



## Group Assignment 3

T-103-STST, Discrete Mathematics for Engineers  
Reykjavík University — Department of Computer Science, Reykjavík, Iceland

Andri Már Kristjánsson, Elmar Sigmarsdóttir, Ísak Elí Hauksson,  
Kristinn Hrafn Daníelsson, Kristján Hagalín Jónsson og Sindri Freysson

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# Requirement List

## 0.1 Functional Requirements

Nr	Functional requirements	User group	Priority	Completed
1	The user can login as organizer	Organizer	A	✓
2	The user can register as a player	Player	A	✓
3	The user can login as a player	Player	A	✓
4	The user can enter as a spectator without signing in	General	A	✓
5	Organizer can create a tournament	Organizer	A	✓
6	Organizer can add a team to a tournament	Organizer	A	✓
7	When a team captain leaves a team, he assigns a team member to be the new captain	Team Captain	A	✓
8	The Organizer archives tournaments when they finish	Organizer	A	Outdated
9	Organizer can publish a tournament	Organizer	A	✓
10	Organizer can input match results	Organizer	A	
11	Player can create a team	Player	A	✓
12	Player becomes team captain	Player	A	✓
13	Player can leave a team	Player	A	✓
14	Team captain can add a player to his team	Team Captain	A	✓
15	Team captain can remove a player from his team	Team Captain	A	✓
16	Team captain can leave his team	Team Captain	A	✓
17	The user can view tournament	General	A	
18	The user can view tournament schedule	General	A	
19	The user can view all teams	General	A	✓
20	The user can view all players	General	A	✓
21	Organizer can manage tournament	Organizer	A	✓
22	Organizer can create a club	Organizer	B	✓
23	When the organizer creates a tournament, he chooses between double elimination and normal	Organizer	B	Outdated
24	Teams are assigned to a club on creation	Team Captain	B	✓
25	The user can view all clubs	Player	B	✓
26	Organizer can modify time of a tournament before it has started	Organizer	B	
27	Organizer can delete a tournament before it has been published	Organizer	C	
28	Organizer can edit clubs	Organizer	C	
29	Team captains can transfer his authority to a player in the team	Team Captain	C	
30	Team captain can change what club the team is associated with	Team Captain	C	
31	Organizer can cancel an ongoing tournament	Organizer	C	
32	Team captain can add ascii art to his team	Team Captain	C	✓
33	Organizer can edit specific match scheduling	Organizer	C	
34	The user can type in shortcuts for windows to travel to specific window	General	C	

## 0.2 Non-functional Requirements

Nr	Non-Functional requirements	User group	Priority	Completed
1	System automatically shuffles and arranges teams in a tournament match, based on quantity of teams and time frame	System	A	
2	When team captain leaves a team if he is alone then the team is archived	System	A	Outdated
3	Each Player can only be in one team at the same time	System	A	✓
4	The system should not crash due to invalid data	System	A	
5	The player personal data should not be visible to the spectator	System	A	
6	Only the team captain can modify the team	System	A	✓
7	Only the organizer can create tournaments	System	A	✓
8	Code must follow Python type hinting everywhere	System	A	
9	Code must follow snake case naming convention	System	A	
10	Doc-strings in code must follow Python flake8	System	A	
11	Name and Username should be the lenght of 3-40	System	A	✓
12	Tournament have must have at least 2 teams	System	A	✓
13	Player, Team, Tournament, Servers, Matches, Clubs generate UUID when model classes are created	System	A	✓
14	The user can see a breadcrumb navigation	System	B	
15	Only the organizer can modify clubs	System	B	
16	Give users options to cancel while inputting information	System	B	✓
17	Tournament can have more than 2 teams	System	B	✓
18	The Club Name will be printed in its color	System	C	
19	Show tournaments brackets visually	System	C	NO!

## Use Cases

User logs in as organizer		User registers as player	
Number	1	Number	3
Priority	A	Priority	A
Precondition	Program is running	Precondition	Program is running
Base flow	1. User selects log in	Base flow	1. Player selects log in
	2. Inputs the details for the Organizer • Organizer username		2. Player inputs his Handle
Alternative flow			3. Player is now logged in
Post condition	User is now an Organizer and can create and manage tournaments.	Alternative flow	• User doesn't have a player account. User needs to sign up as a player. Use case(2)
Actors	User/Organizer	Post condition	The player is now logged in and can access information about himself
Author	Elmar Sigmarsen	Actors	Player
		Author	Elmar Sigmarsen

User registers as player	
Number	2
Priority	A
Precondition	Program is running
Base flow	1. User selects Sign up
	2. User inputs his information • Full name • Date of birth • Address • Phone • Email • Link (optional) • Handle
	User is now registered as a player
Alternative flow	• User tries to sign up with an existing account. User needs to login to his account. See use case(3)
Post condition	User is now a player and cannot be registered as a player again.
Actors	User/Player
Author	Elmar Sigmarsen

User enters as spectator	
Number	4
Priority	A
Precondition	Program is running
Base flow	1. User selects the Spectator option
	2. Now the user is a spectator
Alternative flow	
Post condition	The user is now a spectator and can view details from the tournament, (schedule, match results, clubs, teams and players)
Actors	User
Author	Elmar Sigmarsen

Organizer can create a tournament		Organizer removes a team from a tournament	
Number	5	Number	7
Priority	A	Priority	A
Precondition	Logged in as organizer, use case(1)	Precondition	A team has to have been added to the Tournament, use case (6)
Base flow	1. Organizer selects Create Tournament	Base flow	1. Organizer selects tournament
	2. Organizer inputs tournament information		2. Organizer selects view team
	<ul style="list-style-type: none"> <li>• Unique name</li> <li>• Start date</li> <li>• End date</li> <li>• Start time frame</li> <li>• End time frame</li> <li>• Max servers</li> <li>• Venue</li> <li>• Contact email</li> <li>• Contact number</li> </ul>		3. Organizer selects remove team
	3. User is now registered as a player		4. Organizer inputs team name
		Alternative flow	
		Post condition	That team is no longer apart of the tournament
		Actors	Organizer
		Author	Elmar Sigmarsdóttir
Alternative flow			
Post condition	Organizer has now created and has access to a new unique tournament		
Actors	Organizer		
Author	Elmar Sigmarsdóttir		

