

SEG2105 Final Project Report

Design and Implementation of Keeper

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SEG2105 Section B
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Introduction

This document serves to formalize the work completed throughout the implementation of the *Keeper* app. The three previous deliverables have been modified based upon marker feedback and the relevant changes listed. The final implementation of these deliverables is listed below. As is common in software engineering, the non-essential requirements have been modified to more closely reflect the final implementation, without changing the intent.

Contributions and Corrections

Member	Deliverable			
	#1	#2	#3	#4
Chen, Qufei	25%	25%	25%	25%
Langlois, Matthew	25%	25%	25%	25%
Yang, Meng	25%	25%	25%	25%
Yaraskavitch, Matthew	25%	25%	25%	25%

Deliverable	Changes / Corrections
#1	<ul style="list-style-type: none">Functional requirements were updated to make specific reference to the “Tournament Maker System” as opposed to the general “system”The user role “Coach” has been replaced with “Captain” to accurately reflect the final applicationNon-functional requirements were updated to more closely reflect the tools used
#2	<ul style="list-style-type: none">Added ‘Elimination’, ‘RoundRobin’, and ‘Combination’ tournament type subclasses to the class ‘Tournament’ on class diagramUpdated role names and multiplicities on class diagramsRemoved instance ‘Person’, and changed ‘teamList’ and ‘team’ to be retrieved by the main ‘TournamentMaker’ class on sequence diagram 2
#3	<ul style="list-style-type: none">Replaced the rough mockups from Deliverable 3 with actual snapshots of the UI from the app

Software Requirements (Deliverable 1)

Functional Requirements

1. The Tournament Maker System must allow a player to join only one team.
2. The Tournament Maker System must assure a player has joined a team before participating in a tournament.
3. The Tournament Maker System must inform the players when a goal is scored in one of their matches.
4. The Tournament Maker System must show the team's rank compared to the other teams participating in the tournament.
5. The Tournament Maker System must allow a player to change their player number.
6. The Tournament Maker System must allow a team to set their avatar.
7. The Tournament Maker System must allow the captain to set the team's name.
8. The Tournament Maker System must allow the captain to set the team's logo.
9. The Tournament Maker System must force a team to have a name before joining a tournament.
10. The Tournament Maker System must allow organizers to create new tournaments.
11. The Tournament Maker System must prompt the organizer to choose one format from Round Robin, Knockout, or Round Robin and Knockout combination.
12. The Tournament Maker System must allow the organizer to add, edit, or delete teams from a tournament if it has not started.
13. The Tournament Maker System must allow a player to review previous rounds of play.
14. The Tournament Maker System must display the current tournament standings.
15. The Tournament Maker System must randomize the team listings and order of play.
16. The Tournament Maker System must allow the user to access the instructions.
17. The Tournament Maker System must inform the user that teams cannot be edited once the tournament has started.
18. The Tournament Maker System must allow the user to customize the tournament settings.
19. The Tournament Maker System must store the number of wins and losses for each team.
20. The Tournament Maker System must allow organizers to keep track of a match's score.

Nonfunctional Requirements

1. The Tournament Maker System must not allow unauthorized access 99% of the time.
2. The Tournament Maker System must require no more than 5 minutes to be learned.
3. The Tournament Maker System must display changes from the user within 0.5 seconds.
4. The Tournament Maker System must be able to store information for at least 100 teams.
5. The Tournament Maker System back-end must be available 99% of the time.

Use Cases:

(1) Use Case Name: Create a Team

Actors: Captain

Goals: To create a team

Preconditions: Must be logged in as a captain

Summary: Create a team

Related Use Cases:

Steps:

Actor Actions	System Responses
1. Click on 'Add a Team'	2. 'New Team' page opens
3. Enter team name	
4. Select logo/display picture	
5. Press 'confirm'	6. 'New Team' page closes, 'Team Info' page opens.

Post-conditions: Team is created.

(2) Use Case Name: Change Team Display Picture

Actors: Captain

Goals: To change the display picture to a picture from your phone

Preconditions: Team is created, and must be logged in as a captain

Summary: Captain sets new picture as the display picture/logo of their team

Related Use Cases: 'Create a Team'

Steps:

Actor Actions	System Responses
1. Click on 'My Teams'	2. Dialog with list of teams that you belong to opens
3. Click on name of the team you want to edit	4. Team info page opens
5. Click on the display picture box	6. Display picture menu appears
7. Choose 'upload from phone'	8. Photo library of phone opens
9. Select picture	
10. Press 'confirm'	11. Photo library dialog closes, selected picture is displayed on display picture menu
12. Press 'update display picture'	13. display picture menu closes
	14. redirects back to team info page

Post-conditions: Profile picture is changed.

