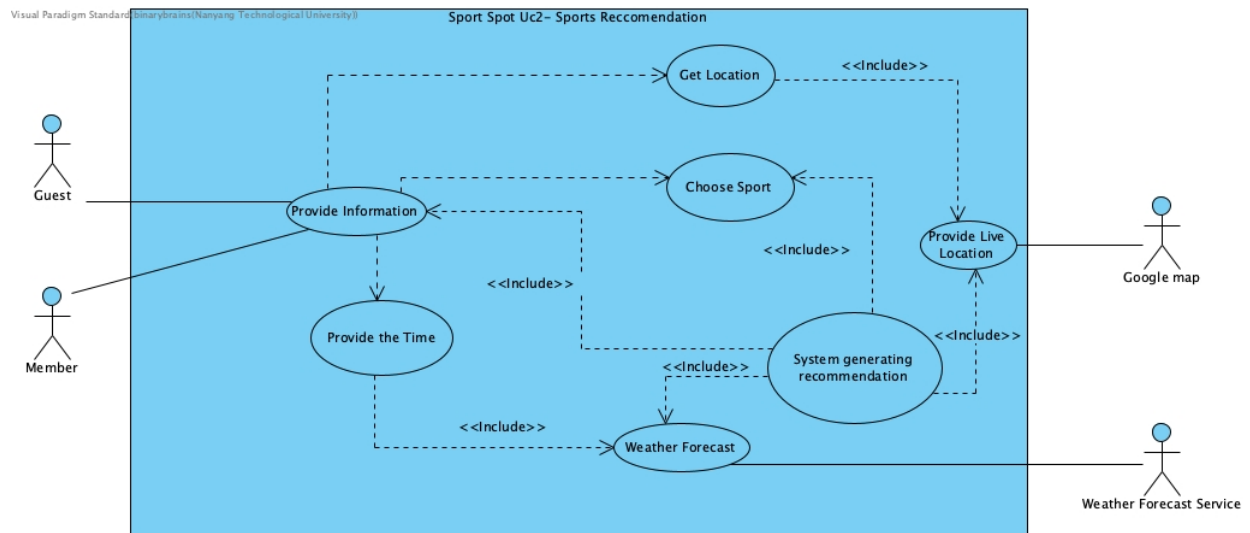
We want our web application to reach and be utilized by people of all age groups.

2.0 Use Case Diagrams -

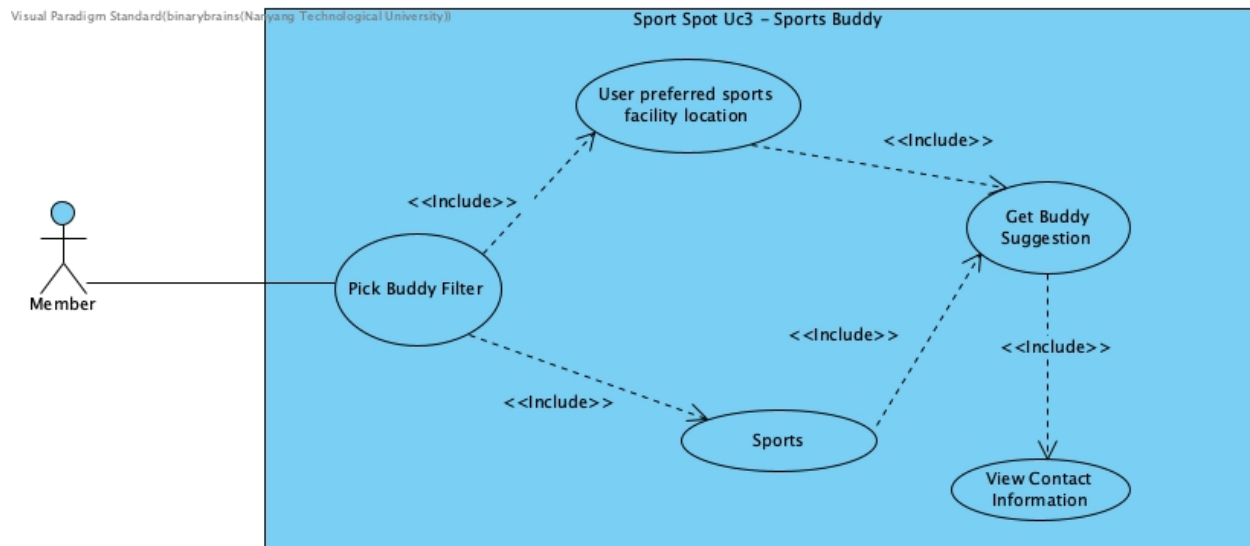
2.1 Use Case 1: Account Information



2.2 Use Case 2: Sports Recommendation



2.3 Use Case 3: Sports Buddy



2.2 Use Case Description

Use Case ID:	UCI_1		
Use Case name:	Create Account		
Created By:	Binary Brains	Last Updated By:	
Date Created:	29.01.2023	Date Last Updated:	12.02.2023

Actor:	Member
Description:	Create Account enables new users to register for an account in the database management system. Users must enter their Name, Username, Email, Phone Number, and Password in order to establish an account.
Preconditions:	<ol style="list-style-type: none">1. Username must not be taken by someone else.2. Passwords must consist of at least 1 special character, letters in mixed cases, and at least 8 characters should be present3. Phone numbers must not be registered to an existing account.4. Email must not have been registered previously.