Organizer adds team to tournament	
Number	6
Priority	A
Precondition	Organizer has already created a tournament, use case (5)
Base flow	1. Organizer selects tournament
	2. Organizer selects View Teams.
	3. Organizer selects add team
	4. Organizer inputs team name
Alternative flow	<ul style="list-style-type: none"> <li>• No team has been made, a player needs to make a team, use case (10)</li> <li>• The team doesn't have enough players, the team captain needs to add players to his team, use case (11)</li> </ul>
Post condition	That team is now apart of the tournament
Actors	Organizer
Author	Elmar Sigmarsdóttir

Organizer starts a tournament	
Number	8
Priority	A
Precondition	The tournament needs to have enough teams.
Base flow	1. Organizer is logged in, case (1)
	2. Organizer selects manage tournaments
	3. Organizer inputs a tournament name
	4. Organizer is now able managing a tournament
Alternative flow	<ul style="list-style-type: none"> <li>• Tournament doesn't have enough teams in it, organizer needs to add teams to the tournament, use case(6).</li> </ul>
Post condition	The organizer is now viewing the tournament and its info and can edit/manage it (publish, manage teams in the tournament, change name/date)
Actors	Organizer
Author	Elmar Sigmarsdóttir

Organizer can publish a tournament		Player creates a team	
Number	9	Number	11
Priority	A	Priority	A
Precondition	The tournament needs to have 16 teams	Precondition	
Base flow	1. Organizer selects a tournament to manage, use case (8)	Base flow	1. Player logs in, use case (3)
	2. Organizer selects publish tournament		2. Captain selects Add player to team.
	3. And confirms		3. Player inputs team name
Alternative flow	• Tournament doesn't have enough teams in it, organizer needs to add teams to tournament, use case (6)		4. Player inputs Club (no input = no club)
Post condition	Needs post condition!!!		5. (Now the player is the team captain of an empty team)
Actors	Organizer	Alternative flow	• Player is already a part of a team. Player needs to leave his existing team, see case (14) and then create a team
Author	Elmar Sigmarsen	Post condition	Player is now a team captain of a team
		Actors	Player
		Author	Elmar Sigmarsen

Organizer inputs result of a match	
Number	10
Priority	A
Precondition	A tournament needs to have been published
Base flow	1. Organizer selects a tournament to manage, use case (8)
	2. Organizer selects input match results
	3. Organizer gets a list of all matches and selects matches to input results
	4. Organizer is asked who of the two teams won the match and inputs the team name
	5. Player is now team captain of the newly created team.
Alternative flow	
Post condition	Results of a specific match have been made so the winner of that match goes to the next round
Actors	Organizer
Author	Elmar Sigmarsen

Team captain adds a player to their team	
Number	12
Priority	A
Precondition	Player must have created a team, use case(10)
Base flow	1. Captain logs in, use case (3)
	2. Captain selects My Team
	3. Captain selects Add Player to Team
	4. Captain inputs Players Handle
	5. That Player is now a part of team
Alternative flow	• A player is already in another team. That player needs to leave his team, see case (14), then the Captain can add that player to his team
Post condition	Team captain has now added a player to his team
Actors	Team captain, Player
Author	Elmar Sigmarsen

Team captain removes a player from their team.	
Number	13
Priority	A
Precondition	Team captain must have added a player to their team, use case(11)
Base flow	<ol style="list-style-type: none"> <li>1. Captain logs in, use case (3)</li> <li>2. Captain selects view team</li> <li>3. Captain selects remove player</li> <li>4. Captain inputs Player's handle</li> <li>5. Player has been removed from the team</li> </ol> <ul style="list-style-type: none"> <li>• That player removes himself from the team, use case (14)</li> </ul>
Post condition	Team no longer has That Player in their team
Actors	Team captain, Player
Author	Elmar Sigmarsdóttir

Team captain leaving his team.	
Number	15
Priority	A
Precondition	Player needs to be a team captain.
Base flow	<ol style="list-style-type: none"> <li>1. Captain logs in, use case (3)</li> <li>2. Captain selects view team</li> <li>3. Captain selects leave team</li> <li>4. (Error message/ are you sure)</li> <li>5. Captain selects a Player from team to become new Captain</li> <li>6. The Captain has left the team</li> </ol> <ul style="list-style-type: none"> <li>• If the team the Captain is leaving has no other players the team is archived, but still has its statistics (wins, etc.)</li> </ul>
Alternative flow	
Post condition	TThe Captain is no longer a part of the team and is now has the status of just Player (not in team), and the player he selected has the status team Captain of that team
Actors	Captain, player
Author	Elmar Sigmarsdóttir

Player leaves their team	
Number	14
Priority	A
Precondition	Player needs to be in a team.
Base flow	<ol style="list-style-type: none"> <li>1. Player logs in, use case (3)</li> <li>2. Player selects view team</li> <li>3. Player selects leave team</li> <li>4. (Error message/ confirmation)</li> <li>5. Player is no longer a part of any team</li> </ol> <ul style="list-style-type: none"> <li>• Team captain removes player from team, case (12)</li> </ul>
Alternative flow	
Post condition	The player is no longer a part of any team and can now be picked onto a new team or create his own
Actors	Player
Author	Elmar Sigmarsdóttir

Any user can see tournaments	
Number	16
Priority	A
Precondition	
Base flow	<ol style="list-style-type: none"> <li>1. User selects Tournaments</li> <li>2. User selects which tournament</li> <li>3. User is now viewing a specific tournament</li> </ol>
Alternative flow	<ul style="list-style-type: none"> <li>• There are no tournaments available, the organizer needs to create a tournament, use case (5)</li> <li>• A tournament is not published, so the organizer needs to start the tournaments, use case (9)</li> </ul>
Post condition	User can now look through that tournament
Actors	Any user
Author	Elmar Sigmarsdóttir