(3) Use Case Name: Enter a Tournament

Actors: Captain

Goals: To enter the team into a tournament

Preconditions: Team is created, and must be logged in as a captain

Summary: To register the team into a tournament

Related Use Cases: 'Create a Team'

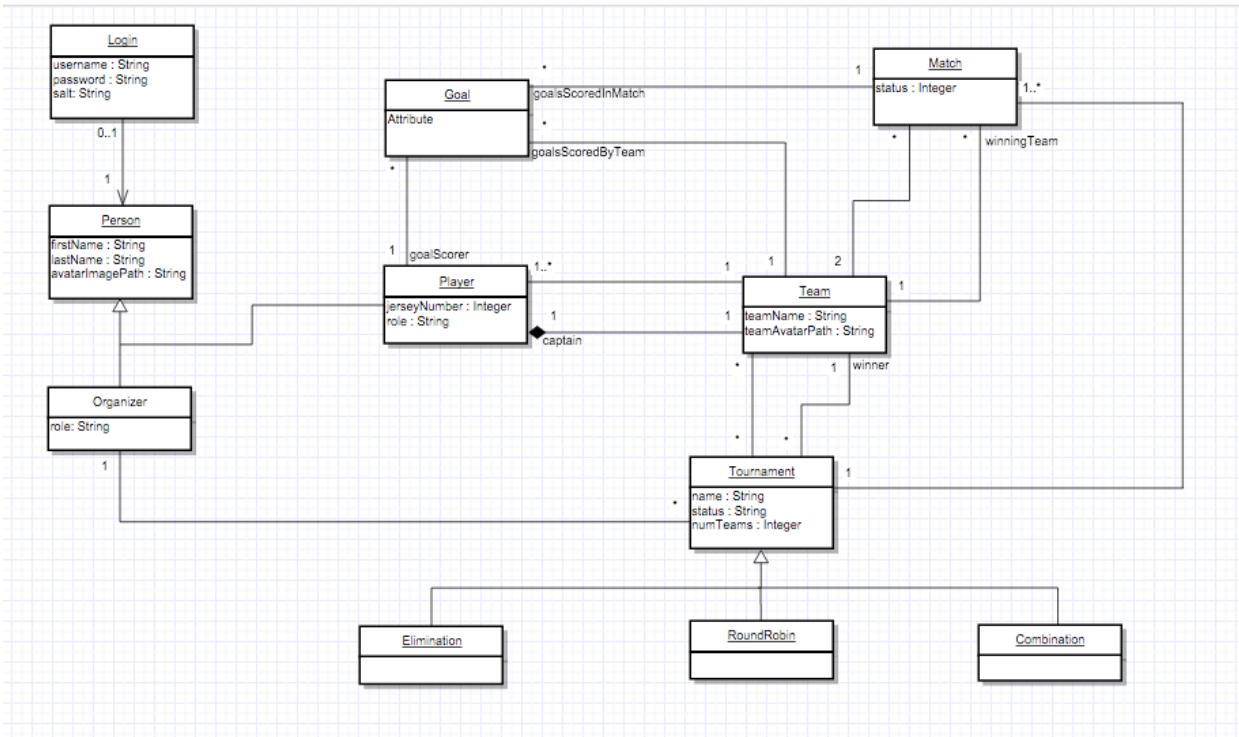
Steps:

Actor Actions	System Responses
1. Click on 'Tournaments'	2. Dialog with list of active (open to registration) tournaments opens
3. Click on name of the tournament that you wish to enter	4. Tournament info page opens
5. Click on 'Register for the Tournament'	6. Registration page opens
7. Choose the team that you wish to enter into the tournament from the drop down list	
8. Select method of payment	
9. Check box agreeing to terms and conditions	
10. Press 'confirm'	11. Dialog with 'You have been successfully registered' pops up
12. Press 'Okay'	13. Dialog closes
	14. Redirects back to main menu

Post-conditions: Team is entered into tournament.

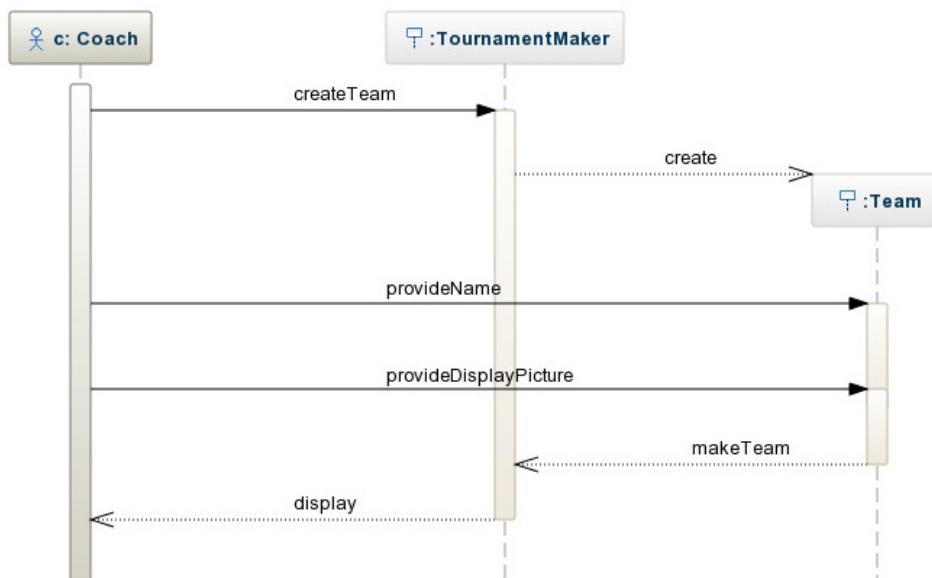
UML Design (Deliverable 2)

Class Diagram

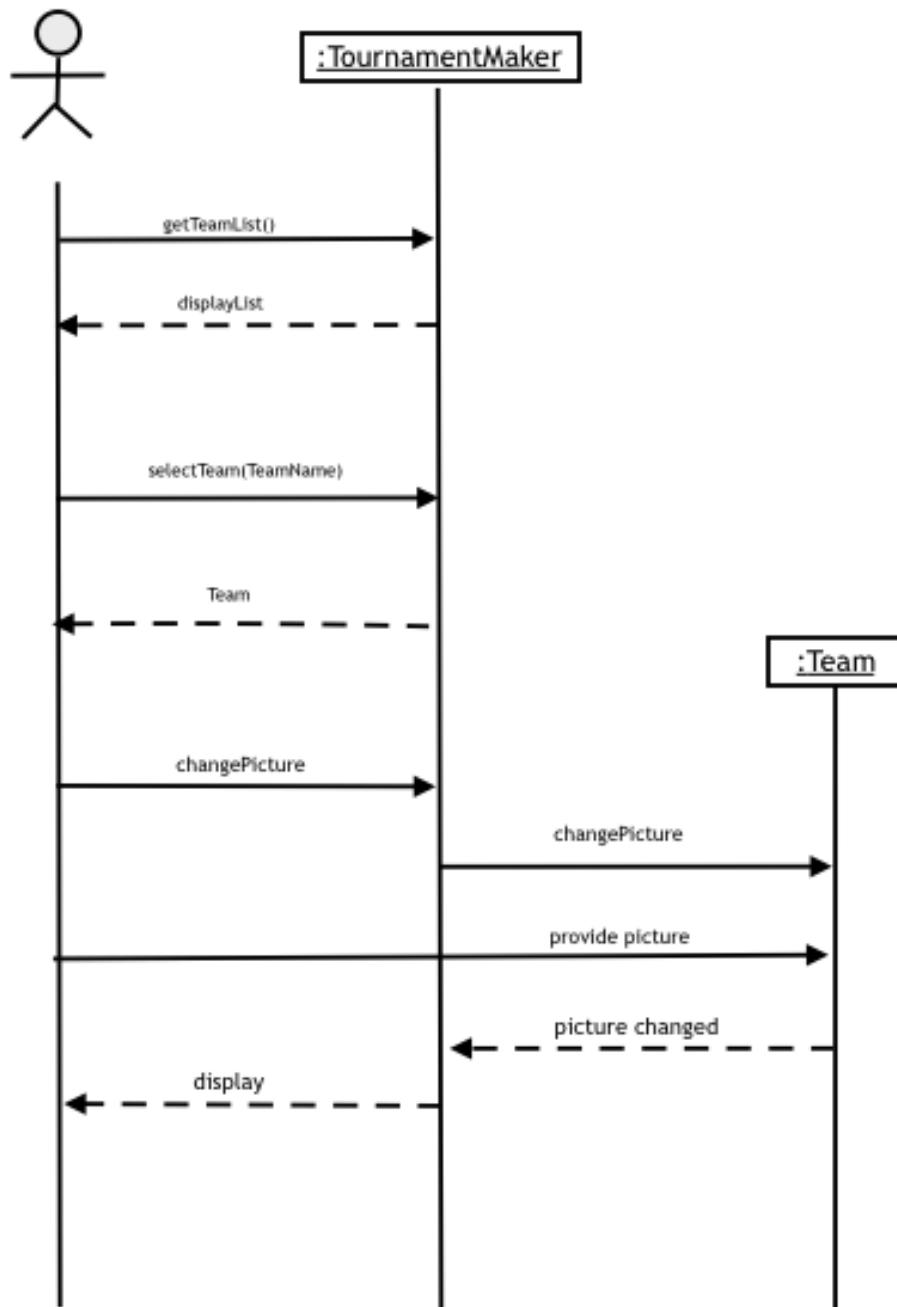


Sequence Diagrams

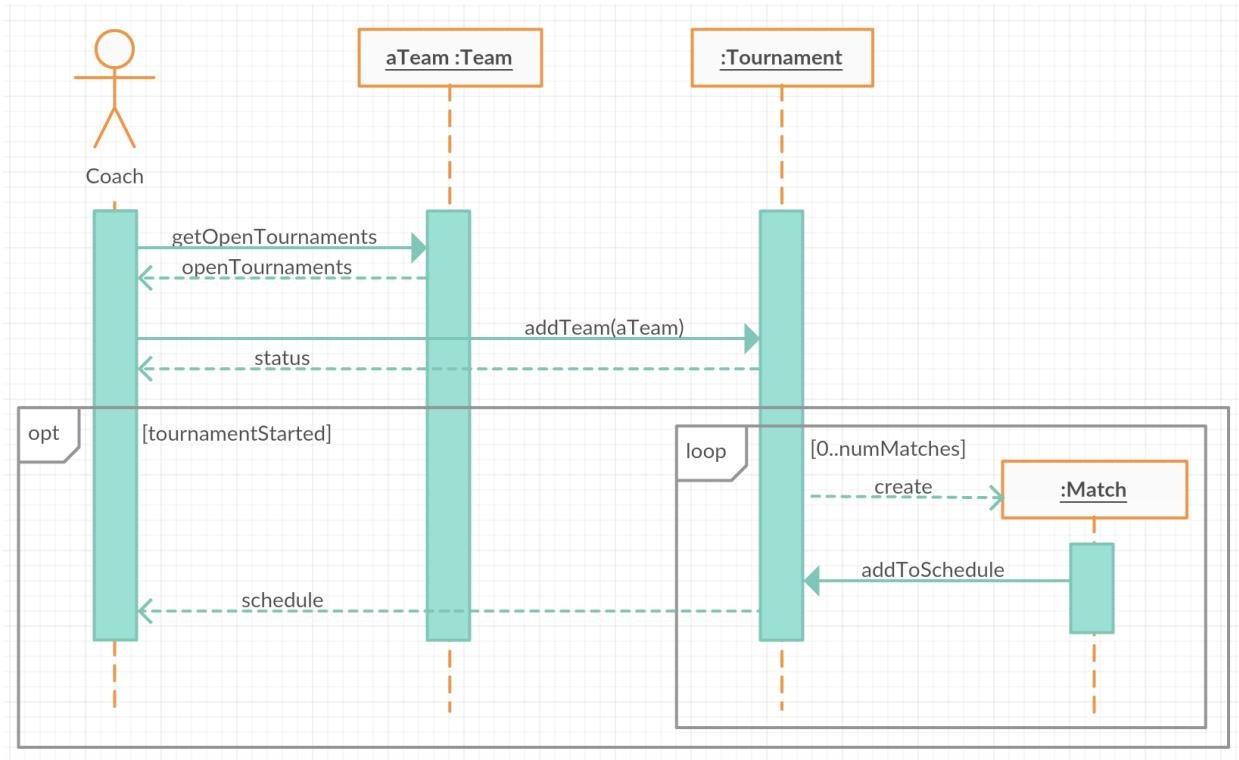
(1) Use case: Create a Team



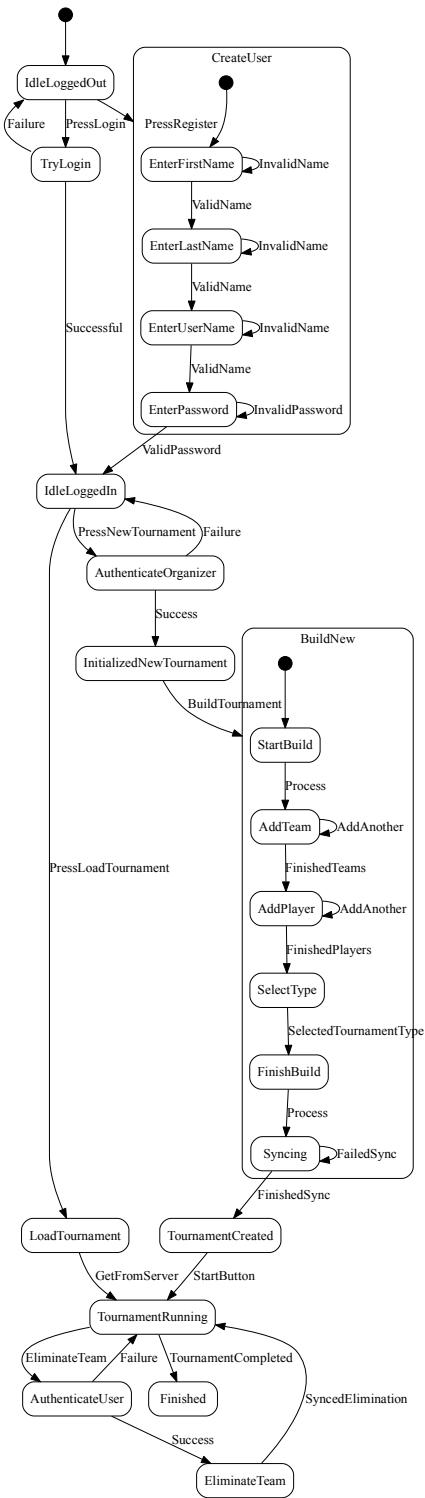
(2) Use case: Change Team Display Picture



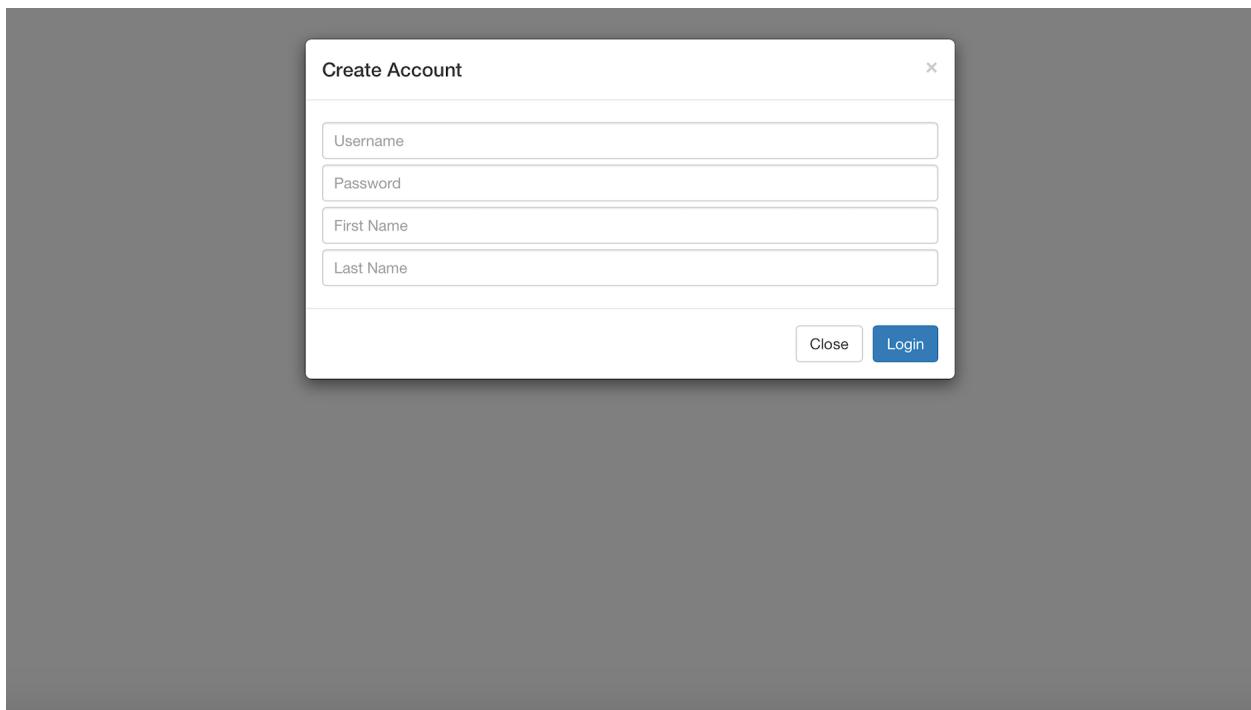
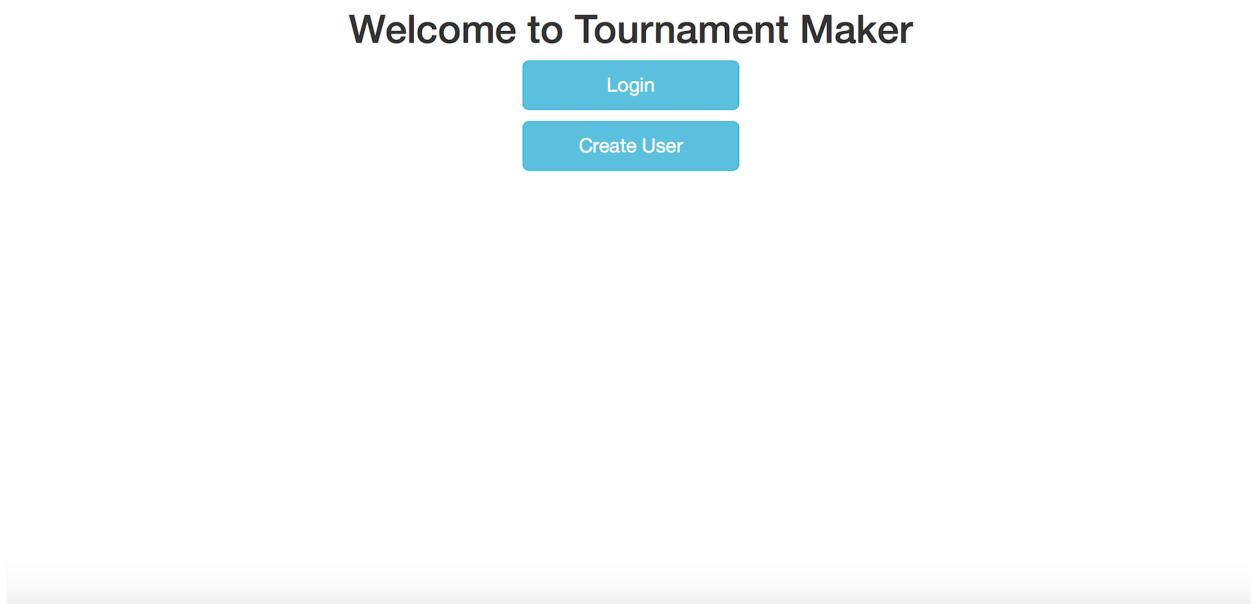
(3) Use case: Enter a Tournament

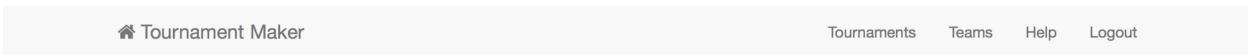
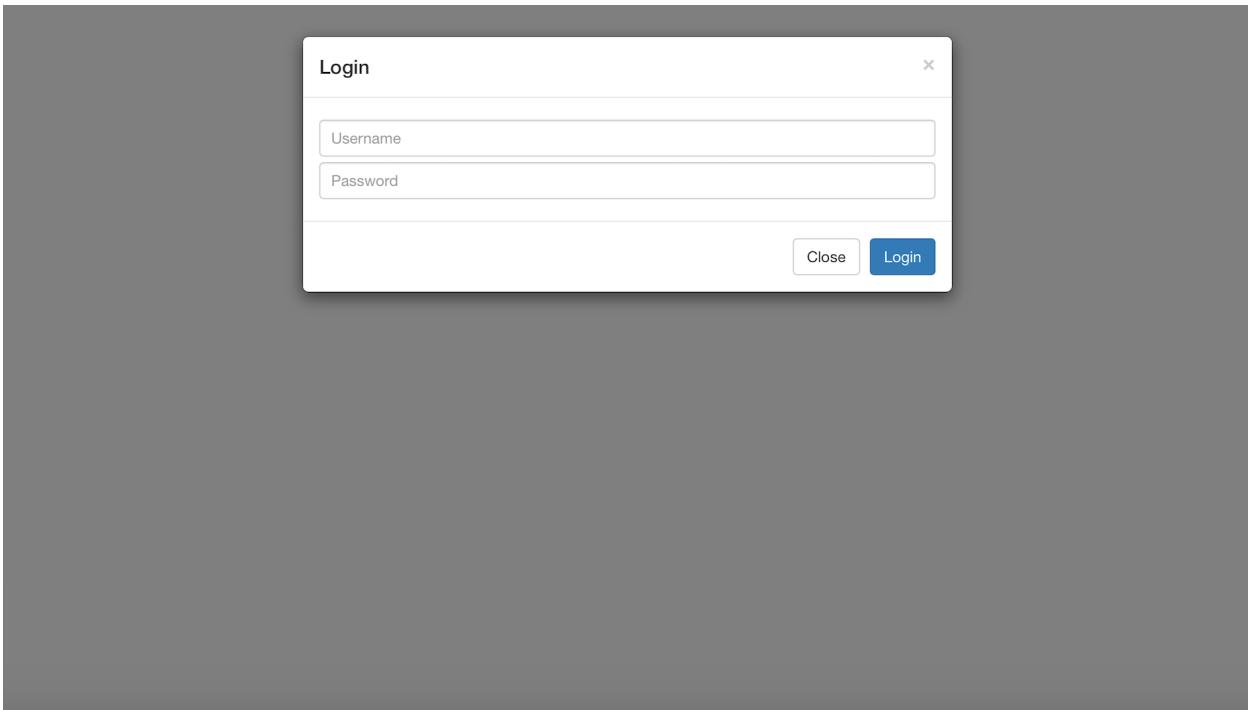


State Diagram



Screenshots of UI (Deliverable 3)





Welcome Matthew

Welcome to tournament maker, Matthew! This page will soon serve as your personal organizer portal.



Tournaments

[Create Tournament](#)

In-progress Tournaments

Tournament Name	Tournament Type	View Teams	View Standings	View Matches	End Tournament
Leauge style	Roundrobin	Teams	Standings	Matches	End

Post-game Tournaments

Tournament Name	Tournament Type	View Teams	View Matches	View Standings
NHL 2015 Season	Knockout Roundrobin	Teams	Matches	Standings
NHL 2016 Season (fix KRR)	Knockout Roundrobin	Teams	Matches	Standings
Stanley cup finals	Knockout	Teams	Matches	Standings
hello world tournament	Roundrobin	Teams	Matches	Standings

Create Tournament

[Close](#)
[Create](#)
[Tournament Name](#)
[Leauge style](#)
[Roundrobin](#)
[Teams](#)
[Standings](#)
[Matches](#)
[End](#)

Post-game Tournaments

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Stanley cup finals	Knockout	Teams	Matches	Standings
hello world tournament	Roundrobin	Teams	Matches	Standings

Teams in NHL 2015 Season

Team Name	Team Captain	Team Statistics
Ottawa Senators	Milan Michalek	Statistics
Pittsburgh Penguins	Sidney Crosby	Statistics
Chicago Blackhawks	Jonathan Toews	Statistics
Montreal Canadiens	Max Pacioretty	Statistics
Detroit Redwings	Henrik Zetterberg	Statistics

Standings for team Ottawa Senators in tournament NHL 2015 Season

Position	Player	Number	Goals Scored
1	Chris Neil	25	3
2	Daniel Alfredsson	11	1
3	Milan Michalek	9	0

Matches in Stanley cup finals

Round	Winner	Team A	Team B
1	Ottawa Senators	Ottawa Senators	Pittsburgh Penguins
1	Chicago Blackhawks	Chicago Blackhawks	Montreal Canadiens
2	Ottawa Senators	Ottawa Senators	Chicago Blackhawks

Matches in League style

Round	Team A	Team B	Begin Match
	Pittsburgh Penguins	Chicago Blackhawks	<button>Begin</button>
	Ottawa Senators	Chicago Blackhawks	<button>Begin</button>
	Montreal Canadiens	Pittsburgh Penguins	<button>Begin</button>
	Ottawa Senators	Pittsburgh Penguins	<button>Begin</button>
	Chicago Blackhawks	Montreal Canadiens	<button>Begin</button>

Round	Team A	Team B	Add Goal	End Match
	Ottawa Senators	Montreal Canadiens	<button>Add Goal</button>	<button>End</button>

Tournament Maker

Tournaments Teams Help Logout

Add Goal

Select team

Please choose a team to pick an assister...

Please choose a team to pick a goal scorer...

Close Add

Ottawa Senators Pittsburgh Penguins

Chicago Blackhawks Montreal Canadiens

Begin Match

Begin Begin Begin Begin

Round Team A Team B Add Goal End Match

Ottawa Senators Montreal Canadiens Add Goal End

Tournament Maker

Tournaments Teams Help Logout

Standings for tournament: Leauge style

Position	Team	Matches Won	Matches Played
1	Montreal Canadiens	0	0
2	Chicago Blackhawks	0	0
3	Pittsburgh Penguins	0	0
4	Ottawa Senators	0	0

All Teams

[Create Player](#) [Create Team](#)

Team Name	Team Captain	Team Statistics	Add Player
Ottawa Senators	Milan Michalek	Statistics	Add Player
Pittsburgh Penguins	Sidney Crosby	Statistics	Add Player
Chicago Blackhawks	Jonathan Toews	Statistics	Add Player
Montreal Canadiens	Max Pacioretty	Statistics	Add Player
Detroit Redwings	Henrik Zetterberg	Statistics	Add Player
hello world team	hello world	Statistics	Add Player

Create Player

x

[Close](#)[Create](#)

Team Name	Team Captain	Team Statistics	Add Player
Ottawa Senators	Jonathan Toews	Statistics	Add Player
Pittsburgh Penguins	Max Pacioretty	Statistics	Add Player
Chicago Blackhawks	Jonathan Toews	Statistics	Add Player
Montreal Canadiens	Max Pacioretty	Statistics	Add Player
Detroit Redwings	Henrik Zetterberg	Statistics	Add Player
hello world team	hello world	Statistics	Add Player

Tournament Maker

Create Team

Team Name: Ottawa Senators

Select team captain

Add Player

Team Name	Captain	Actions
Pittsburgh Penguins	Sidney Crosby	Statistics
Chicago Blackhawks	Jonathan Toews	Statistics
Montreal Canadiens	Max Pacioretty	Statistics
Detroit Redwings	Henrik Zetterberg	Statistics
hello world team	hello world	Statistics

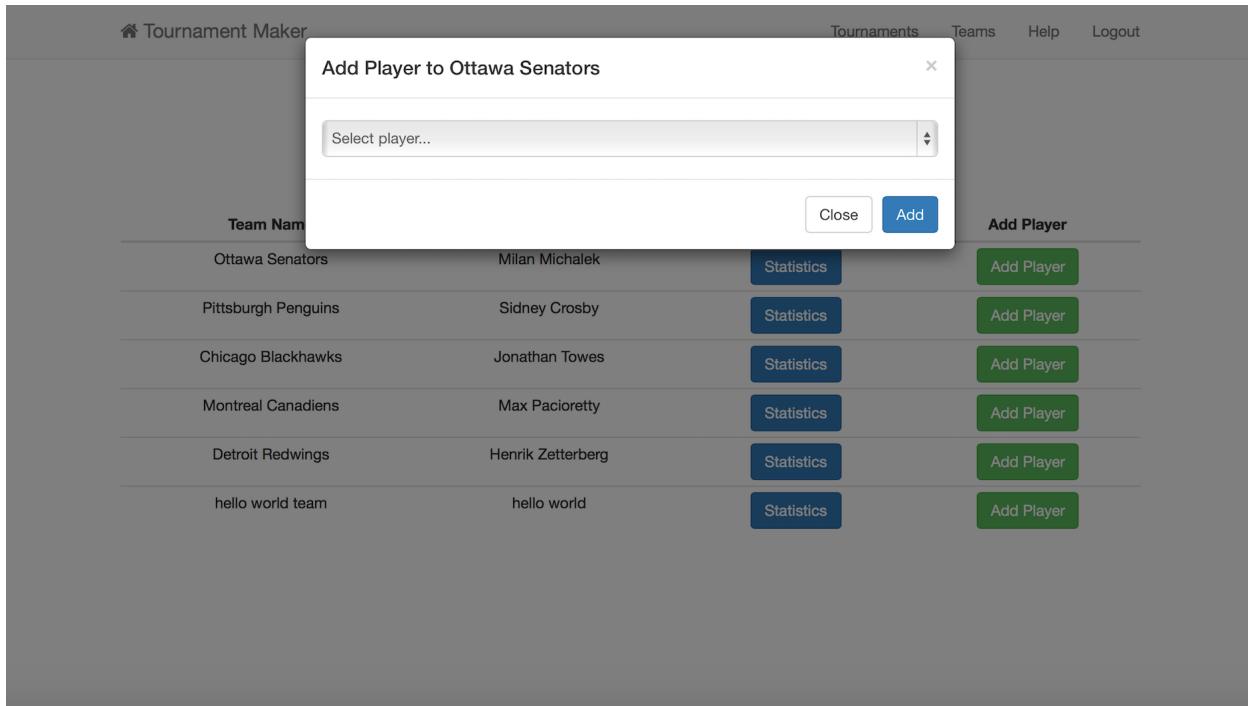
[Close](#) [Create](#)

Tournament Maker

Tournaments Teams Help Logout

Standings for team: Ottawa Senators

Position	Player	Number	Goals Scored
1	Chris Neil	25	4
2	Daniel Alfredsson	11	9
3	Milan Michalek	9	1



Welcome to Keeper, your personalized Tournament Maker!

Create a Player

As an organizer, you have the ability to create new players. Simply navigate to "Teams" from the navigation bar, and press "Create player". Enter the name and jersey number of the player, and press "Create".

Teams

Click on the link "Teams" in the navigation bar to display the team list. Click on the "Join Team" button beside your chosen team to join it. You can also click on "Statistics" button of a given team to view the players in the team, their goals scored, and their team ranking (based on total goals scored). You can also add a player to a team by choosing "Add a player" button of the chosen team, and then choosing the player to add from the drop down list.

Create a Team

As an organizer, you have the ability to create new teams. In order to create a team, there must exist atleast one free player (a player unattached to a team). This is because every team needs a unique team captain.

View Tournaments

To view all tournaments (Pre-game, In-progress, or Post-game), click on the "Tournament" button in the navigation bar. You can view the teams entered in each tournament by pressing the "Teams" button beside a specific team. For Post-game tournaments, you can also view the completed matches with results, and final team standings.

Create a Tournaments

To create a tournament, simply navigate to the Tournament page from the navigation bar, then press "Create Tournament". Enter a tournament name, and choose from Round Robin, Knock-out, or Combination formats. A Knock-out style tournament requires 2^n teams, and both Combination and Roundrobin require 2 or more teams. You can also being a Pre-game tournament by pressing the "Begin" button next to the tournament name.