Postconditions:	<ol style="list-style-type: none"> 1. The system sends a confirmation link to the user's email account. 2. The system displays the main home page.
Priority:	
Frequency of Use:	1
Flow of Events:	<ol style="list-style-type: none"> 1. Members enter the required details which are : Name, Phone numbers, Username, Email and Password. 2. The system validates the information. 3. The system creates a new account for the user. 4. System updates account information in the database. 5. The system directs the member to the main home page.
Alternative Flows:	<p>a. If the member account already exists: Phone number/ email taken.</p> <ol style="list-style-type: none"> 1. System displays “member account already exists” 2. The system prompts users to create an account or log in. 3. If you create an account, then continue from main flow step 1. 4. If log in, then the system directs to log in page to continue from Login <p>b. Username is already taken</p> <ol style="list-style-type: none"> 1. The system displays “Username already taken” 2. The system prompts members to input a different username. 3. Continue from main flow step 1. <p>c. Passwords do not meet requirements.</p> <ol style="list-style-type: none"> 1. The system displays the “Please input a password of at least 1 special character, mixed case and at least 8 characters long” message. 2. Continue from main flow step 1. <p>d. The member wants to sign in as a guest instead of creating an account.</p>

Use Case ID:	UCI_2		
Use Case name:	Update Account		
Created By:	Binary Brains	Last Updated By:	
Date Created:	29.01.2023	Date Last Updated:	

Actor:	Member
Description:	Update Account allows members to change passwords and addresses in the system database.
Preconditions:	<ol style="list-style-type: none"> 1. Passwords must adhere to requirements: at least 1 special character, letters in mixed cases, and at least 8 characters. 2. The address must be in the system database.
Postconditions:	<ol style="list-style-type: none"> 1. The system sends a confirmation link to the member's email account if there are any changes. 2. The system displays the main landing page.
Priority:	
Frequency of Use:	1 - 2 times per login

Flow of Events:	<ol style="list-style-type: none"> 1. Member inputs new password or the address they want to change to 2. The system validates the information. 3. System updates account information in the database. 4. The system directs the member to the main landing page.
Alternative Flows:	<ol style="list-style-type: none"> a. Passwords do not meet requirements. <ol style="list-style-type: none"> 1. The system displays the “Please input a password of at least 1 special character, mixed case and at least 8 characters long” message. 2. Continue from the main flow step 1.

Use Case ID:	UCI_3		
Use Case name:	Delete Account		
Created By:	Binary Brains	Last Updated By:	
Date Created:	29.01.2023	Date Last Updated:	12.02.2023

Actor:	Member, Account Manager
Description:	Delete Account allows members to delete their account from the system database.
Preconditions:	<ol style="list-style-type: none"> 1. A valid account must exist in the database. 2. The member account is already logged in.
Postconditions:	<ol style="list-style-type: none"> 1. The system sends a confirmation link to the member email account to complete the deletion. 2. The system deletes member accounts from the database.
Priority:	
Frequency of Use:	1

Flow of Events:	<ol style="list-style-type: none"> 1. The member goes to account settings and chooses the delete account option. 2. The system makes sure that the member is logged in. 3. The system sends a confirmation link to the member's email account to complete the deletion. 4. The system deletes member accounts from the database.
Alternative Flows:	

Use Case ID:	UCI_4		
Use Case name:	View Account		
Created By:	Binary Brains	Last Updated By:	12.02.2023
Date Created:	29.01.2023	Date Last Updated:	

Actor:	Member
Description:	View Account allows members to view their account from the system database
Preconditions:	<ol style="list-style-type: none"> 1. A valid account must exist in the database 2. The member's account is already logged in
Postconditions:	
Priority:	
Frequency of Use:	1
Flow of Events:	<ol style="list-style-type: none"> 1. The member goes to account settings 2. The system makes sure that the member is logged in 3. The member can view their account
Alternative Flows:	

Use Case ID:	UCI_5
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Use Case name:	Choose Sports		
Created By:	Binary Brains	Last Updated By:	
Date Created:	29.01.2023	Date Last Updated:	12.02.2023

Actor:	Member, Guest
Description:	Choose sports allows users to pick their sports preference from a list of sports given.
Preconditions:	
Postconditions:	1. The system displays all facility's locations according to the user's chosen sports preferences.
Priority:	
Frequency of Use:	1 - 5 times per login
Flow of Events:	<ol style="list-style-type: none"> 1. The user must choose from the list of sports available 2. The user will then be prompted to choose whether they want to display the results based on distance or weather suitability. 3. The system will show sport facility recommendations to the user on the basis of the chosen sport.
Alternative Flows:	