Any user can see tournament schedule	
Number	17
Priority	A
Precondition	
Base flow	<p>1. User selects a tournament</p> <p>2. User selects Schedule</p> <p>3. User is now viewing the schedule of a tournament</p>
Alternative flow	
Post condition	User can view the schedule of the next round of that tournament (or whole tournament, date)
Actors	Any user
Author	Elmar Sigmarsdóttir

Any user can view players	
Number	19
Priority	A
Precondition	
Base flow	
Alternative flow	<p>1. User selects players (in main menu)</p> <p>2. User is viewing a list of all registered players</p> <ul style="list-style-type: none"> <li>• User can select a tournament see use case (XXX), and in that menu select players and then the user is viewing only the players in that tournament</li> <li>• User selects a team, use case (XX), and from the team menu the user can view a list of that teams player</li> </ul>
Post condition	The user is viewing list of players that he can select from to see that players information (handle, statistics)
Actors	Any user
Author	Elmar Sigmarsdóttir

Any user can view teams	
Number	18
Priority	A
Precondition	
Base flow	<p>1. User selects teams (from main menu)</p> <p>2. User is viewing a list of all teams</p>
Alternative flow	<ul style="list-style-type: none"> <li>• User can select a tournament see use case (XXX), and in that menu select teams and then the user is viewing only the teams in that tournament</li> </ul>
Post condition	The user is viewing a list of teams that he can select from see that teams information (players, statistics)
Actors	Any user
Author	Elmar Sigmarsdóttir

Organizer can create clubs	
Number	20
Priority	B
Precondition	
Base flow	
Alternative flow	<p>1. Organizer selects View Clubs.</p> <p>2. Organizer selects add club.</p> <p>3. Organizer inputs information.</p> <ul style="list-style-type: none"> <li>• Name</li> <li>• Club color</li> <li>• Hometown</li> <li>• Country</li> </ul>
Post condition	Organizer has added a new club.
Actors	Organizer
Author	Elmar Sigmarsdóttir

Organizer can choose type of tournament when creating one		Organizer can delete a tournament	
Number	Priority	Number	Priority
Priority	B	Priority	B
Precondition		Precondition	A tournament can NOT be published
Base flow	<p>1. While Organizer is creating a tournament, use case (5)</p> <p>2. Now there is an extra section which asks the organizer what type of tournament it is (knockout or double elimination)</p>	Base flow	<p>1. Organizer selects a tournament to manage, use case (8)</p> <p>2. Organizer selects Delete</p> <p>3. Organizer confirms deletion</p>
Alternative flow		Alternative flow	
Post condition	Organizer has added selected what type of tournament	Post condition	Now the tournament has been deleted and no records of it are left
Actors	Organizer	Actors	Organizer
Author	Elmar Sigmarsdóttir	Author	Elmar Sigmarsdóttir

Organizer can edit time frame of tournament	
Number	Priority
Priority	B
Precondition	Tournament has to created and NOT started
Base flow	<p>1. Organizer selects a tournament to manage, use case (8)</p> <p>2. Organizer selects Edit Time Frame</p> <p>3. Organizer input new:</p> <ul style="list-style-type: none"> <li>• Start date</li> <li>• End date</li> </ul> <p>4. Organizer selects Edit Time Frame</p>
Alternative flow	
Post condition	The Time frame has been updated of that tournament
Actors	Organizer
Author	Elmar Sigmarsdóttir

Player can edit their information.	
Number	Priority
Priority	B
Precondition	
Base flow	<p>1. Player logs in, use case (3)</p> <p>2. Player selects Edit Information</p> <p>3. Player selects the info he wants to edit (all info)</p> <p>4. Player has changed his info</p> <p>3. Player has changed their information.</p>
Alternative flow	
Post condition	Player has updated their information.
Actors	Player
Author	Elmar Sigmarsdóttir

Team Captain can make team Player a Captain	
Number	25
Priority	B
Precondition	
Base flow	<p>1. Player logs in, use case (3)</p> <p>2. Captain selects My Team</p> <p>3. Captain selects transfer authority</p> <p>4. Captain inputs players' name to transfer authority to</p>
Alternative flow	
Post condition	Now that Player is the Team Captain, and the old Team Captain is just a Player on the team
Actors	Captain, Player
Author	Elmar Sigmarsdóttir

Team captain can edit team name	
Number	28
Priority	C
Precondition	
Base flow	<p>1. Captain is logged in, and selects View Team</p> <p>2. From View Team menu Captain selects Change Team Name</p> <p>3. Captain inputs the new team name (has to be unique)</p>
Alternative flow	
Post condition	Now that teams name has a new name, and new or other teams cannot use that name, but can use the previous team name
Actors	Team Captain
Author	Elmar Sigmarsdóttir

Any user can view clubs	
Number	26
Priority	B
Precondition	
Base flow	<p>1. User selects spectator</p> <p>2. User selects clubs</p> <p>User is now viewing a list of clubs</p>
Alternative flow	
Post condition	User can view all the clubs created, and can select any club to see that clubs teams
Actors	Any user
Author	Elmar Sigmarsdóttir

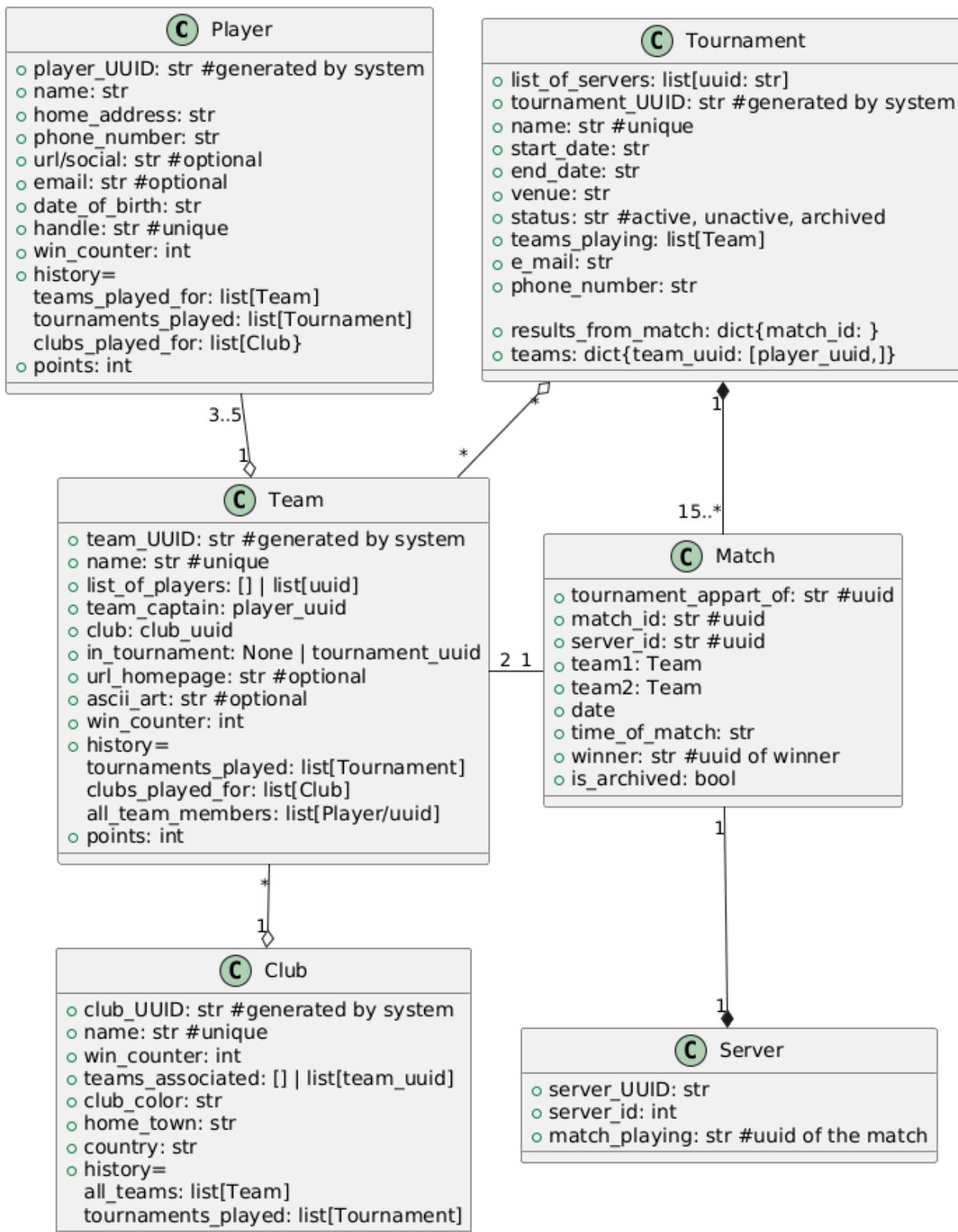
Team captain can change the teams club	
Number	29
Priority	C
Precondition	
Base flow	<p>1. Team Captain is logged in, and selects View Team</p> <p>2. From View Team menu Captain selects Change Club</p> <p>3. Captain has a list of the clubs and can select what his teams new club is</p>
Alternative flow	
Post condition	Now the Captains team is in a new club, so the team is listed in the their new club and no longer in the old club
Actors	Team Captain
Author	Elmar Sigmarsdóttir

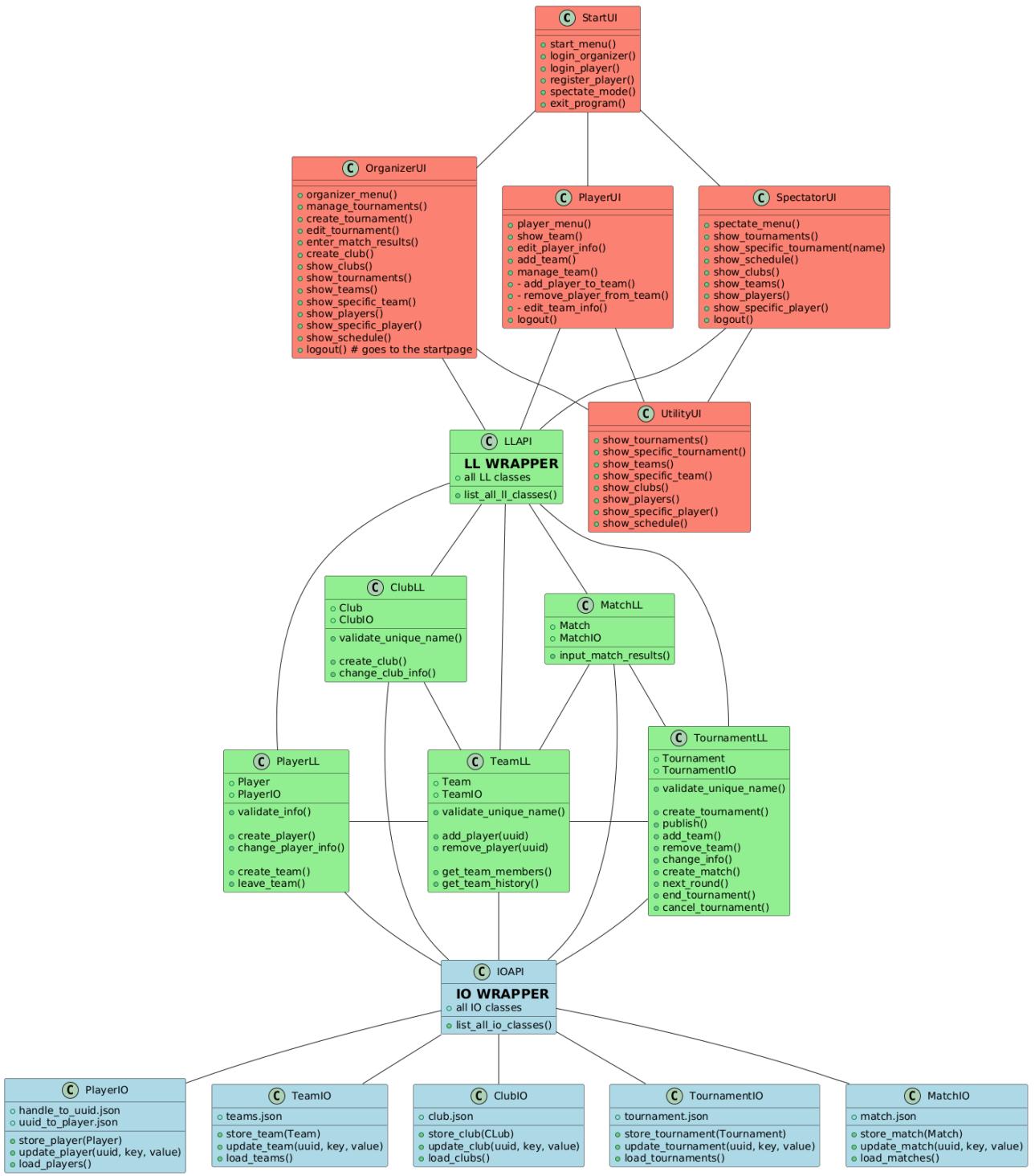
Organizer can cancel a tournament	
Number	27
Priority	C
Precondition	A tournament has to have been published
Base flow	<p>1. Organizer selects a tournament</p> <p>2. Organizer selects Cancel tournament</p> <p>3. Tournament is now canceled</p>
Alternative flow	
Post condition	The tournament is cancelled, all records are not kept, the statistics for the teams is reverted to the state before the tournament started
Actors	Organizer
Author	Elmar Sigmarsdóttir

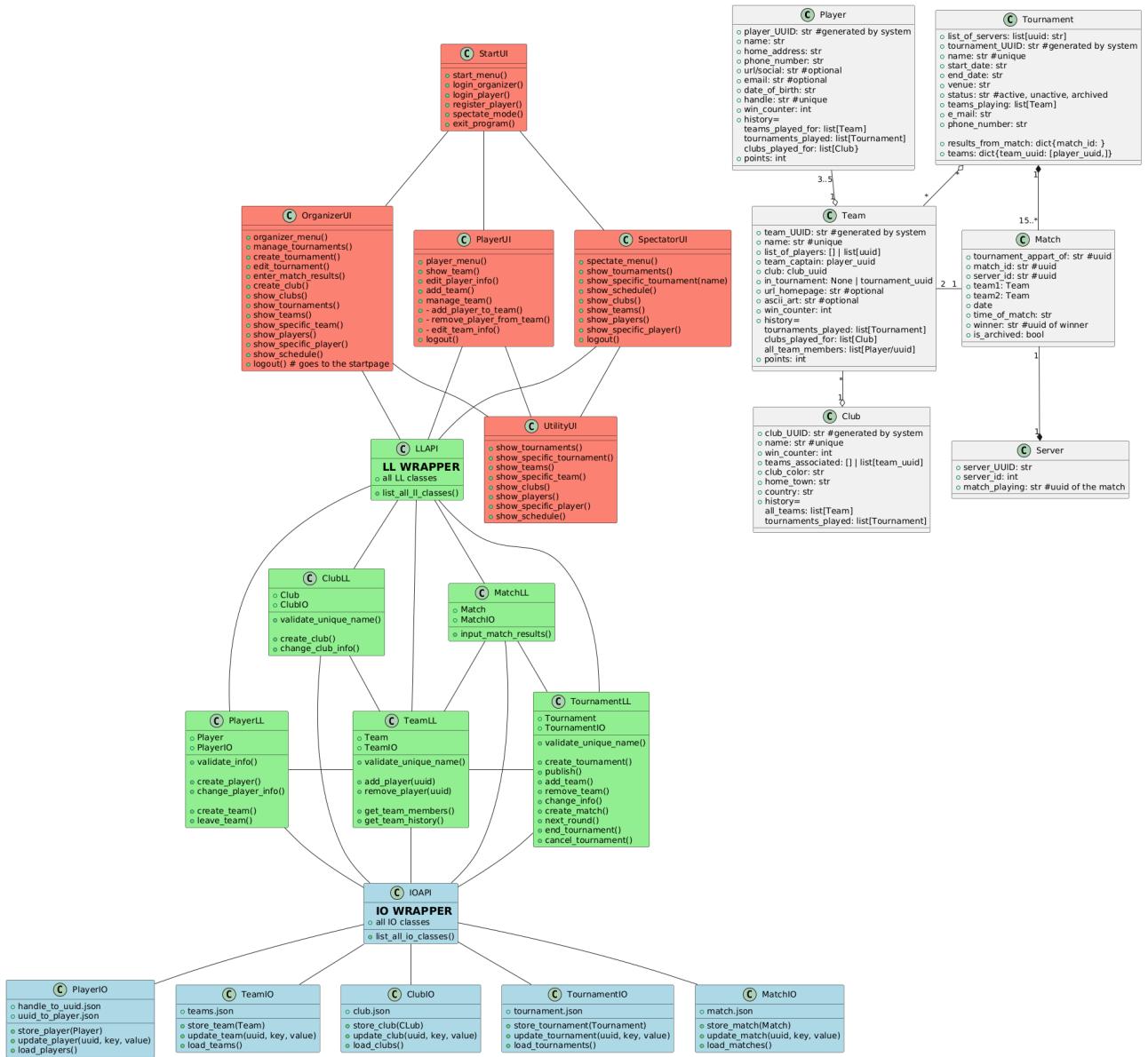
Team Captain can add ASCII art to his team (logo)	
Number	30
Priority	C
Precondition	
Base flow	<p>1. Captain is logged in, and selects View Team</p> <p>2. Captain selects add ASCII art</p> <p>3. Captain inputs the ASCII art</p>
Alternative flow	
Post condition	Now the team has ASCII art that can be viewed from any user viewing the team
Actors	Team Captain
Author	Elmar Sigmarsdóttir

