

Phase 1 and 2 SWE Project

Students:

- 1- Ahmed Kamel Bukhamsin / 202041780
- 2- Mohammed Alammar / 202016880
- 3- Sami Shuraim / 202042200
- 4- Rayan Alamrani / 202038940

Phase 1:

Nonfunctional requirements:

We decided that some Nonfunctional requirements are more important and adhere to our principals when it comes to this software than others:

1. Usability:

The tournament application, being easy to pick up by the student and being not challenging to use, is an important goal for us when designing the application, it has the greatest influence on other parts of the development.

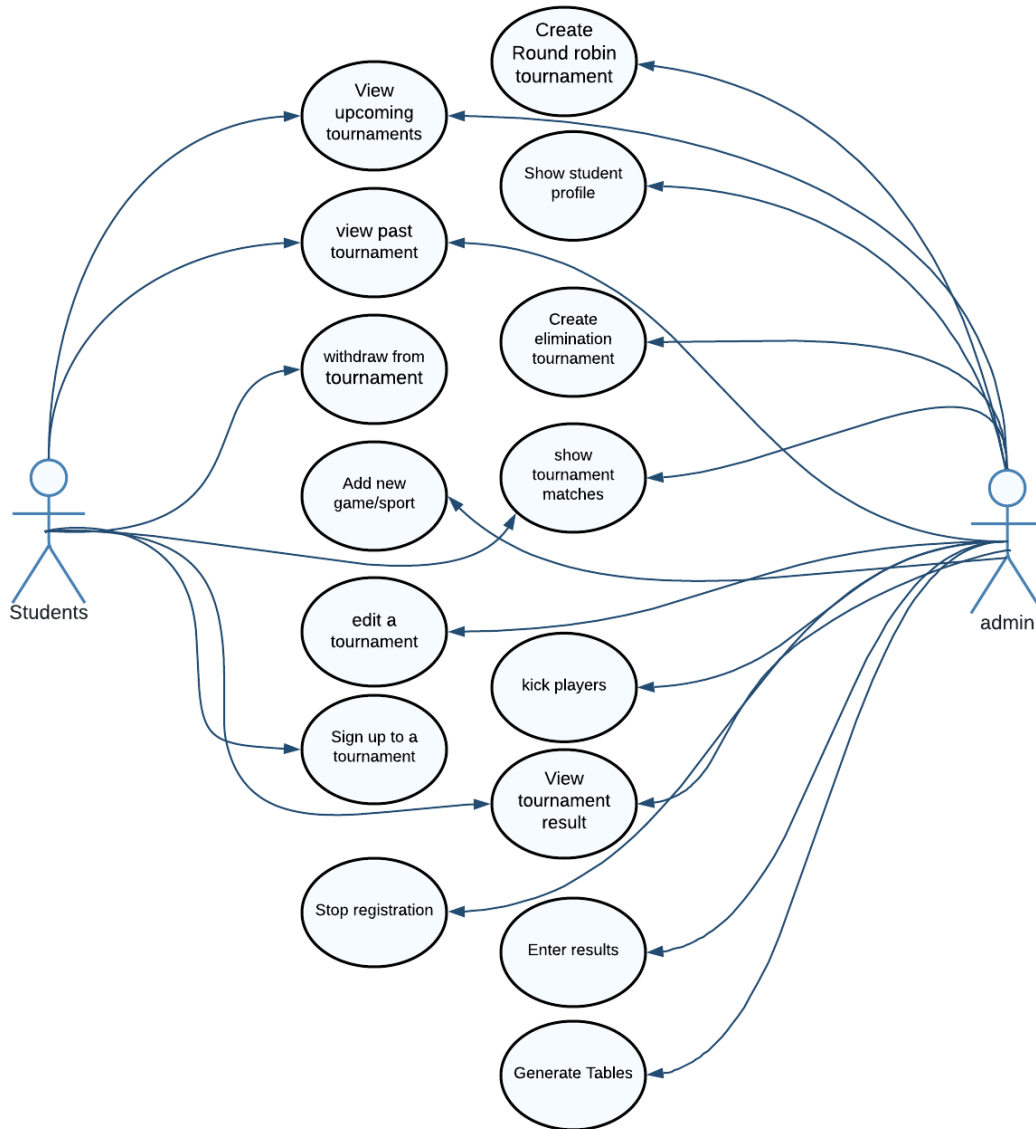
2. Maintainability

The software being easy to update and change parts of it is a design principle important for many things here. From us wanting to follow an incremental style of development and wanting to avoid deterioration, to wanting the process of adding games to our system free of flaws.

3. Security

While our system doesn't store critical information, we want our userbase to trust that the match and tournament results can't be affected by intrusion.

Use case diagram:



Use case ID:	US01		
Use Case Name:	View upcoming tournaments		
Created by:	Ahmed Bukhamsin	Last Updated by:	
Date Created:	29/3/2023	Last Revision Date:	
Actors:	Student, Admin		
Description:	The ability to view upcoming tournaments.		
Trigger:	Home (From the bottom bar).		
Preconditions:			
Postconditions:			
Normal Flow:	<ol style="list-style-type: none"> 1. The user enter the program. 2. The user clicks on the home icon from the navbar. 3. The program shows the user a list of upcoming tournaments. 		
Alternative Flows:	1A. The user clicks on search from the bottom bar. <ol style="list-style-type: none"> 1. The user click on the text field for to search for a given tournament. 2. The user clicks search. 3. The program show the user the list for upcoming tournaments. 		
Exceptions:	In the normal flow step 1. <ol style="list-style-type: none"> 1. The program checks that the user is not online. 2. A msg will be prompted for the user regarding the problem. 		
Assumptions:			
Notes and Issues:			

Use case ID:	US02		
Use Case Name:	View past tournament.		
Created by:	Ahmed Bukhamsin	Last Updated by:	
Date Created:	29/3/2023	Last Revision Date:	
Actors:	Student, Admin		
Description:	The ability to view past tournament.		
Trigger:	Home (From the bottom bar).		
Preconditions:			
Postconditions:			
Normal Flow:	<ol style="list-style-type: none"> 1. The user enters the program. 2. The user clicks on the home icon from the navbar. 3. The program shows the user a list of upcoming matches. 		

Alternative Flows:	1A. The user clicks on search from the bottom bar. 1. The user clicks on the text field for to search for a given tournament. 2. The user clicks search. 3. The program shows the user the list for upcoming matches.
Exceptions:	In the normal flow step 1. 1. The program checks that the user is not online. 2. A msg will be prompted for the user regarding the problem.
Assumptions:	
Notes and Issues:	

Use case ID:	US03		
Use Case Name:	Withdraw from tournament.		
Created by:	Ahmed Bukhamsin	Last Updated by:	
Date Created:	29/3/2023	Last Revision Date:	
Actors:	Student.		
Description:	The ability for the student to withdraw from a tournament.		
Trigger:	Tournament card.		
Preconditions:	1. The student should be logged in. 2. The student should be participated in the given tournament.		
Postconditions:	1. Delete the student from the tournament.		
Normal Flow:	1. The student clicks on the tournament card. 2. The student clicks on withdraw.		