Use Case ID:	UCI_6		
Use Case name:	Provide live location		
Created By:	Binary Brains	Last Updated By:	
Date Created:	5.02.2023	Date Last Updated:	

Actor:	Member, Guest, Google Maps
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Description:	In provide live location, the system generates the user current location using the google maps API
Preconditions:	1. The user has allowed the system to access live location
Postconditions:	1. The system generates the user's current location.
Priority:	
Frequency of Use:	1 - 5 times per login
Flow of Events:	<ol style="list-style-type: none"> 1. The user chooses the filter by location option. 2. The system generates the user's live location using google maps API.
Alternative Flows:	<ol style="list-style-type: none"> a. Location permission is not given <ol style="list-style-type: none"> 1. System prompts user to input the location manually 2. User inputs their pincode 3. System identifies the users location b. The location the user inputs is incorrect <ol style="list-style-type: none"> 1. The Pincode the user inputs is out of range 2. User is prompted to re-enter the pin code 3. System identifies the user's location

Use Case ID:	UCI_7		
Use Case name:	Get Location		
Created By:	Binary Brains	Last Updated By:	
Date Created:	29.01.2023	Date Last Updated:	12.02.2023

Actor:	Member, Guest
Description:	Provide location allows registered members and guests to provide their live location to the system for the system to make recommendations.

Preconditions:	1. The user has given permissions to the system to access their locations
Postconditions:	1. The recommended sports facilities are displayed
Priority:	
Frequency of Use:	1 - 5 times per login
Flow of Events:	<ol style="list-style-type: none"> 1. The member allows system to access its location 2. The System allows users to choose whether the user wants to filter according to weather or distance from a live location. 3. The user chooses distance option 4. System generates the user's live location 5. The system displays facilities up to 10 km from the user's current location 6. The user chooses the top 3 locations they want to go to from the given results
Alternative Flows:	<ol style="list-style-type: none"> a. Location permission not given <ol style="list-style-type: none"> 1. The system prompts the user to input the location manually 2. The user inputs their pin code 3. The system identifies the user's location 4. The system allows users to filter according to weather conditions or distance 5. The user chooses distance option 6. System displays facilities up to 10 km from the user's current location 7. The user chooses the top 3 locations they want to go to from the given results b. The location the user inputs is incorrect <ol style="list-style-type: none"> 2. The Pincode the user inputs is out of range 2. The user is prompted to re-enter the pin code 3. The system identifies the user's location 4. System allows user to filter according to weather conditions or distance 5. The user chooses distance option

	6. System displays facilities up to 10 km from the user's current location 7. The user chooses the top 3 locations they want to go to from the given results.
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Use Case ID:	UCI_8		
Use Case name:	Provide Time		
Created By:	Binary Brains	Last Updated By:	
Date Created:	05.02.2023	Date Last Updated:	

Actor:	Member, Guest		
Description:	Provide time allows the user input the time at which they will be going to the chosen sports facility		
Preconditions:	1. The user must choose the sports facility they want to go to.		
Postconditions:	1. The system displays the weather at the time of the chosen sports facility.		
Priority:			
Frequency of Use:	1 - 5 times per login		
Flow of Events:	1. The user has selected the sports facility they want to visit. 2. The user inputs the time they want to go to the sports facility.		
Alternative Flows:			

Use Case ID:	UCI_9		
Use Case name:	Weather Forecast		
Created By:	Binary Brains	Last Updated By:	

Date Created:	29.01.2023	Date Last Updated:	12.02.2023
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Actor:	Member, Guest, Weather Forecast Service
Description:	Weather allows the user to get suitable facilities based on current weather conditions
Preconditions:	<ol style="list-style-type: none"> 1. The user has chosen the sports facility they want to go to. 2. The user must input their location. 3. The user inputs time to get a weather forecast.
Postconditions:	<ol style="list-style-type: none"> 1. System displays the recommended facilities according to weathers suitability
Priority:	
Frequency of Use:	1 - 5 times per login
Flow of Events:	<ol style="list-style-type: none"> 1. The system asks users to choose the sports they want to do. 2. Once the user chooses the sports, the system asks the user whether to filter by weather or distance 3. The user chooses weather 4. The user inputs time for the system to provide a weather forecast. 3. The system generated the nearest sports facility for users within a 10km range. .
Alternative Flows:	<p>A. The user chooses to filter by location</p> <ol style="list-style-type: none"> 1. The member allows the system to access its location 2. The system allows users to choose whether the user wants to filter according to weather or distance from a live location. 3. The user chooses distance option 4. System generates the user's live location 5. System displays facilities up to 10 km from the user's current location 6. The user chooses the top 3 locations they want to go to from the given results

Use Case ID:	UCI_10		
Use Case name:	System generating recommendation		
Created By:	Binary Brains	Last Updated By:	
Date Created:	05.02.2023	Date Last Updated:	