# Class Diagrams

Class diagrams are the main building block in object-oriented modeling. They are used to show the different objects in a system, their attributes, their operations and the relationship between them. The two class diagrams are with model classes and 3 tier design classes. Model classes are a class (bucket) that is just the data, with few functions. While the 3-tier design splits the classes into the user interaction layer, logic layer and data layer, which are connected by so called wrappers that make it so that each layer doesn't impact the rest of the layers to make it easier refactor or change classes or functions without the other layers getting affected. The diagrams below show model classes, 3-tier design and model classes combined with 3-tier design.







# User Group Analysis

Table 1:

User group	Organizers	Team Captains	Player	Spectators
Background	<b>Age:</b> 19+	<b>Age:</b> 19+	<b>Age:</b> 19+	<b>Age:</b> Any
	<b>Gender:</b> Any	<b>Gender:</b> Any	<b>Gender:</b> Any	<b>Gender:</b> Any
	<b>Education:</b> Graduated from high school	<b>Education:</b> Graduated from high school	<b>Education:</b> Graduated from high school	<b>Education:</b> Graduated from high school
	<b>Abilities:</b> Nothing special	<b>Abilities:</b> Nothing special	<b>Abilities:</b> Nothing special	<b>Abilities:</b> Nothing special
	<b>Computer skills:</b> Very good	<b>Computer skills:</b> Very good	<b>Computer skills:</b> Very good	<b>Computer skills:</b> Various, depends on age and education
	<b>Number:</b> 1	<b>Number:</b> ca. 400	<b>Number:</b> ca. 1750	<b>Number:</b> ca. 1750
User goal	Plan, coordinate and manage a competitive tournament information	To manage a tournament team, enter team information and see tournament information	To enter and see information related to themselves and tournament	To see and keep up with tournament information
Equipment	A good computer with an internet connection	A good computer with an internet connection	A good computer with an internet connection	A good computer with an internet connection
Environment	The physical location is good both at Reykjavík University or at another location with an internet connection	The physical environment can be good both at home and at Reykjavík University	The physical environment is usually good wherever, as long as there is an internet connection available	The physical environment is usually good wherever, as long as there is an internet connection available
Usage	<b>How often:</b> Before and during every tournament	<b>How often:</b> Before every tournament	<b>How often:</b> After tournaments	<b>How often:</b> During and after tournaments
	<b>For how long each time:</b> The system is used for a couple of hours at a time but it can vary depending on the duration of the tournament	<b>For how long each time:</b> The system is used for about 30 minutes each time	<b>For how long each time:</b> The system is used for about 10 minutes each time	<b>For how long each time:</b> The system is used for about 10 minutes each time
	<b>Skills:</b> Very skilled, since they take care of setting everything up with the use of the system and should be familiar with it to do so	<b>Skills:</b> Skilled, since they take care of entering crucial information and should at least be familiar with the system in order to do so	<b>Skills:</b> Mediocre, since they only need to take care of their own personal information	<b>Skills:</b> Not very skilled, since they only use the system to see tournament information
Important	Most important + Team captains	Most important + Organizers	Second most important	Least important

# 1 UI-Design

## 1.1 Tasks

### Player / Captain

1. You want to create a account for a player named Miss Piggy, handle: BaconBits, date of birth: june 14th 1938, home address: 44 Bronson Lane, phone number: 1234567, email: mspiggy@gmail.com, socials: none
2. Now that you are a player, you want to create a team named TheMuppets in the club Disney
3. Now that you have created a team you want to add another player called GreenCroaker to your team

### Admin

1. You want to log in as an admin (the handle is just "admin") and create a tournament named MuppetsVsDocHopper that will take place in Sesame Street, it will start 27th of november 2025 and end the 29th of november 2025, the contact info is the gmail: something@something.com, and phone number: 1234567.
2. Now you want to publish the tournament, but you first have to add the TheMuppets team, DocHopper team to the tournament and 14 other teams
3. After publishing the tournament, you start the tournament. The system creates matches between two unique teams.
4. You input the results of the matches, with TheMuppets winning every match. This happens until they win the tournament.

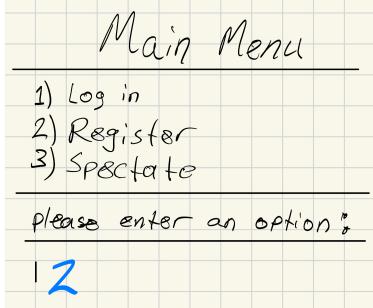
### Spectator

1. You want to log in as a spectator and go to view the results of the MuppetsVsDocHopper tournament.
2. You want to see the information on TheMuppets team and see how many games they have won in the past.

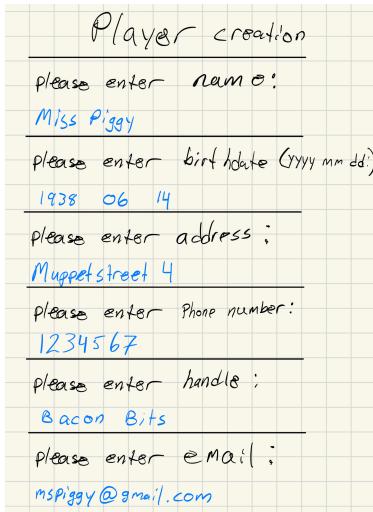
## 1.2 Happy path

### Happy path 1 "You want to register yourself as a player"

1. User starts the program and chooses option "2" to register themselves as a new user



2. User inputs all necessary information they are prompted to give



3. User is taken to their player menu where they can see their information

Player Page

Name: Miss Piggy  
 Birthdate: 1938 06 14  
 Address: Muppetstreet 4  
 Phone number: 1234567  
 E-Mail: msPiggy@gmail.com

---

Team: None  
 Club: None  
 Handle: BaconBits

---

Wins: 0  
 Points: 0

---

1) Edit info  
 2) My team  
 3) Create a team  
 b) Back

---

please enter an option:

---

| 1

4.

Happy Path 2 "Now that you are a player, you want to create a team named TheMuppets in the club Disney"

1. User starts the program and chooses option "1" to log in

Main Menu

1) Log in  
 2) Register  
 3) Spectate

---

please enter an option:

---

| 1

2. User inputs their user handle

Log in

Input your handle:

BaconBits

3. User is taken to their player menu where they can see their information and chooses option 3 to create a new team

## Player Page

Name: Miss Piggy  
Birthdate: 1938 06 14  
Address: Muppetstreet 4  
Phone number: 1234567  
Team: None  
Club: None  
Handle: BaconBits  
E-Mail: msPiggy@gmail.com

Wins: 0

Points: 0

- 1) Edit info
- 2) My team
- 3) Create a team
- 4) Back

Please enter an option:

3

4. User is made aware that they will be made captain of the team they are creating and choose "c" to continue

By creating a team you are assigned  
as the captain of it!  
c) Continue  
b) Back  
Please enter an option:  
C

5. User is prompted to give information and inputs "TheMuppets" as a name and leaves the rest blank since it is not needed

6. User then gets a list of all available clubs and chooses the "Disney" club to join it

Team Creation  
Enter teamname:  
The Muppets  
Enter URL for the team (optional):  
Enter ASCII art (optional):

## Available clubs

XXXXX  
XXX XX  
Disney  
clubName

Enter a Club to join:  
Disney

**Happy Path 3 "Now that you have created a team, you want to add another player called GreenCroaker to your team"**

1. Player is already loged in as a player and selcts

## Player Page

Name: Miss Piggy  
Birthdate: 1938 06 14  
Address: Muppetstreet 4  
Phone number: 1234567

Team: None  
Club: None  
Handle: BaconBits  
E-Mail: msPiggy@gmail.com

Wins: 0

Points: 0

- 1) Edit info
- 2) My team
- 3) Create a team
- b) Back

please enter an option:

1 2

2. User inputs "1" to edit their team

## My Team

Team: The Muppets

C - BaconBits

BlueBignose

SmileyBear

- 1) Edit team
- 2) Leave team
- b) Back

1

3. User inputs "1" again to add a player to their team

## Edit team

- 1) Add player
- 2) Remove player
- b) Back

1

4. User inputs the handle of the player they want to add

## Add Player

Enter a players name or the first letter(s) to search:

GreenCroaker

5. The player is found and the user inputs "Y" to confirm that they want to add them to their team

## Add Player

Enter a players name or the first letter(s) to search:

GreenCroaker

The handle GreenCroaker was found do you want to add them to your team Y/N:

Y

Happy Path 4 "You want to log in as an admin (the handle is just "admin") and create a tournament named MuppetsVsDocHopper

1. User inputs "1" to log in

Main Menu

---

- 1) Log in
- 2) Register
- 3) Spectate

---

please enter an option:

| 1

2. User inputs "Admin" in order to log in as an admin

Log in

---

Input your handle:

Admin

3. User is met with the admin options and inputs "1" to create a tournament

Admin Menu

---

- 1) Create Tournament
- 2) Manage Tournaments
- 3) Create Club

---

b) Back

---

please enter an option:

| 1

4. User is prompted for the needed info in order to be able to create a tournament and inputs the information needed

Create tournament

---

Enter tournament name:

Muppets vs DocHopper

---

Enter venue name:

Sesame Street

---

Enter Start date

2025 11 27

---

Enter end date

2025 11 29

---

Enter contact E-Mail:

Something@Something.com

---

Enter contact phone number:

1234567

**Happy Path 5 "Now you want to start the tournament, but you first have to add the TheMuppets team and the DocHopper team to the tournament"**

1. User goes back to the admin menu and inputs "2" in prder to manage their tournaments

Admin Menu

---

- 1) Create Tournament
- 2) Manage Tournaments
- 3) Create Club

---

b) Back

---

please enter an option:

| 2

2. User is met with a list of all their tournaments and if they are active or unactive and user inputs the name of the tournament they want to manage

Manage Tournaments  
 tournamentname1, active  
 x x x x x x x x, unactive  
MuppetsVs Doc Hopper, unactive  
 Choose a tournament to edit: ?  
MuppetsVs Doc Hopper

3. User inputs "1" to manage the teams in the tournament

Manage Teams  
 1) Add Team  
 2) Remove team  
 3) Back  
1

4. User gets prompted to add a teamname to add to the tournament, the program confirms that the team was found and user inputs "y" to add it

Add Team  
 Enter team name or "l" to list all teams:  
TheMuppets  
 Add Team  
 Enter team name or "l" to list all teams:  
TheMuppets  
 TheMuppets was found, do you want to add it? Y/N  
y

5. User re-does the previous 2 steps but inputs another teamname

Add Team  
 Enter team name or "l" to list all teams:  
DocHopper  
 Add Team  
 Enter team name or "l" to list all teams:  
DocHopper  
 DocHopper was found, do you want to add it? Y/N  
y

6. User goes back to the tournament manage menu and inputs "2" to publish it

Manage Unactive Tournament  
 1) Manage teams  
 2) Publish  
 3) Edit Tournament  
 4) Back  
2

7. User inputs the name of the tournament they want to publish and confirm to publish it

Publish  
 What tournament do you want to publish?  
TheMuppetsVs Doc Hopper  
 Publish  
 What tournament do you want to publish?  
TheMuppetsVs Doc Hopper  
 TheMuppetsVs Doc Hopper was selected  
 do you want to continue? Y/N:  
y  
 Publish  
 What tournament do you want to publish?  
TheMuppetsVs Doc Hopper  
 TheMuppetsVs Doc Hopper was selected  
 do you want to continue? Y/N:  
y  
 TheMuppetsVs Doc Hopper has been published

Happy Path 6 “Now that all the rounds have finished except for the last round of the tournament, you want to input the results that TheMuppets won the tournament”

1. User goes back to the manage tournament menu and inputs the name of the tournament they want to input the results to

Manage Tournaments  
 tournament name 1, active  
 X X X X X X X X, active  
 MuppetsVsDocHopper, inactive  
 Choose a tournament to edit:  
MuppetsVsDocHopper

2. Since the tournament is now active the user gets a new menu and inputs "1" to input results

Manage active tournaments  
 1) input results of match  
 2) Next round  
 3) Cancel tournament  
 b) Back  
 please enter an option:  
1

3. User is met with a list of all matches left in the tournament and inputs "1" to select match number 16

Match results  
 Match Nr Team 1 Team 2  
 Match 30 TheMuppets DocHopper  
 1) Match 30  
 b) Back  
 please enter an option:  
1

4. User inputs the name of the winning team for that round

Select a winner  
 Match 30 TheMuppets DocHopper  
TheMuppets

5. Since all the matches of the tournament have finished, the program prints out who won the tournament

Tournament results  
 TheMuppets Won the tournament!  
 b) Back

**Happy Path 7 "You want to log in as a spectator and go to view the results of the MuppetsVsDocHopper tournament"**

1. User inputs "3" in the main menu to spectate

Main Menu  
 1) Log in  
 2) Register  
 3) Spectate  
 please enter an option:  
3

2. User is taken to the spectators page and inputs "4" to see the tournament history

Spectate Page  
 1) Game schedule  
 2) Clubs  
 3) Teams  
 4) Tournament History  
 b) Back  
 please enter an option:  
4

3. User is met with a list of previous tournaments and can see next to each tournament who the winner was

Tournament History

xxxxx, Winner: x  
 FinishedTournament, Winner: bla  
 Muppets Vs Doc Hopper, Winner: TheMuppets  
 AAAAA, winner: B  
 BIGCHUNGLIS, winner: WhatstupDOC

b) Back

Happy Path 8 "You want to see the information on TheMuppets team and see how many games they have won in the past"

1. User inputs "3" on the main menu to spectate

Main Menu

1) Log in  
 2) Register  
 3) Spectate

please enter an option:

| 3

2. User is taken to the spectators page and inputs "3" to see team inforation

Spectate Page

1) Game schedule  
 2) Clubs  
 3) Teams  
 4) Tournament History  
 b) Back

please enter an option:

| 3

3. User is taken to a team lookup menu and inputs "2" to search for a specific team

Teams

1) See all teams  
 2) Search for team  
 b) Back

2

4. User inputs the desired team name and then the teamname, along with how many wins the team has gotten and the club it is is printed for the user

Search for team

Enter a players name or the first letter(s) to search:  
TheMuppets

TheMuppets Wins: 1 Club: Disney

## 2 Extra Notes

### 2.1 Archives

#### 2.1.1 Tournament

- When the tournament is over then it is archived

#### 2.1.2 Team

- The place that a team goes to when a team captain is alone in a team and leaves the team (AKA: IF a team becomes empty)
- Stores empty teams and their scores (Should be able to view it)

### 2.2 Publish Tournament

When managing the tournaments the Organizer has the option of publishing a tournament and by pressing that option, he will get a list of available tournaments (AKA: Tournaments that have 16 or more teams and tournaments that aren't already published). Then he will input what tournament he wants to publish and that tournament

### 2.3 Search Bar

- Can input the name of a player directly
- If unsure about the player options, then should be able to list every name
- The ability to search for the first letters to narrow down the list

#### 2.3.1 Example: Searching for available players for teams

Add a Teams

- Enter Team name or l for the list of all team or q to quit: abcd
  - abcd was found are you sure you want to continue
- Y Yes
- N No

Remove a Team

- Enter Team name or l for the list of all teams in the tournament or q to quit:
  - abcd is not a part of the tournament, do you want to continue
- Y Yes
- N No

### 2.4 Logic to use for multiple instances

### 2.5 States (For diagrams)

A team needs to have at least 3 players to join a tournament

A team can have a maximum of 5 players? If it has 5 players, the captain cannot add more.

A player can have 3 states (Captain, In Team, Not In Team)

- Captain: Can view team and add or remove players
- Player in team: Can view his team, and can leave his team
- Player NOT in team: Can create a team

If captain leaves his team there can be two outcomes

- Captain leaves and selects a new captain from the team
- If the team is empty the captain leaves but the team still exists and has all statistics

A player can NOT leave his team if the team is in a tournament

### 2.6 Player/Team Notes

Color: simple length check

- Venue: simple length check

- Email: needs to go through a check

- Phone number: 7 Numbers

- Address: (string)(space)(number)

- When taking input we will have a validator in the logic layer that returns whether it is valid or not

- Valid player handle: Just about the length (3-12) NEED TO HAVE \*\*ADMIN\*\* in the handle file

- Date stored YYYY-MM-DD

o Validation

All need to be numbers that are not the "-"

Year:

Month: 01 <= month <= 12

- If the C color requirement will be used then there should only be options for the user (Can only choose color out of few chosen colors)

- Randomize team list for tournaments

- At least 16 teams in a tournament

- Teams cannot Play in multiple matches at the same time
- The main interactions from the user is with shown steps like: 1) Login, 2) Sign Up, b) back ... something like that (can also have some commands)
- Everyone should be able to see all active Teams (in an active tournament)

## 2.7 Json Formatting

## 2.8 User Terminal navigation

Need navigation to override action input nav -> action