	3. The student clicks on confirmation. 4. The system withdraw the student from the system.
Alternative Flows:	
Exceptions:	From step 3 in normal flow: 1. The student lost connection in the process. 2. The software display an error msg indicating the problem.
Assumptions:	
Notes and Issues:	

Use case ID:	US04		
Use Case Name:	Add new game/sport		
Created by:	Ahmed Bukhamsin	Last Updated by:	
Date Created:	30/3/2023	Last Revision Date:	
Actors:	Admin.		
Description:	The ability for the student to withdraw from a tournament.		
Trigger:	Create Button (Bottom bar)		
Preconditions:	1- The admin should be logged in to the system.		
Postconditions:	- The ability for the admin to pick the added game to the tournament.		
Normal Flow:	1- The admin clicks on Create from the bottom bar. 2- The admin picks the type of tournament.		

	3- The on the dropdown button for game, the admin clicks on add a new game. 4- The admin fills the information for the game. 5- The admin clicks add.
Alternative Flows:	
Exceptions:	In Step A5: 1- The game has already been added. 2- The system display an error msg.
Assumptions:	
Notes and Issues:	

Use case ID:	US05		
Use Case Name:	Edit a tournament		
Created by:	Mohammed Alammar	Last Updated by:	Mohammed Alammar
Date Created:	29/03/2023	Last Revision Date:	
Actors:	Admin		
Description:	The ability to modify tournament details		
Trigger:	1. Click (Modify) Which is located at the bottom bar		

Preconditions:	<ul style="list-style-type: none"> • The admin is logged in. • The tournament has not ended yet.
Postconditions:	<ul style="list-style-type: none"> • The details are changed.
Normal Flow:	<ol style="list-style-type: none"> 1. The admin clicks on modify. 2. The system shows a list of all tournaments that can be modified. 3. The admin choses a specific tournament. 4. The system shows all the tournament attributes the can be edited, such as entered dates, team members. 5. The admin enters the new details. 6. The admin confirms the changes. 7. The system checks if changes are valid. 8. The System implements the changes.
Alternative Flows:	<p>In step 3 of normal flow,</p> <ol style="list-style-type: none"> 1. If the user choses to edit matches info rather than the tournament. 2. The system shows match details, scores, date, participated player. <p>Then continues the normal flow from step 5.</p>
Exceptions:	<p>In step 7 of normal flow,</p> <ol style="list-style-type: none"> 1. The system found an invalid date entered. 2. The system will show an error massage. 3. The tournament details will not be changed.
Assumptions:	
Notes and Issues:	

Use case ID:	US06		
Use Case Name:	Sign up to a tournament		
Created by:	Mohammed Alammar	Last Updated by:	Mohammed Alammar
Date Created:	29/03/2023	Last Revision Date:	
Actors:	Student		
Description:	The ability to register to tournament.		
Trigger:	1. Click (Register) button on any available tournament.		
Preconditions:	<ul style="list-style-type: none"> • The student is logged in. • The tournament has not started yet. • The tournament is not full yet. 		

Postconditions:	<ul style="list-style-type: none"> • The student is registered into the tournament. • Matches schedule is modified to accommodate the new students matches. • The ability for the student to withdraw from the tournament.
Normal Flow:	<ol style="list-style-type: none"> 1. The student clicks register. 2. The system shows the team register page. 3. The student enters the team detail, student's names, ids, and emails. 4. The system checks if all students are able to register to this tournament. 5. The system adds the newly registered team to the tournament. 6. The students receive a confirmation email.
Alternative Flows:	<p>In step 2 of normal flow,</p> <ol style="list-style-type: none"> 1. If the tournament is an individual's tournament. 2. The system shows the individual register page. 3. The student enters his name, id, and email. <p>Then continues the normal flow from step 5.</p>
Exceptions:	<p>In step 4 of normal flow,</p> <ol style="list-style-type: none"> 1. If one of the students is already in another team for the same tournament. 2. The system will ask to change that team member. <p>Then continues the normal flow from step 4 again.</p>
Assumptions:	
Notes and Issues:	

Use case ID:	US07		
Use Case Name:	Create round robin tournament.		
Created by:	Sami Shuraim	Last Updated by:	
Date Created:	30/03/2023	Last Revision Date:	
Actors:	Admin.		

Description:	The ability to create a tournament of round robin type.
Trigger:	Click “Create” then click “Round Robin Tournament”.
Preconditions:	<ul style="list-style-type: none"> • The admin is logged in.
Postconditions:	<ul style="list-style-type: none"> • Tournament is added to the student’s available tournaments tab. • Tournament is added to the admin’s current tournaments tab. • The ability for a student/team to register in the tournament. • The ability to modify the tournament. • The ability to stop students from registering.
Normal Flow:	<ol style="list-style-type: none"> 1) Fill in the following information: <ol style="list-style-type: none"> a) Tournament name. b) Start date. c) End date. d) Time between rounds. 2) System validates the following: <ol style="list-style-type: none"> a) Tournament name is valid and not repeated. b) Start date is a real date and is in the future. c) End date is a real date, is in the future, and is after start date. d) Time between rounds is a period that isn’t longer than the tournament itself. 3) Click “Create”. 4) Tournament is successfully created.
Alternative Flows:	<ol style="list-style-type: none"> 1) In Exceptions 1.a, 1.b: <ol style="list-style-type: none"> a) Display error message stating that the tournament name is invalid. b) Clear tournament name’s input field. 2) In Exception 1.c, 1.d, 1.e: <ol style="list-style-type: none"> a) Display error message stating that the tournament time is invalid. b) Clear both input fields. 3) In Exception 1.f: <ol style="list-style-type: none"> a) Display error message stating that the time between rounds is too long.

Exceptions:	1) In step 2: a) Another tournament has the same name. b) Tournament name has invalid characters in it. c) Date consists of characters other than numbers and '/'. d) Date does not exist (February 30 th). e) End time is before start time. f) Time between rounds is longer than the tournament itself.
Assumptions:	
Notes and Issues:	

Use case ID:	US08		
Use Case Name:	Create elimination tournament.		
Created by:	Sami Shuraim	Last Updated by:	
Date Created:	30/03/2023	Last Revision Date:	
Actors:	Admin.		
Description:	The ability to create a tournament of elimination type.		