Actor:	Member, Guest
Description:	The system generating recommendation is the recommendation feature which suggests the nearest sports facility to users according to the filters they have chosen.
Preconditions:	<ol style="list-style-type: none"> 1. The user must choose the sports facility they want to go to. 2. The user must input their location. 3. The user may input time to get a weather forecast.
Postconditions:	<ol style="list-style-type: none"> 2. The system displays the recommended sports facility to the user.
Priority:	
Frequency of Use:	1 - 5 times per login
Flow of Events:	<ol style="list-style-type: none"> 1. The system asks users to choose the sports they want to play. 2. Once the user chooses the sports, the system asks the user to input the location or get a live location generated. 3. The system prompts users to choose whether they want to filter by distance or weather. 4. The user chooses the weather option. 5. The user inputs time for the system to provide a weather forecast at. 4. The system generated the nearest sports facility for users within a 10 km range.
Alternative Flows:	

Use Case ID:	UCI_11
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Use Case name:	Pick Buddy Filter		
Created By:	Binary Brains	Last Updated By:	
Date Created:	29.01.2023	Date Last Updated:	12.02.2023

Actor:	Member
Description:	Pick buddy filter allows users to choose whether to filter buddy lists by their preferred sports locations or by the sports they play.
Preconditions:	<ol style="list-style-type: none"> 1. The user must give permission to the system to share their profile details. 2. This feature is only available to users who have created an account.
Postconditions:	<ol style="list-style-type: none"> 1. The system shows the information about users according to the chosen filter.
Priority:	
Frequency of Use:	1 - 5 times per login
Flow of Events:	<ol style="list-style-type: none"> 1) The user goes to the buddy recommendation menu. 2) The user can choose whether they want to filter by sports facility location or sports.
Alternative Flows:	<p>A. The user chooses not to filter by any of the options</p> <ol style="list-style-type: none"> 1. The user goes to the buddy recommendation menu 2. The user can choose whether they want to filter by sports facility location or sports 3. The system shows the entire list of users on the system who have allowed their information to be shown

Use Case ID:	UCI_12		
Use Case name:	User Preferred Sports Facility Location		
Created By:	Binary Brains	Last Updated By:	

Date Created:	05.02.2023	Date Last Updated:	
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Actor:	Member
Description:	User Preferred Sports Facility Location is a list of member's top 3 sports facilities which matches their sports buddy.
Preconditions:	<ol style="list-style-type: none"> 1. The member must give permission to the system to share their profile details. 2. This feature is only available to users who have created an account. 3. The member must have picked the filter to list sports buddies.
Postconditions:	<ol style="list-style-type: none"> 1. The system shows the information about users according to the chosen filter. 2. The system recommends buddy if their choice of sports location matches another member's choice.
Priority:	
Frequency of Use:	1 - 5 times per login
Flow of Events:	<ol style="list-style-type: none"> 1. The user goes to the buddy recommendation menu. 2. The user must choose a filter to recommend sports buddy on the basis of sports facility location. 3. The member must select the buddy he wants to match with. 4. Then the system sends a request to the buddy.
Alternative Flows:	

Use Case ID:	UCI_13		
Use Case name:	Get Buddy suggestion		
Created By:	Binary Brains	Last Updated By:	
Date Created:	29.01.2023	Date Last Updated:	12.02.2023

Actor:	Member
Description:	Users can connect with others who utilize the same sports facility as them using the buddy recommendation feature.
Preconditions:	<ol style="list-style-type: none"> 1. The user must give permission to the system to share their activity details. 2. This feature is only available to users who have created an account.
Postconditions:	<ol style="list-style-type: none"> 1. The system shows the information about the user once they have accepted the request.
Priority:	
Frequency of Use:	1 - 5 times per login
Flow of Events:	<ol style="list-style-type: none"> 1. The user goes to the buddy recommendation menu. 2. The user can choose whether they want to filter by sports facility location or sports. 3. The user chooses not to filter by either option 4. The user can view information like Telegram ID, Sports they play, and their top 3 chosen facilities.
Alternative Flows:	<p>A. The user chooses sports as a filter.</p> <ol style="list-style-type: none"> 1. The user goes to the buddy recommendation menu. 2. The user can choose whether they want to filter by sports facility location or sports. 3. The user chooses to filter by sports 4. The user can view information (like Telegram ID, Sports they play, and their top 3 chosen facilities) of users who play the same sport as the user. <p>B. The user chooses sports facility location as a filter</p> <ol style="list-style-type: none"> 1. The user goes to the buddy recommendation menu. 2. The user can choose whether they want to filter by sports facility location or sports. 3. The user chooses to filter by sports facility location.

	4. The user can view information (like Telegram ID, sports they play, and their top 3 chosen facilities) of users who have at least 1 common chosen sports facilities.
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Use Case ID:	UCI_14		
Use Case name:	Sports		
Created By:	Binary Brains	Last Updated By:	
Date Created:	29.01.2023	Date Last Updated:	12.02.2023

Actor:	Member
Description:	Sports allows users to view profiles of users who play the same sport as the user.
Preconditions:	<ol style="list-style-type: none"> 1. This feature is only available to users who have created an account. 2. The user must give permission to the system to share their profile details.
Postconditions:	<ol style="list-style-type: none"> 1. The system shows the information about users according to the chosen filter.
Priority:	

Frequency of Use:	1 - 5 times per login
Flow of Events:	<ol style="list-style-type: none"> 1) The user goes to the buddy recommendation menu 2) The user chooses to filter buddy by sports 3) The system displays the filtered buddy profiles
Alternative Flows:	<p>A. The user chooses not to filter by any of the options</p> <ol style="list-style-type: none"> 1. The user goes to the buddy recommendation menu 2. The user can choose whether they want to filter by sports facility location or sports 3. The system shows the entire list of users on the system who have allowed their information to be shown <p>B. The user chooses to filter by sports facilities location</p> <ol style="list-style-type: none"> 1. The user goes to the buddy recommendation menu 2. The user can choose to filter by sports facility location 3. The system shows the filtered list of users on the system who have at least one common chosen sports

Use Case ID:	UCI_15		
Use Case name:	View Contact		
Created By:	Binary Brains	Last Updated By:	
Date Created:	05.02.2023	Date Last Updated:	

Actor:	Member
Description:	View contact is the contact information of the member through which their sports buddy can contact them.
Preconditions:	<ol style="list-style-type: none"> 1. The member must give permission to the system to share their profile details. 2. The member must send the request to their sports buddy. 3. The sports buddy must accept the request of the member.

Postconditions:	1. If all the preconditions are met, the system must show the contact information of the sports buddy to the member.
Priority:	
Frequency of Use:	1 - 5 times per login
Flow of Events:	<ol style="list-style-type: none"> 1. The member goes to the buddy recommendation menu 2. The member chooses to filter buddy 3. The member selects the buddy they want to match with. 4. The system sends requests to the sports buddy. 5. Once the buddy accepts the request, the member can view the buddy's contact information.
Alternative Flows:	

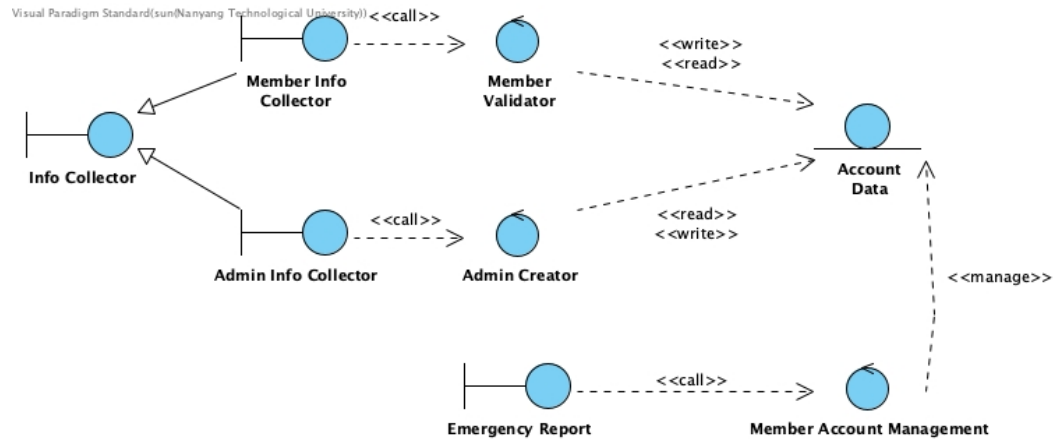
Use Case ID:	UCI_16		
Use Case name:	Emergency Report		
Created By:	Binary Brains	Last Updated By:	
Date Created:	12.02.2023	Date Last Updated:	

Actor:	Account Manager, User
Description:	Emergency report allows a user to report any incidents and the individuals involved.
Preconditions:	1. The reported member must be an added friend of the member who is reporting.
Postconditions:	1. The account manager investigates and deletes the reported member's account.
Priority:	
Frequency of Use:	1 - 5 times per login

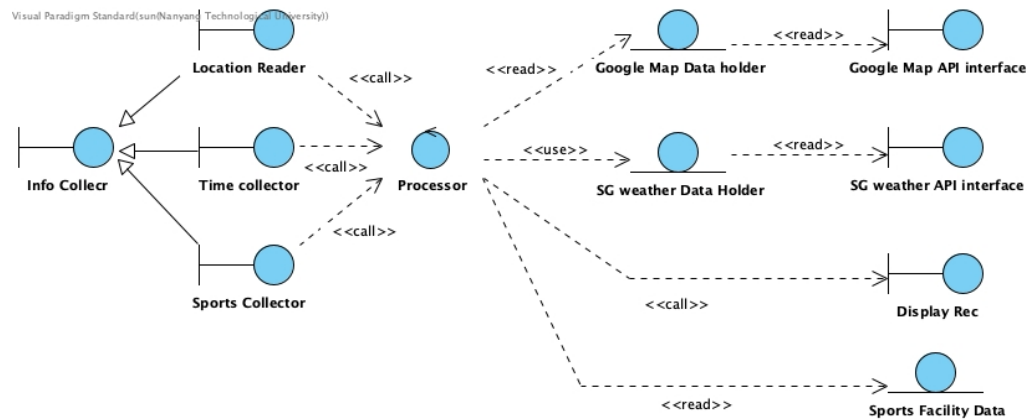
Flow of Events:	<ol style="list-style-type: none">1. The member reports a member's account.2. The account manager verifies if the reported member is a friend of the reporting member.3. The account manager externally contacts the reporting member to get details.4. The reported member's account is deleted if the details are accurate.
Alternative Flows:	

3.0 Key boundary classes and control classes

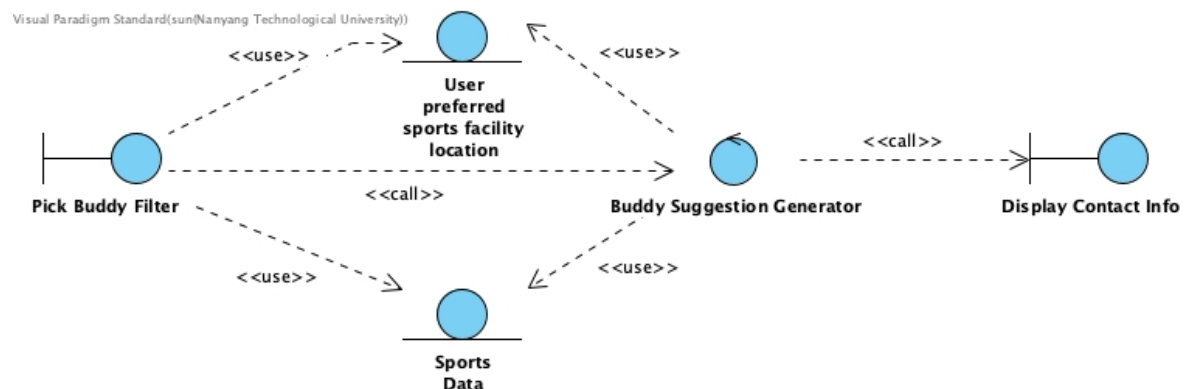
3.1 Class diagram for Account Management



3.2 Class diagram for the Sports Facility recommendation

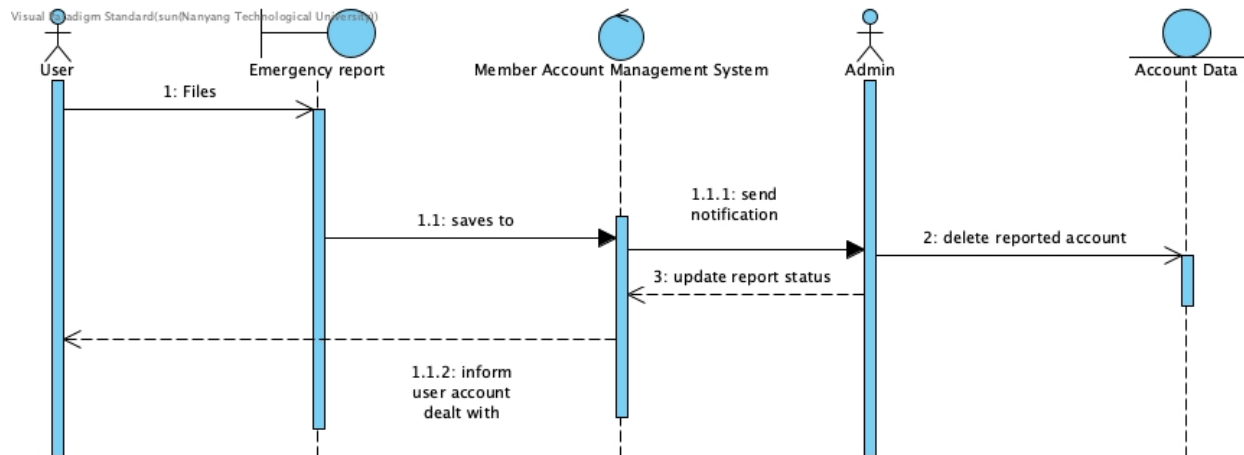


3.3 Class diagram for the sports buddy recommender

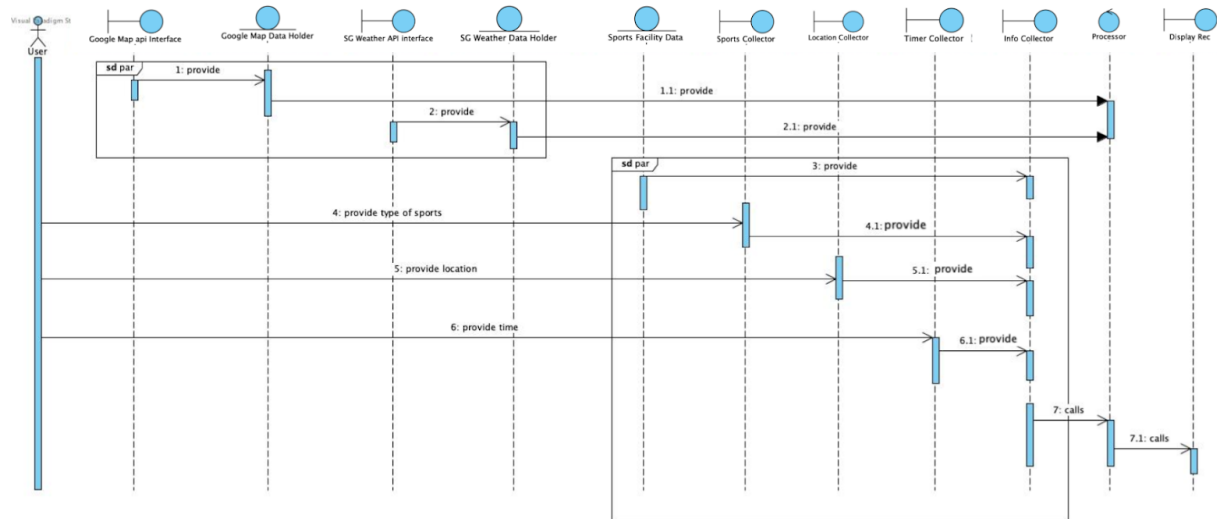


4.0 Sequence diagrams

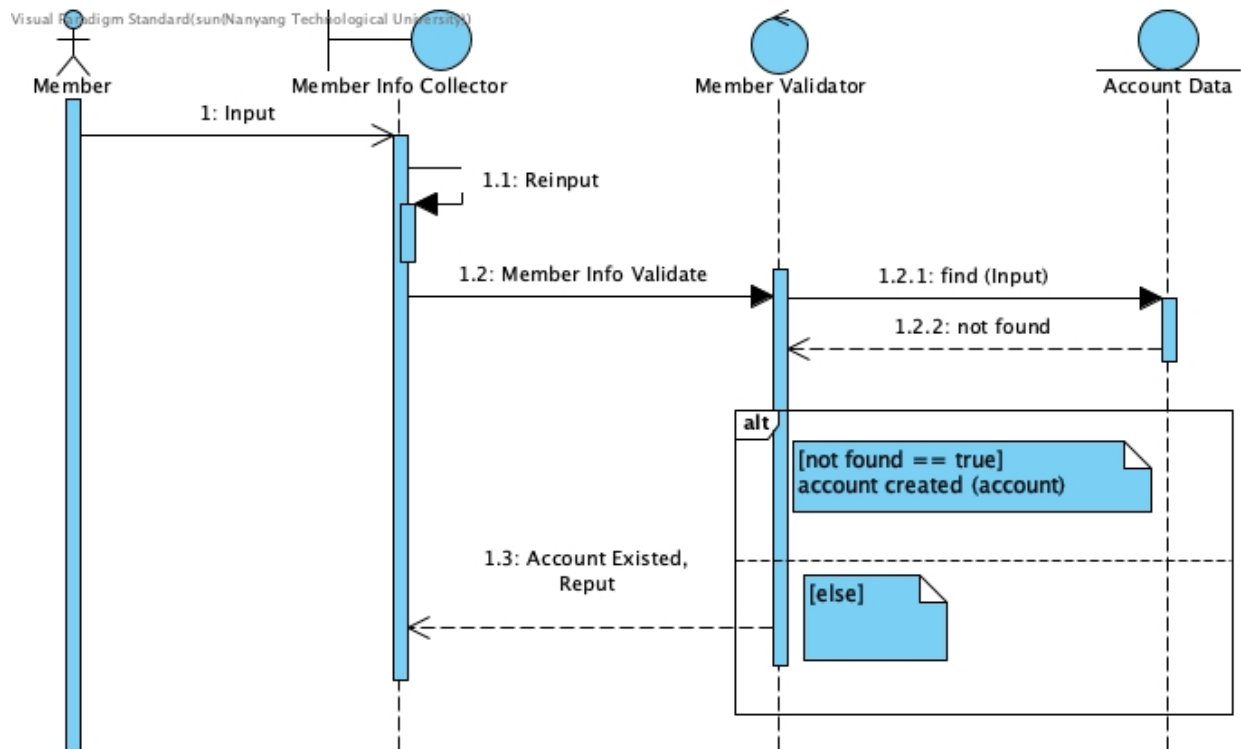
4.1 Sequence Diagram of Emergency Report



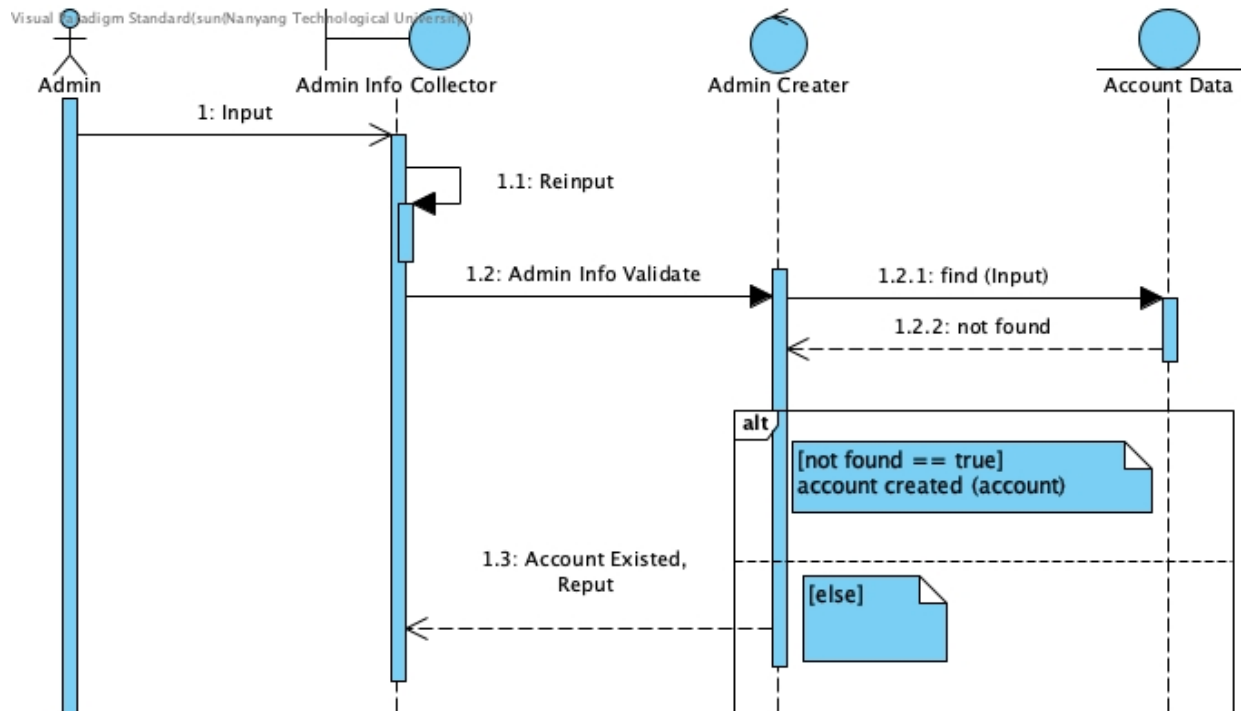
4.2 Sequence Diagram of Sports Recommendation



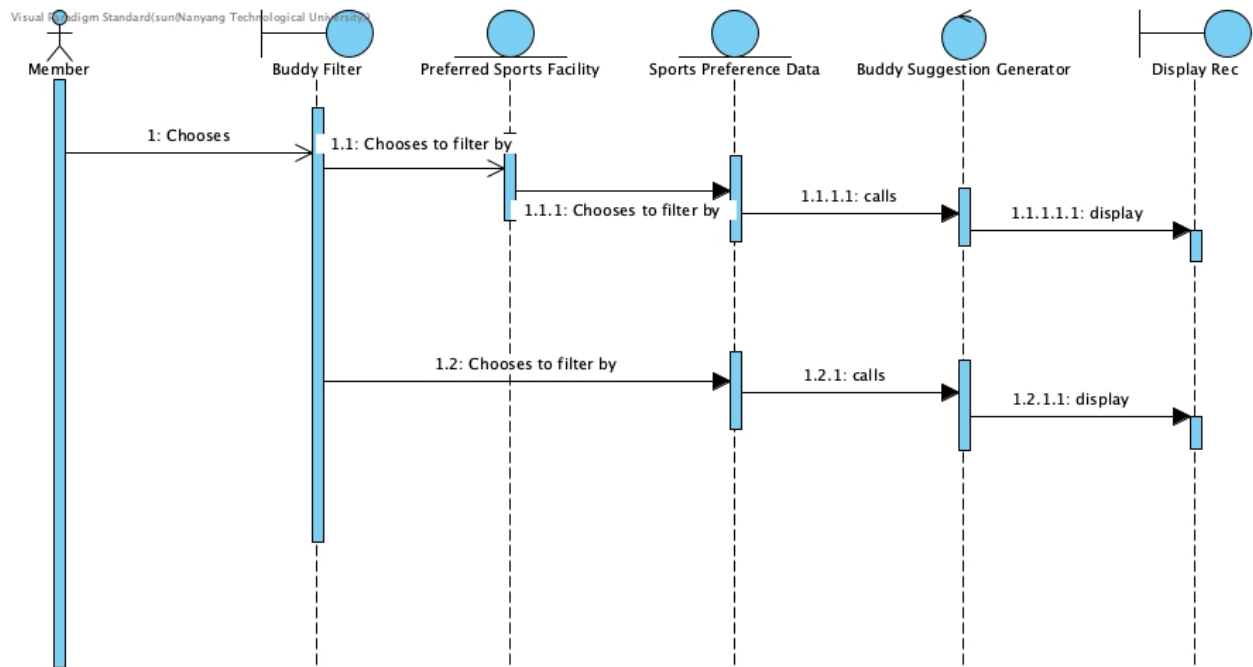
4.3 Sequence Diagram of Member Account Creation



4.4 Sequence Diagram of Admin Account Creation



4.5 Sequence Diagram of Sports Buddy allocation



5.0 Initial dialog map