Trigger:	Click “Create” then click “Elimination Tournament”
Preconditions:	<ul style="list-style-type: none"> • The admin is logged in.
Postconditions:	<ul style="list-style-type: none"> • Tournament is added to the student’s available tournaments tab. • Tournament is added to the admin’s current tournaments tab. • The ability for a student/team to register in the tournament. • The ability to modify the tournament. • The ability to stop students from registering.
Normal Flow:	<ol style="list-style-type: none"> 1) Fill in the following information: <ol style="list-style-type: none"> a) Tournament name. b) Start date. c) End date. d) Time between rounds. 2) System validates the following: <ol style="list-style-type: none"> a) Tournament name is valid and not repeated. b) Start date is a real date and is in the future. c) End date is a real date, is in the future, and is after start date. d) Time between stages is a period that isn’t longer than the tournament itself. 3) Click “Create”. 4) Tournament is successfully created.
Alternative Flows:	<ol style="list-style-type: none"> 1) In Exceptions 1.a, 1.b: <ol style="list-style-type: none"> a) Display error message stating that the tournament name is invalid. b) Clear tournament name’s input field. 2) In Exception 1.c, 1.d, 1.e: <ol style="list-style-type: none"> a) Display error message stating that the tournament time is invalid. b) Clear both input fields. 3) In Exception 1.f: <ol style="list-style-type: none"> a) Display error message stating that the time between stages is too long.
Exceptions:	<ol style="list-style-type: none"> 1) In step 2:

	<ul style="list-style-type: none"> a) Another tournament has the same name. b) Tournament name has invalid characters in it. c) Date consists of characters other than numbers and '/'. <ul style="list-style-type: none"> d) Date does not exist (February 30th). e) End time is before start time. f) Time between rounds is longer than the tournament itself.
Assumptions:	
Notes and Issues:	

Use case ID:	US09		
Use Case Name:	Show student profile.		
Created by:	Sami Shuraim	Last Updated by:	
Date Created:	30/03/2023	Last Revision Date:	
Actors:	Admin		
Description:	The ability to display a student's profile and all his information.		
Trigger:	Click "Search".		

Preconditions:	<ul style="list-style-type: none"> Admin is logged in.
Postconditions:	
Normal Flow:	<ol style="list-style-type: none"> Admin enter student's name or id in search bar. System gets all the students that match the specified name or id (if a partial name/id is entered). Admin clicks on the student they want. System fetches all their information from the database. System displays student's information.
Alternative Flows:	
Exceptions:	
Assumptions:	
Notes and Issues:	

Use case ID:	US10		
Use Case Name:	Show tournament matches.		
Created by:	Sami Shuraim	Last Updated by:	
Date Created:	30/03/2023	Last Revision Date:	
Actors:	Students, Admin.		
Description:	The ability to view upcoming matches, previous matches' scores, and overall score (in Round Robin).		

Trigger:	Click “Home” or “Search” (only for admins).
Preconditions:	<ul style="list-style-type: none"> • The student or admin is logged in. • The tournament registration is stopped.
Postconditions:	
Normal Flow:	<p>A) Using “Home” button:</p> <ol style="list-style-type: none"> 1) User (either student or admin) clicks on “Home”. 2) System displays all available tournaments. 3) User chooses a tournament and clicks on it. 4) System fetches all information about the tournament, including the matches. 5) System displays tournament matches. <p>B) Using admin-exclusive “Search” button:</p> <ol style="list-style-type: none"> 1) Admin clicks on “Search”. 2) Admin types the name of the desired tournament in search bar. 3) System gets all the tournaments that match the specified name (if a partial name is entered). 4) Admin clicks on tournament they want. 5) System fetches all information about the tournament. 6) System displays tournament matches.
Alternative Flows:	<ol style="list-style-type: none"> 1) In Exception 1.a: <ol style="list-style-type: none"> a) Display error message stating that no tournament exists with the given name. b) Clear search bar.
Exceptions:	<ol style="list-style-type: none"> 1) In step B.3: <ol style="list-style-type: none"> a) No tournament exists with the given name.
Assumptions:	
Notes and Issues:	

Use case ID:	US11		
Use Case Name:	Kick Player		
Created by:	Rayan Alamrani	Last Updated by:	
Date Created:	29/3/2023	Last Revision Date:	
Actors:	Admin		
Description:	The ability to delete a player from a tournament		
Trigger:	Click Delete next to a players name on the tournament card when Selected		
Preconditions:	<ul style="list-style-type: none"> • Admin is logged in • Player is in tournament 		
Postconditions:	<ul style="list-style-type: none"> • The player is removed from the tournament • The tournament data is updated 		
Normal Flow:	1. The admin clicks on the delete button on the player		

	2. The system deletes the player from the tournament and updates the tournament standings
Alternative Flows:	
Exceptions:	In the normal flow step 1. 1. The tournament is already over. 2. A msg will be prompted for the user regarding the problem.
Assumptions:	
Notes and Issues:	

Use case ID:	US12		
Use Case Name:	View tournament results		
Created by:	Rayan Alamrani	Last Updated by:	
Date Created:	29/3/2023	Last Revision Date:	
Actors:	Admin, Student		
Description:	The ability to see the standings in a finished tournament		
Trigger:	Click on a tournament		
Preconditions:	<ul style="list-style-type: none"> User is logged in Tournament is over 		
Postconditions:	<ul style="list-style-type: none"> Tournament standings are shown 		
Normal Flow:	1. User clicks on a finished tournament 2. System showcases the results		
Alternative Flows:			

Exceptions:	In the normal flow step 1. <ol style="list-style-type: none"> 1. The tournament is not over. 2. The current tournament standings and info will be displayed
Assumptions:	
Notes and Issues:	

Use case ID:	US13		
Use Case Name:	Enter results		
Created by:	Rayan Alamrani	Last Updated by:	
Date Created:	29/3/2023	Last Revision Date:	
Actors:	Admin		
Description:	The ability to enter the results of a tournament match into the system		
Trigger:	Click on an upcoming tournament match		
Preconditions:	<ul style="list-style-type: none"> • Admin is logged in • Tournament isn't over 		
Postconditions:	<ul style="list-style-type: none"> • Match results are added to the tournament • The tournament standings are updated 		
Normal Flow:	1. Admin clicks on upcoming match		

	<ol style="list-style-type: none"> Admin enters the results of said match System stores the results Tournament Standings are updated
Alternative Flows:	
Exceptions:	<p>In the normal flow step 2.</p> <ol style="list-style-type: none"> The results are impossible An error prompt will appear and the admin will be asked to enter the results again
Assumptions:	
Notes and Issues:	

Use case ID:	US14		
Use Case Name:	Stop registration		
Created by:	Rayan Alamrani	Last Updated by:	
Date Created:	29/3/2023	Last Revision Date:	
Actors:	Admin		
Description:	The ability to stop the registration of an upcoming tournament		
Trigger:	Click on an upcoming tournament and press stop registrati		
Preconditions:	<ul style="list-style-type: none"> Admin is logged in Tournament is upcoming 		
Postconditions:	<ul style="list-style-type: none"> Tournament cannot be registered by students 		
Normal Flow:	<ol style="list-style-type: none"> Admin clicks on an upcoming tournament Admin presses the stop registration button 		

	3. Systems prevents registration
Alternative Flows:	
Exceptions:	In the normal flow step 1. <ol style="list-style-type: none"> 1. The tournament has already begun/is over. 2. No stop registration button will be shown
Assumptions:	
Notes and Issues:	

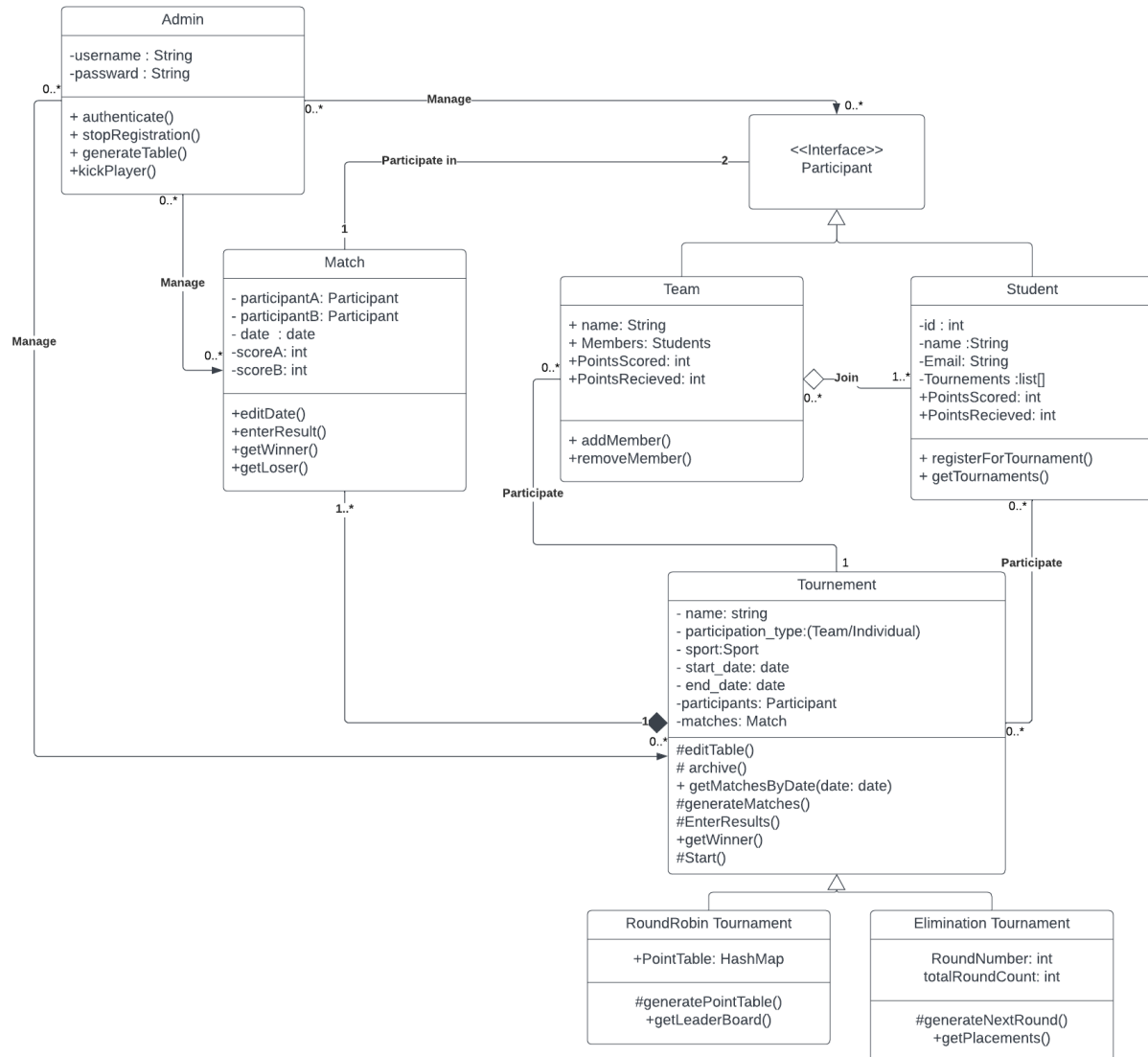
Use case ID:	US15		
Use Case Name:	Generate Tables		
Created by:	Rayan Alamrani	Last Updated by:	
Date Created:	29/3/2023	Last Revision Date:	
Actors:	Admin		
Description:	The ability to Generate the match ups of a tournament		
Trigger:	Click on a tournament and press the generate matches button		
Preconditions:	<ul style="list-style-type: none"> • Admin is logged in • Tournament registration is stopped. 		
Postconditions:	<ul style="list-style-type: none"> • Tournament matches are shown 		
Normal Flow:	<ol style="list-style-type: none"> 1. Admin clicks on a tournament 2. Admin presses the Generate matches button 		

	<ul style="list-style-type: none"> 3. System generates the matches depending on the tournament type 4. The matches are shown
Alternative Flows:	
Exceptions:	<p>In the normal flow step 1.</p> <ul style="list-style-type: none"> 1. The tournament can still be registered/ is over 2. No generate matches button will be shown
Assumptions:	
Notes and Issues:	

Phase 2:

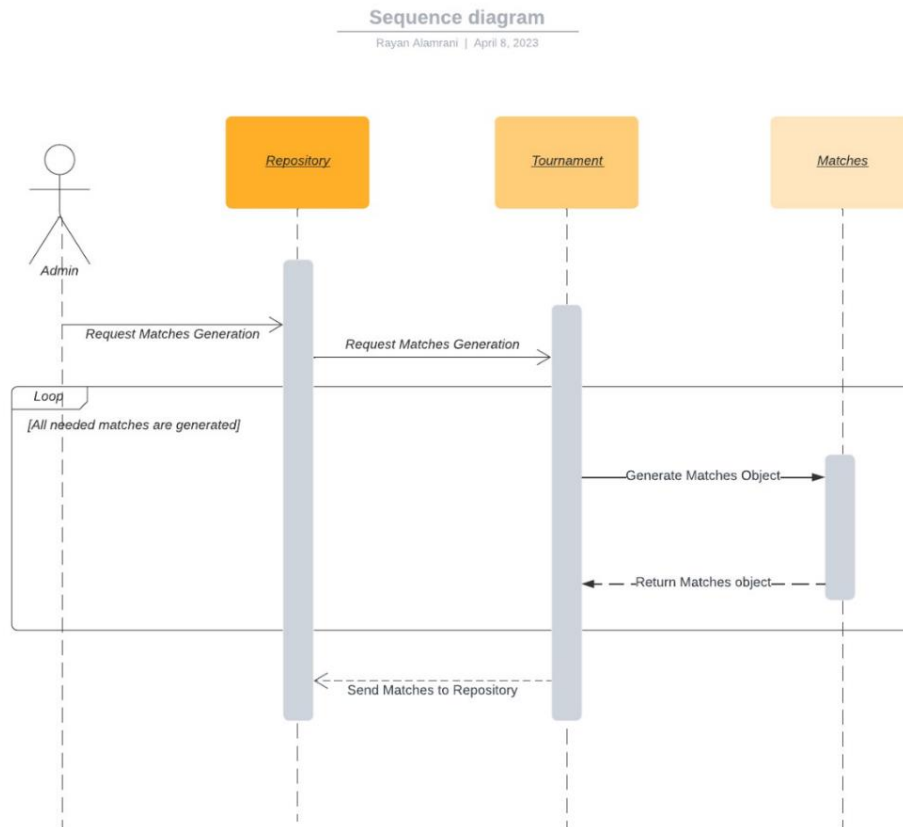
Work was divided evenly.

Class diagram:



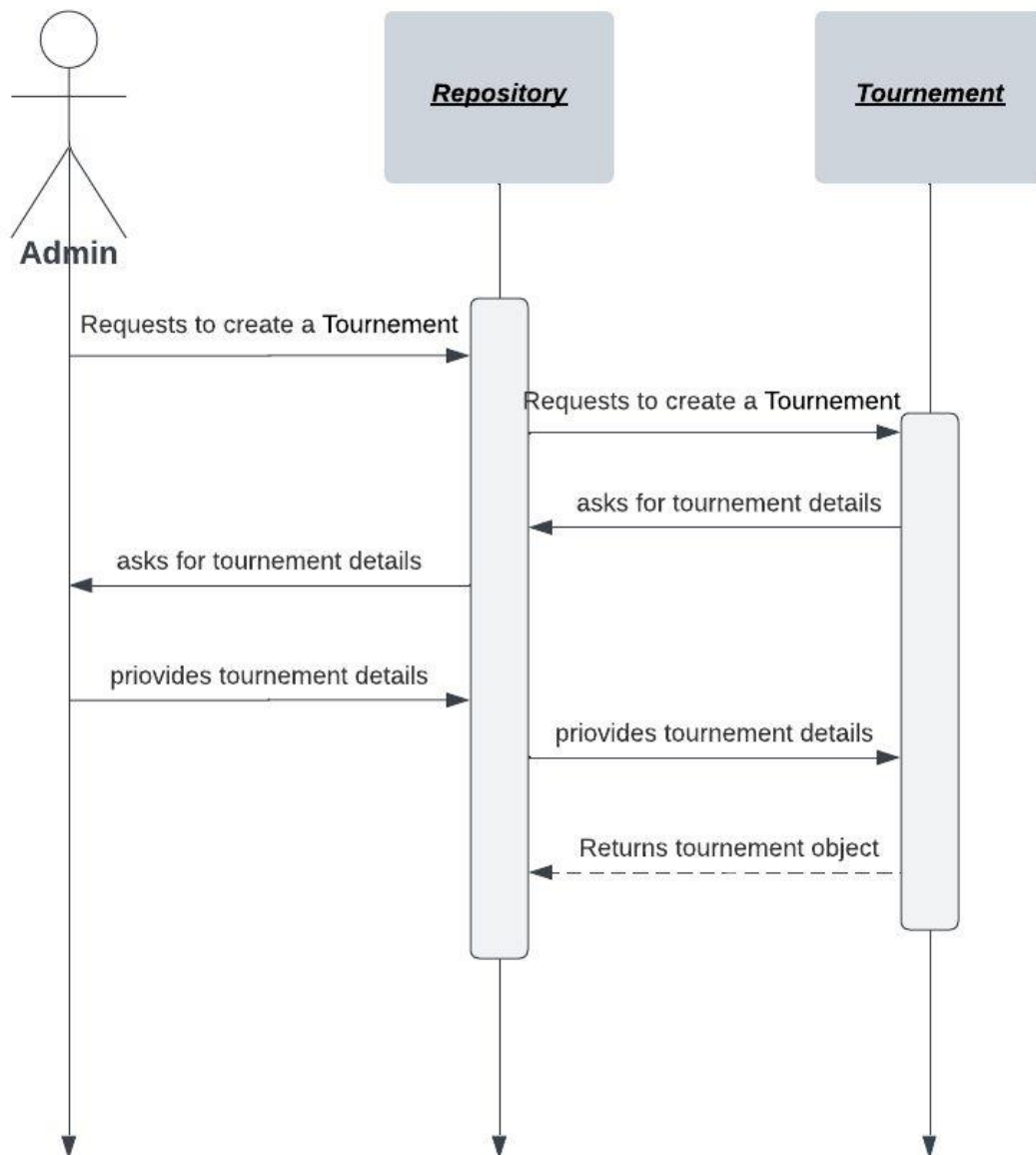
Sequence Diagrams

Generate Matches:

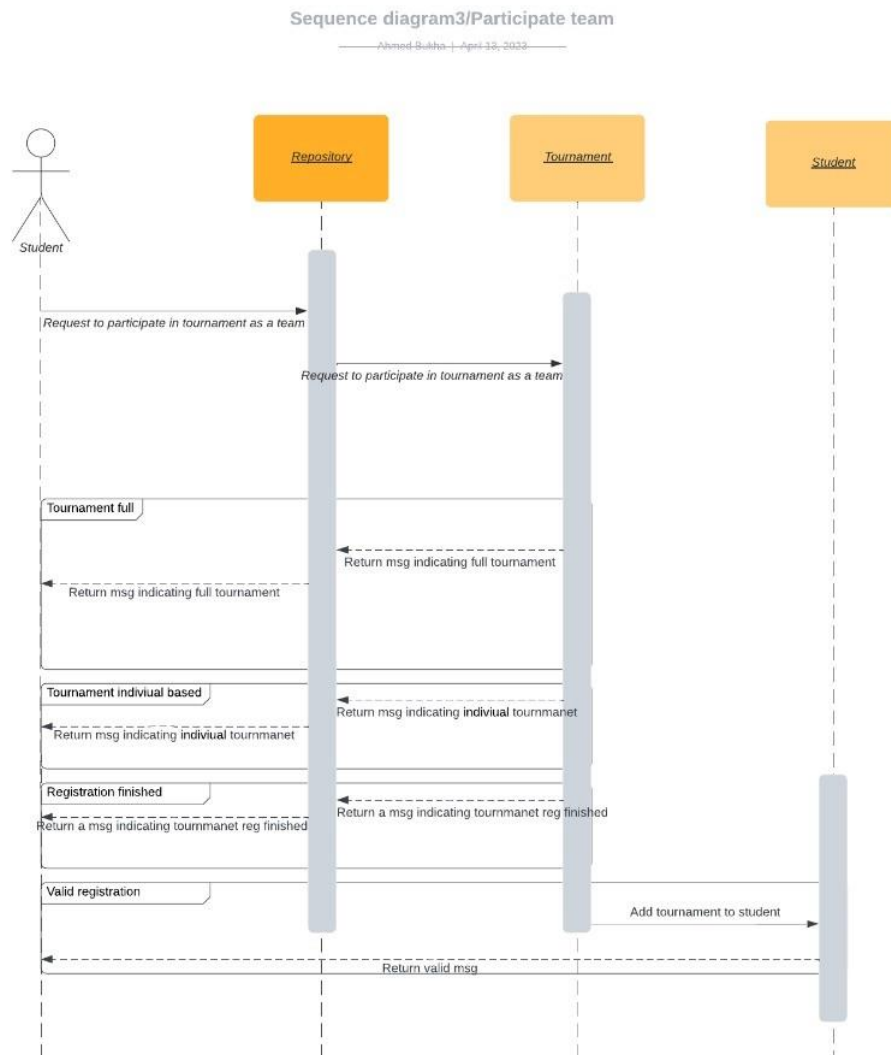


Create a tournament:

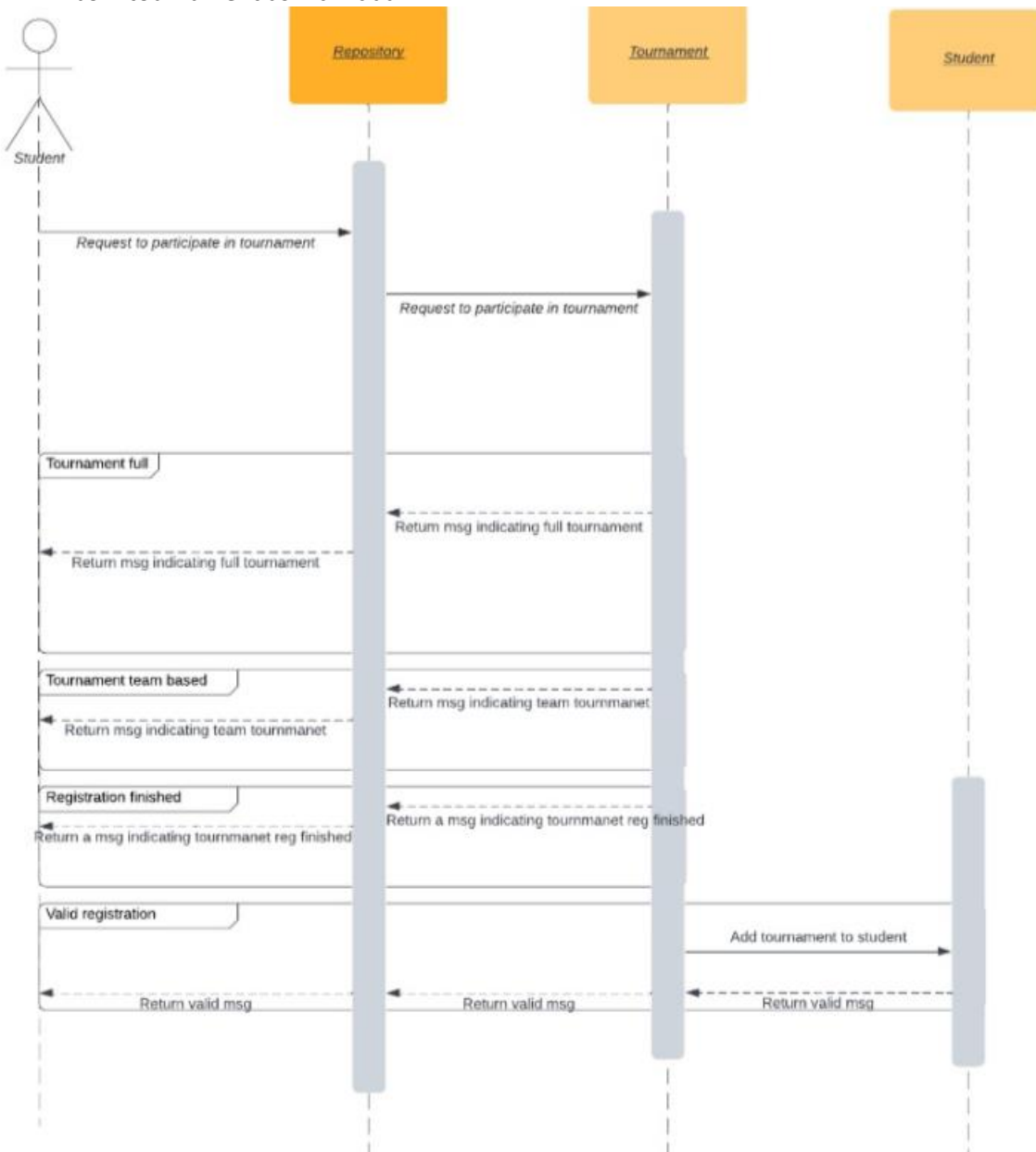
Create a tournament
Sequence diagram



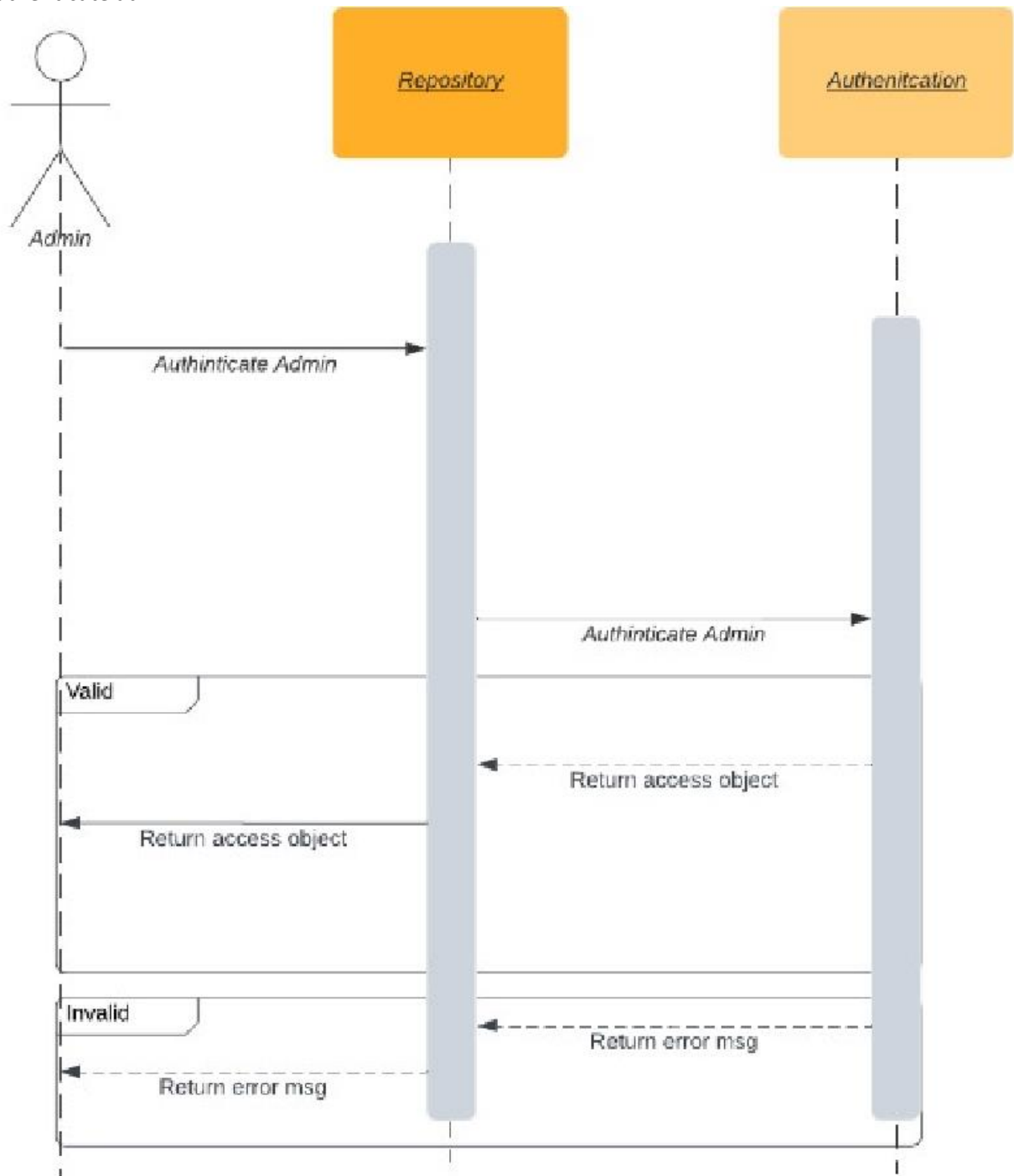
Join tournament as team:



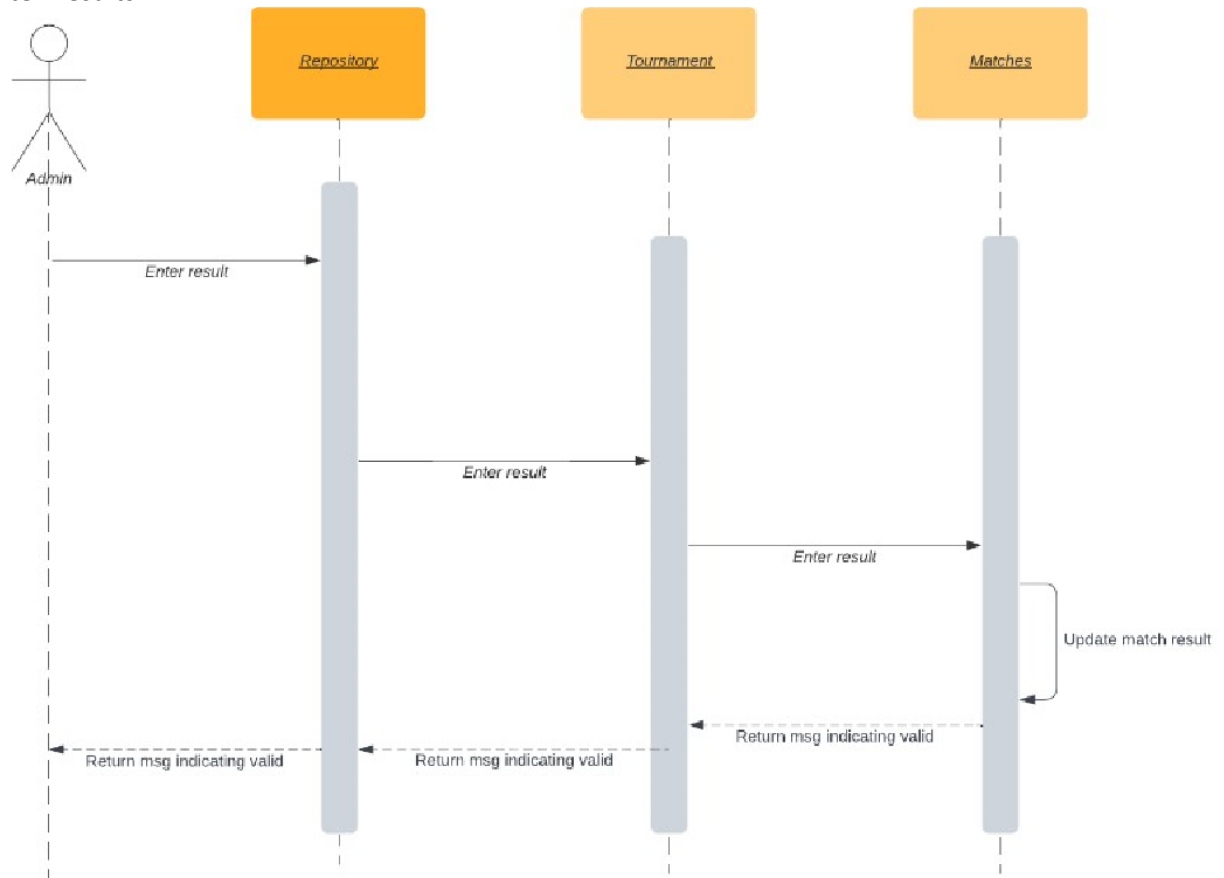
Join tournament as individual:



Authenticate admin:



Enter Results:

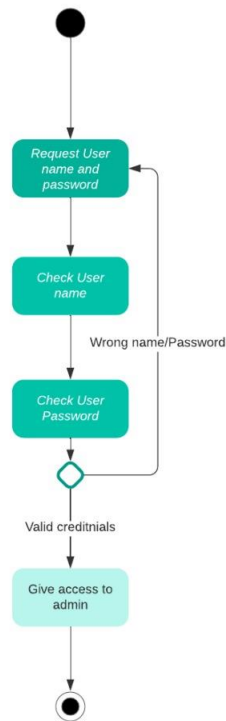


Activity diagrams:

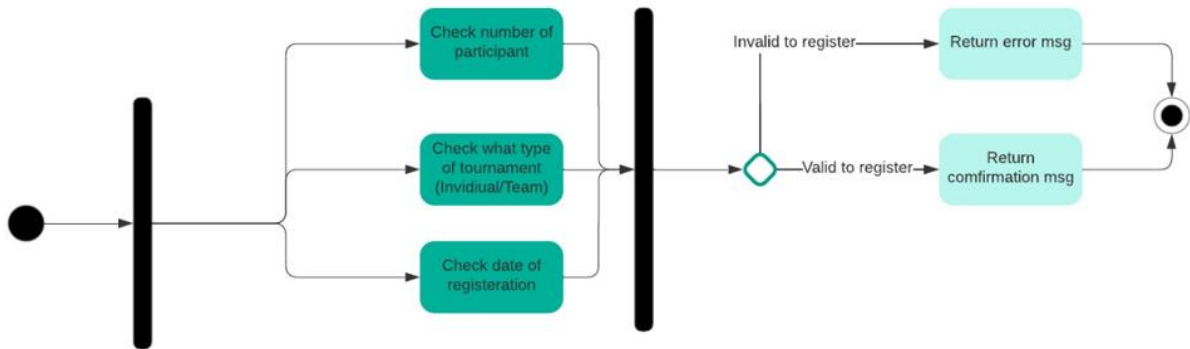
Authentication

Activity diagram Authentication

Ahmed Bukha | April 14, 2023



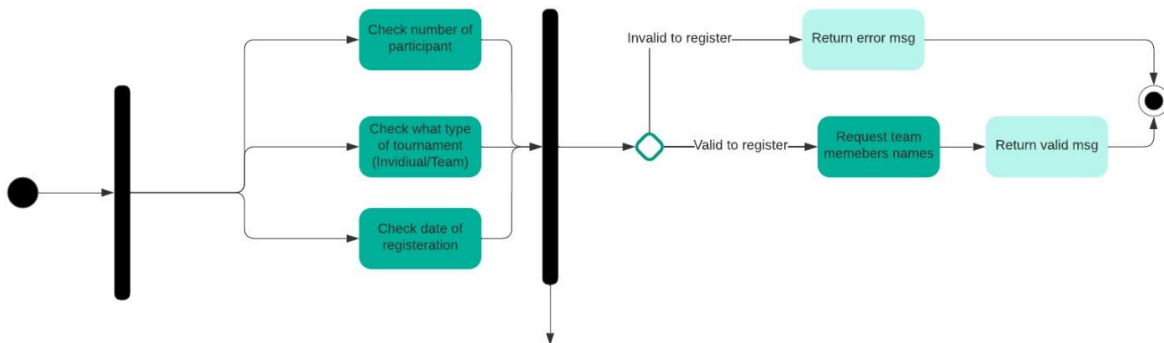
Join Tournament as individual:



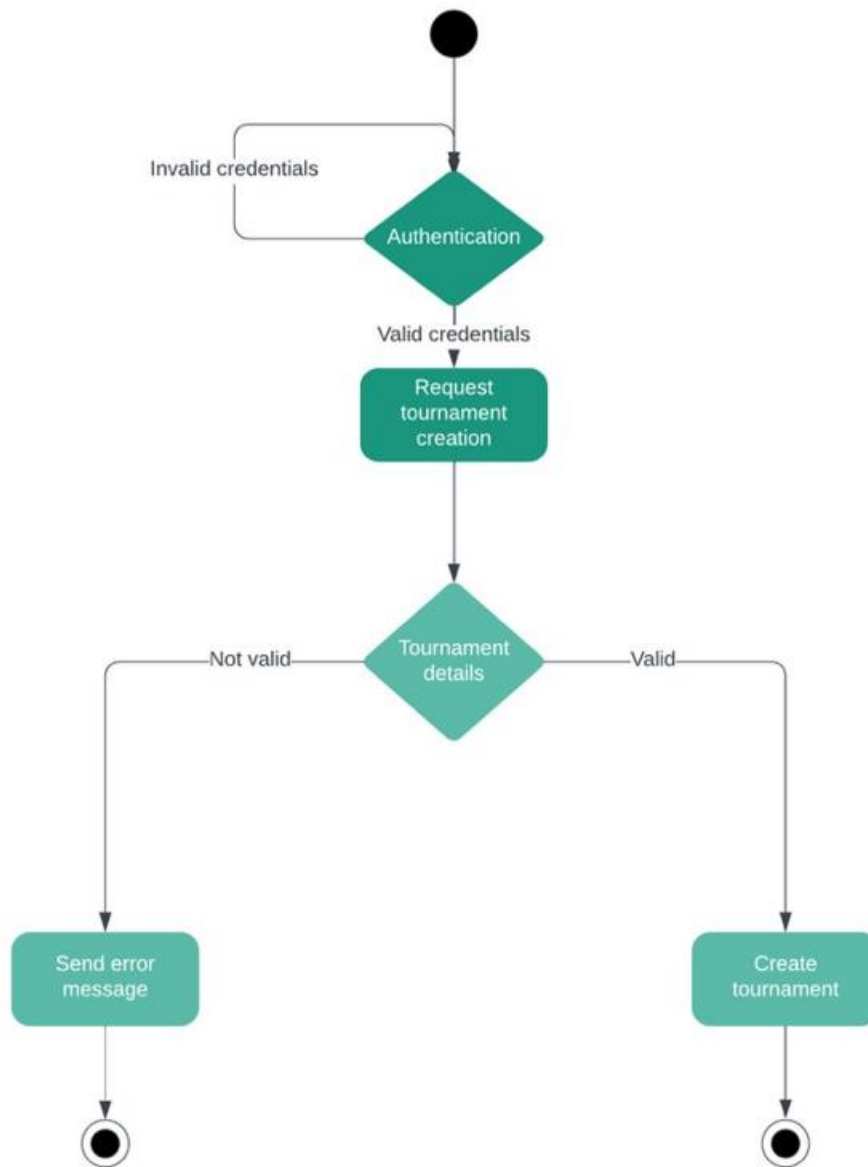
Join tournament as a team:

Activity diagram Participate team

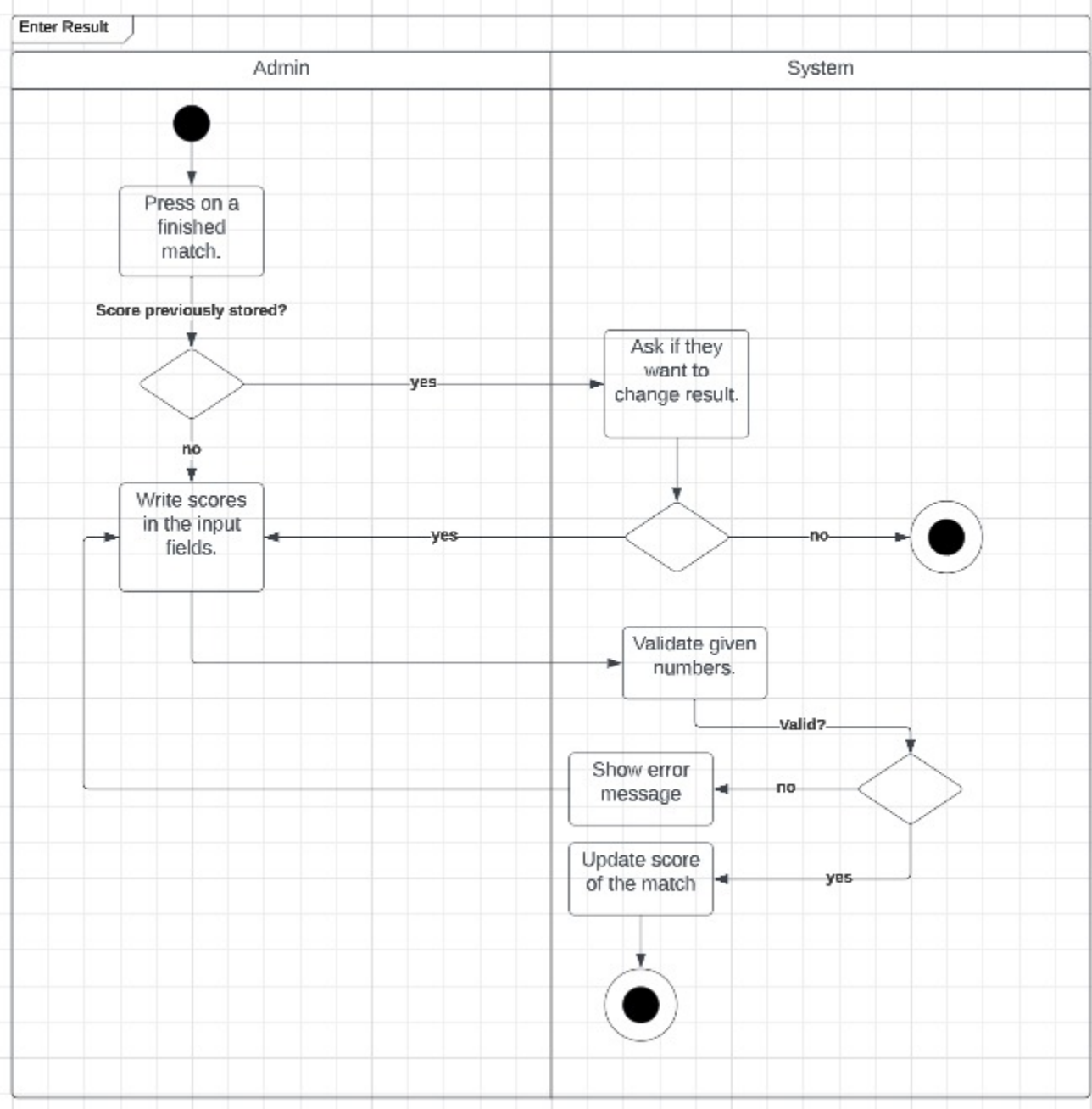
Ahmed Bukha | April 14, 2022



Create Tournament:



Enter Results:



Generate Matches:

