

# Baller's World

## Requirements Analysis Document

## 1. Introduction

Baller's World intends to bring the worlds non-professional basketball players together for competitive tournaments that award cash prizes. An intuitive and streamlined registration and tournament tracking system is essential to accomplishing this goal.

## 2. Current System

Baller's World is currently in the early stages of development and therefore has no registration or tournament tracking system.

## 3. Proposed System

### 3.1. Overview

Baller's World will allow users to register as players and organize teams to participate in national tournaments. Baller's World will also keep track of tournament standings and player/team/game/etc. data.

### 3.2. Functional Requirements

- Baller's World must support four types of user:
  - The *user* should be able to sign up for Baller's World. Once this is done, they are now a *player*.
  - The *player* should be able to create a team, join an existing team, pay registration fees in part or whole, modify their profile and quit a team.
  - The *teamAdmin* is a *player* that is the administrator for a team. If a *player* creates a team, they are automatically made the *teamAdmin* for that team. They should be able to add players to their team, transfer their administrator credentials, and approve "join team requests".
  - The *systemAdmin* should have access to all of the operations and data in the system.
- A user must agree to the "Terms and Conditions" before they may sign up as a player.
- A player may play for multiple teams.
- A game shall consist of exactly 2 teams.
- A team shall consist of exactly 5 players.
- If a player is part of 2 or more teams, those teams may not compete against one another nor shall those teams be playing a game at the same time.
- Teams must register in cities. No city may have more than 30 teams registered, or less than 2 teams registered.
- All tournaments will use a "double elimination" bracket.

### 3.3. Nonfunctional Requirements

- The system should have an intuitive graphical user interface. [Functionality]
- The system should be accessible through mobile platforms, web browsers, and a desktop application. [Functionality]
- A user with only enough experience to navigate a smartphone must be able to access and use all of the features of Baller's World. [Usability]
- The system must be available at all times. [Reliability]
- Tournament, team, and registration data should be updated in no more than 30 seconds. [Performance]
- The systems source code must be thoroughly commented and documented. [Supportability]

### 3.4. Constraints

- Baller's World shall be written in the Objective-C programming language.
- Baller's World shall use the "Parse Mobile App Platform".

### 3.5. System Models

#### 3.5.1. Visionary Scenarios

##### Scenario #1

<i>Scenario Name</i>	<u>userSignup</u>
<i>Participating Actors</i>	<u>Kobe: user</u>
<i>Flow Of Events</i>	<ol style="list-style-type: none"><li>1. Kobe opens the "Baller's World" app and clicks the "Sign Up" button.</li><li>2. Then, he must enter his <i>myInfo</i> on the <i>NewPlayerPage</i>.</li><li>3. Kobe must then agree to the "Terms and Conditions".</li><li>4. Kobe is now a registered <i>player</i></li></ol>

##### Scenario #2

<i>Scenario Name</i>	<u>newTeam</u>
<i>Participating Actors</i>	<u>Kobe: player</u>
<i>Flow Of Events</i>	<ol style="list-style-type: none"><li>1. After signing in, Kobe is taken to the <i>mePage</i>.</li><li>2. Kobe clicks the <i>myTeamsButton</i> and is taken to the <i>myTeamsPage</i>.</li><li>3. The <i>myTeamsPage</i> also has a <i>newTeamButton</i> and a <i>joinTeamButton</i>.</li><li>4. He clicks the <i>newTeamButton</i> and is taken to a blank <i>teamPage</i>. Here he must enter the team details (<i>teamName/Region &amp; City</i>).</li></ol>

**Scenario #3**

<i>Scenario Name</i>	<u>joinExistingTeamAccept</u>
<i>Participating Actors</i>	<u>Michael: player</u> <u>Phil: teamAdmin</u>
<i>Flow Of Events</i>	<ol style="list-style-type: none"><li>1. After signing in, Michael is then taken to the <i>mePage</i>.</li><li>2. Michael clicks the <i>myTeamsButton</i> and is taken to the <i>myTeamsPage</i>.</li><li>3. Michael decides to join a team. So, he clicks the <i>joinTeamButton</i>.</li><li>4. He must then choose his <i>Region, State, City</i>.</li><li>5. Then, he is presented with a list of existing <i>teamNames</i>. He chooses the <i>Charleston Velociraptors</i>.</li><li>6. Phil receives a notification and has 72 hours to respond.</li><li>7. Phil accepts Michael's <i>joinExistingTeamRequest</i>.</li><li>8. Michael receives a notification and <i>Charleston Velociraptors</i> will now appear (temporarily highlighted) on Michael's <i>myTeamsPage</i>.</li></ol>

**Scenario #4**

<i>Scenario Name</i>	<u>joinExistingTeamDeny</u>
<i>Participating Actors</i>	<u>LeBron: player</u> <u>Phil: teamAdmin</u>
<i>Flow Of Events</i>	<ol style="list-style-type: none"><li>1. After signing in, LeBron is taken to the <i>mePage</i>.</li><li>2. LeBron clicks the <i>myTeamsButton</i> and is taken to the <i>myTeamsPage</i>.</li><li>3. LeBron decides to join a team. So, he clicks the <i>joinTeamButton</i>.</li><li>4. He must then choose his <i>Region, State, City</i>.</li><li>5. Then, he is presented with a list of existing <i>teamNames</i> of teams that are looking for players. He chooses the <i>Atlanta Warriors</i>.</li><li>6. Phil receives a notification and has 72 hours to respond.</li><li>7. Phil denies LeBron's <i>joinExistingTeamRequest</i>.</li><li>8. LeBron receives a notification.</li></ol>

**Scenario #5**

<i>Scenario Name</i>	<u>quitTeam</u>
<i>Participating Actors</i>	<u>Shaq: player</u> <u>Phil: teamAdmin</u>
<i>Flow Of Events</i>	<ol style="list-style-type: none"> <li>1. After signing in, Shaq is taken to the <i>mePage</i>.</li> <li>2. Shaq clicks the <i>myTeamsButton</i> and is taken to the <i>myTeamsPage</i>.</li> <li>3. Shaq decides to quit a team. So, he clicks the <i>quitTeamButton</i>.</li> <li>4. A red <i>quitButton</i> appears next to each of his <i>myTeams</i>.. He clicks the <i>quitButton</i> next to "Sunnyvale Serpents".</li> <li>5. A popup window containing the text "Sunnyvale Serpents" appears with 2 buttons; "Quit" &amp; "Don't Quit".</li> <li>6. Shaq clicks quit.</li> <li>7. "Sunnyvale Serpents" no longer appears on his <i>myTeamsPage</i>.</li> </ol>

**Scenario #6**

<i>Scenario Name</i>	<u>registerForTournament</u>
<i>Participating Actors</i>	<u>Dwayne: teamAdmin</u>
<i>Flow Of Events</i>	<ol style="list-style-type: none"> <li>1. After signing in, Dwayne is taken to the <i>mePage</i>.</li> <li>2. Dwayne clicks the <i>myTeamsButton</i> and is taken to the <i>myTeamsPage</i>.</li> <li>3. Dwayne decides to register the "Reno Rhinos", one of his <i>myTeams</i>, for the Fall 2015 tournament. So, he clicks the "Reno Rhinos" and is redirected to their <i>teamPage</i>.</li> <li>4. Dwayne clicks the <i>registerButton</i>, which always shows the current tournament.</li> <li>5. A popup window containing the text "Reno Rhinos - Fall 2015" appears with 2 buttons; "Register" &amp; "Don't Register".</li> <li>6. Dwayne clicks Register.</li> <li>7. A yellow dot (indicating registered/not paid) now appears next to "Reno Rhinos" on Dwayne's <i>myTeamsPage</i>.</li> </ol>

### 3.5.2. Use Cases

#### Use Case #1

<i>Use Case Name</i>	userSignup
<i>Participating Actors</i>	Initiated by: User Communicates with: Player
<i>Flow Of Events</i>	<ol style="list-style-type: none"><li>1. User clicks "Sign Up".</li><li>2. System navigates to the newPlayerPage.</li><li>3. After entering all of the required information for setPlayer, and acceptTerms, User clicks "Save."</li><li>4. System creates the Player and navigates to the myTeamsPage for that Player.</li></ol>
<i>Entry Conditions</i>	<ul style="list-style-type: none"><li>• User must open the app.</li></ul>
<i>Exit Conditions</i>	<ul style="list-style-type: none"><li>• setPlayer and acceptTerms must complete successfully.</li></ul>
<i>Quality Requirements</i>	<ul style="list-style-type: none"><li>• Player should be unique.</li></ul>

#### Use Case #2

<i>Use Case Name</i>	newTeam
<i>Participating Actors</i>	Initiated by: Player Communicates with: TeamAdmin
<i>Flow Of Events</i>	<ol style="list-style-type: none"><li>1. Player clicks addTeamButton.</li><li>2. System navigates to newTeamPage.</li><li>3. Player fills all fields required for setTeam and setAdmin and clicks "Save".</li><li>4. System makes Player into TeamAdmin and displays the new team on the TeamAdmin's myTeamsPage.</li></ol>
<i>Entry Conditions</i>	<ul style="list-style-type: none"><li>• Player must be on the myTeamsPage.</li></ul>
<i>Exit Conditions</i>	<ul style="list-style-type: none"><li>• Player must fill all fields.</li></ul>
<i>Quality Requirements</i>	<ul style="list-style-type: none"><li>• Team must be unique.</li></ul>

**Use Case #3**

<i>Use Case Name</i>	joinExistingTeam
<i>Participating Actors</i>	Initiated by: Player Communicates with: TeamAdmin
<i>Flow Of Events</i>	<ol style="list-style-type: none"><li>1. Player clicks joinExistingTeamButton.</li><li>2. System navigates to existingTeamsPage.</li><li>3. Player chooses a team to join.</li><li>4. System sends notification to that team's TeamAdmin.</li><li>5. TeamAdmin may either accept or deny the joinExistingTeamRequest.</li><li>6. System notifies Player of TeamAdmin's decision.</li></ol>
<i>Entry Conditions</i>	<ul style="list-style-type: none"><li>• Player must be on the myTeamsPage.</li></ul>
<i>Exit Conditions</i>	<ul style="list-style-type: none"><li>• TeamAdmin responds to joinExistingTeamRequest.</li></ul>
<i>Quality Requirements</i>	<ul style="list-style-type: none"><li>• TeamAdmin has 72 hours to respond to joinExistingTeamRequest; else, the request is automatically denied.</li></ul>

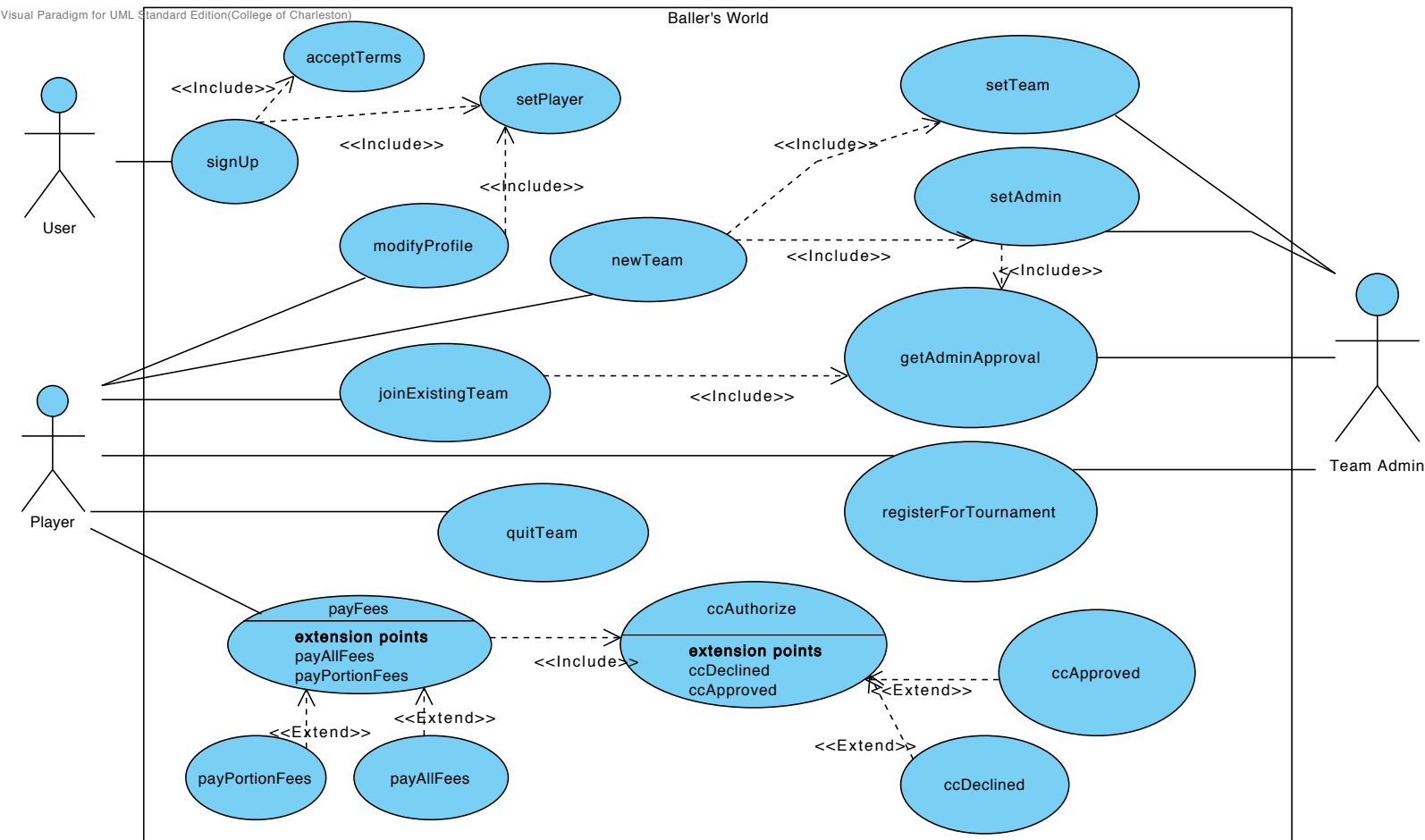
**Use Case #4**

<i>Use Case Name</i>	quitTeam
<i>Participating Actors</i>	Initiated by: Player Communicates with: TeamAdmin
<i>Flow Of Events</i>	<ol style="list-style-type: none"><li>1. Player clicks the quitTeamButton.</li><li>2. System asks for verification of desire to quit that team.</li><li>3. Player verifies.</li><li>4. System sends notification to TeamAdmin and navigates to the myTeamsPage, which no longer displays that team.</li></ol>
<i>Entry Conditions</i>	<ul style="list-style-type: none"><li>• Player must be on the teamPage for the team they wish to quit.</li></ul>
<i>Exit Conditions</i>	<ul style="list-style-type: none"><li>• Player must verify their desire to quit the team.</li></ul>
<i>Quality Requirements</i>	

## Use Case #5

<i>Use Case Name</i>	registerForTournament
<i>Participating Actors</i>	Initiated by: TeamAdmin Communicates with: Player
<i>Flow Of Events</i>	<ol style="list-style-type: none"> <li>1. TeamAdmin clicks on a team that is not yet registered for the current tournament.</li> <li>2. System navigates to the teamPage.</li> <li>3. TeamAdmin clicks the registerForTournamentButton.</li> <li>4. System asks for verification of desire to register.</li> <li>5. TeamAdmin verifies.</li> <li>6. System sends notification to all Players associated with that team and navigates to the myTeamsPage, which now displays a “registered but not paid” status for that team.</li> </ol>
<i>Entry Conditions</i>	<ul style="list-style-type: none"> <li>• TeamAdmin must be on the myTeamsPage.</li> </ul>
<i>Exit Conditions</i>	<ul style="list-style-type: none"> <li>• TeamAdmin must verify their desire to register for the tournament.</li> </ul>
<i>Quality Requirements</i>	<ul style="list-style-type: none"> <li>• Only a TeamAdmin may register a team for a Tournament.</li> </ul>

Visual Paradigm for UML Standard Edition(College of Charleston)





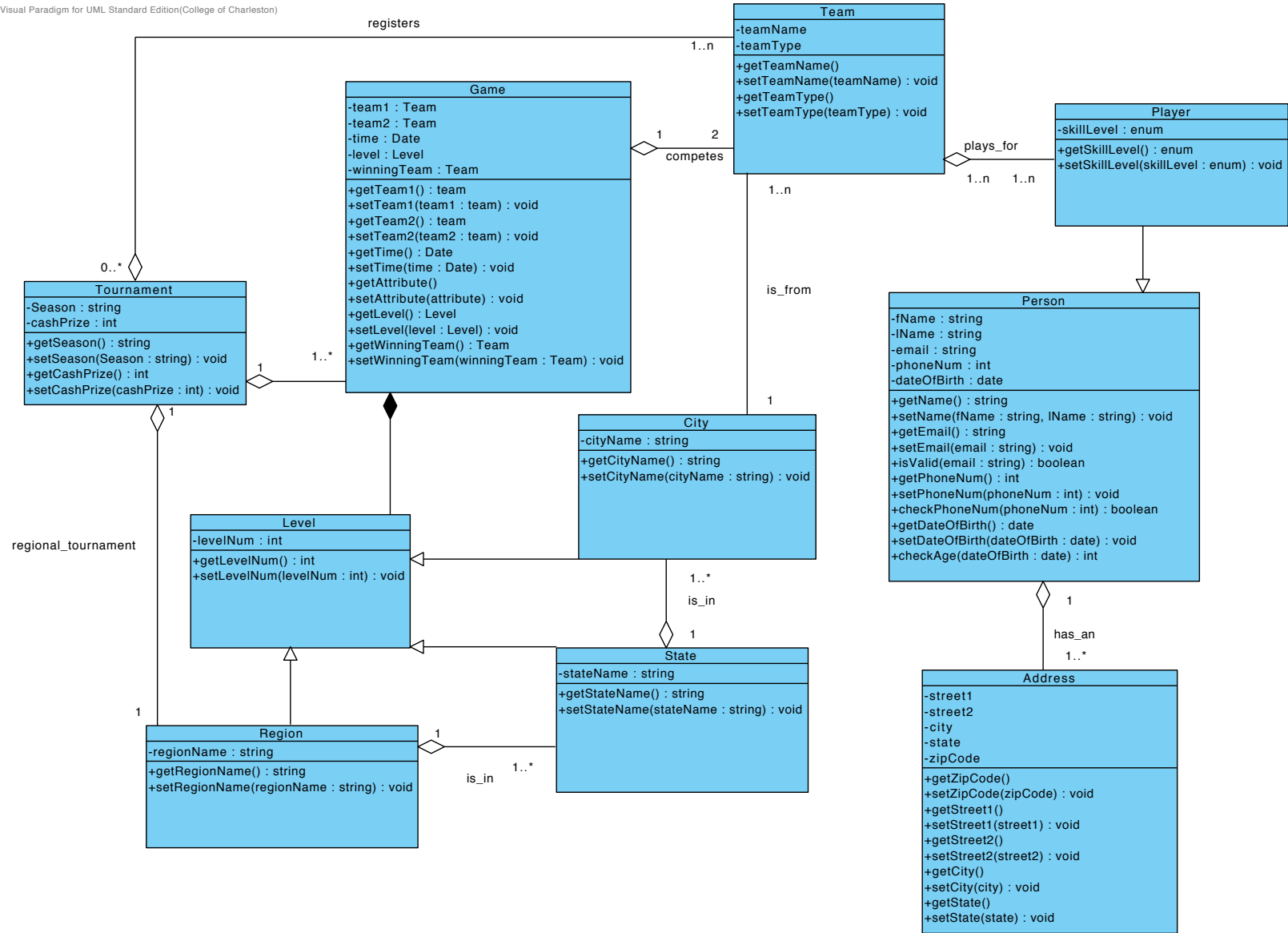
### 3.5.3.Object Model

#### 3.5.3.1. Data Dictionary

Name	Description	Sample Attributes
Tournament	A “double elimination” competition structure.	<b>season:</b> Spring 2015 <b>cashPrize:</b> \$2000
Game	A competitive event played between 2 teams.	<b>team1:</b> Charleston Velociraptors <b>team2:</b> Albuquerque Rabbits <b>time:</b> 2015.07.10 at 18:00:00 GMT <b>level:</b> State <b>winningTeam:</b> Charleston Velociraptors
Team	A group of 5 players.	<b>teamName:</b> Honolulu Hornets <b>teamType:</b> Corporate
Player	A person that has signed up for Baller’s World.	<b>skillLevel:</b> Novice
Person	A human being.	<b>fName:</b> Michael <b>lName:</b> Jordan <b>email:</b> <a href="mailto:m.j.blazing.everyday@aol.com">m.j.blazing.everyday@aol.com</a> <b>phoneNum:</b> 1.843.817.8603 <b>dateOfBirth:</b> 1956.07.10
Address	A place of residence or mail receipt.	<b>street1:</b> 5 Madison Ave. <b>street2:</b> Ste. No. 2325 <b>city:</b> New York <b>state:</b> New York <b>zipCode:</b> 10017

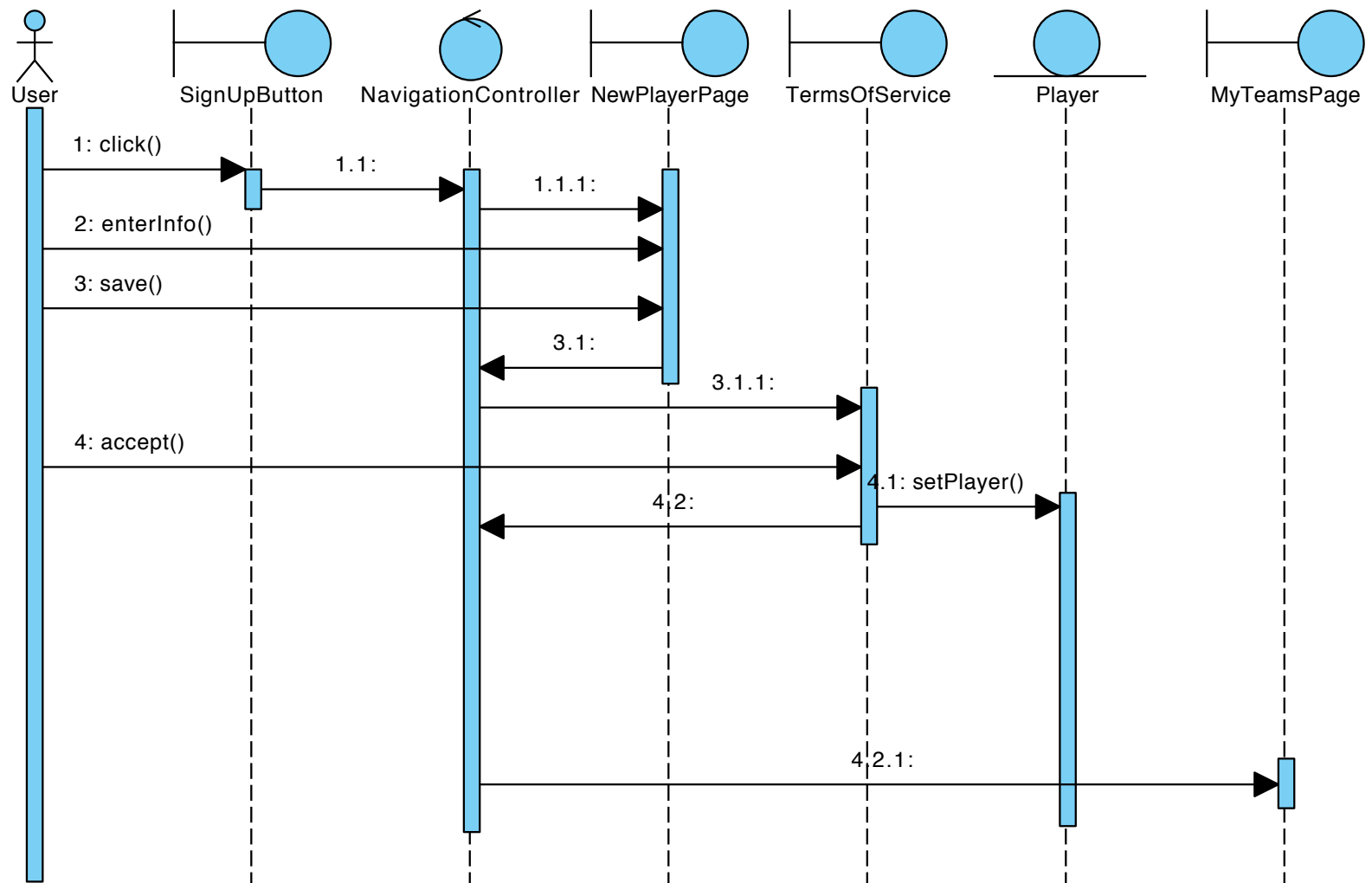
### 3.5.3.2. Class Diagram

Visual Paradigm for UML Standard Edition(College of Charleston)



### 3.5.4. Dynamic Models

#### 3.5.4.1. Sequence Diagram - New Player Signup



### 3.5.5. User Interface

The screenshot displays the Salesforce 14 user interface. The top navigation bar includes the Salesforce logo, a search bar, and user information (Joseph Black, Setup, Help, and a 'Baller's World' button). The main navigation menu shows tabs for Home, People, Addresses, **Players**, Teams, Games, Tournaments, Cities, States, Regions, and TeamPlayerJunctions. The 'Players' tab is active, showing a table of players with columns for Action, Player Number, Player Name, and Skill Level. The table lists 10 players, including Michael Jordan, Paul Pierce, Kevin Garnett, Zach Galifianakis, Lil Wayne, Fat Joe, Ronald McDonald, Norma Jean Mort..., Scottie Pippen, Dennis Rodman, and Rajon Rondo. A left sidebar contains 'Recent Items' and a 'Recycle Bin' button.

Action	Player Number	Player Name	Skill Level
<input type="checkbox"/> Edit   Del	1	Michael Jordan	Expert
<input type="checkbox"/> Edit   Del	10	Paul Pierce	Expert
<input type="checkbox"/> Edit   Del	11	Kevin Garnett	Expert
<input type="checkbox"/> Edit   Del	2	Zach Galifianakis	Beginner
<input type="checkbox"/> Edit   Del	3	Lil Wayne	Beginner
<input type="checkbox"/> Edit   Del	4	Fat Joe	Beginner
<input type="checkbox"/> Edit   Del	5	Ronald McDonald	Beginner
<input type="checkbox"/> Edit   Del	6	Norma Jean Mort...	Beginner
<input type="checkbox"/> Edit   Del	7	Scottie Pippen	Expert
<input type="checkbox"/> Edit   Del	8	Dennis Rodman	Expert
<input type="checkbox"/> Edit   Del	9	Rajon Rondo	Expert

The screenshot displays the Salesforce 14 user interface with the 'States' tab selected. The top navigation bar and main navigation menu are identical to the previous screenshot. The 'States' tab is active, showing a table of states with columns for Action, Region, and State Abbreviation. The table lists 20 states, including SouthWest, SouthEast, Pacific, and NorthEast. A left sidebar contains 'Recent Items' and a 'Recycle Bin' button. A alphabetical index bar is visible at the top right of the table.

Action	Region	State Abbreviation
<input type="checkbox"/> Edit   Del	SouthWest	NV
<input type="checkbox"/> Edit   Del	SouthWest	AZ
<input type="checkbox"/> Edit   Del	SouthWest	NM
<input type="checkbox"/> Edit   Del	SouthWest	CO
<input type="checkbox"/> Edit   Del	SouthWest	TX
<input type="checkbox"/> Edit   Del	SouthEast	NC
<input type="checkbox"/> Edit   Del	SouthEast	GA
<input type="checkbox"/> Edit   Del	SouthEast	SC
<input type="checkbox"/> Edit   Del	SouthEast	FL
<input type="checkbox"/> Edit   Del	SouthEast	LA
<input type="checkbox"/> Edit   Del	SouthEast	NC
<input type="checkbox"/> Edit   Del	SouthEast	TN
<input type="checkbox"/> Edit   Del	SouthEast	VA
<input type="checkbox"/> Edit   Del	Pacific	CA
<input type="checkbox"/> Edit   Del	Pacific	OR
<input type="checkbox"/> Edit   Del	Pacific	WA
<input type="checkbox"/> Edit   Del	NorthEast	NY
<input type="checkbox"/> Edit   Del	NorthEast	PA
<input type="checkbox"/> Edit   Del	NorthEast	DE
<input type="checkbox"/> Edit   Del	NorthEast	NJ
<input type="checkbox"/> Edit   Del	NorthEast	ME
<input type="checkbox"/> Edit   Del	NorthEast	RI

salesforce14

Search...

Search

Joseph BlackSetupHelpBaller's World

HomePeopleAddressesPlayersTeamsGamesTournamentsCitiesStatesRegionsTeamPlayerJunctions

Create New...

Recent Items

All

Edit | Delete | Create New View

New TeamPlayerJunction

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Other All

Action	Team	Player
<input type="checkbox"/> Edit   Del	Electrons	Norma Jean Mortenson
<input type="checkbox"/> Edit   Del	Electrons	Ronald McDonald
<input type="checkbox"/> Edit   Del	Electrons	Fat Joe
<input type="checkbox"/> Edit   Del	Electrons	Zach Galfinakis
<input type="checkbox"/> Edit   Del	Electrons	Michael Jordan
<input type="checkbox"/> Edit   Del	Thunderbolts	Rajon Rondo
<input type="checkbox"/> Edit   Del	Thunderbolts	Norma Jean Mortenson
<input type="checkbox"/> Edit   Del	Thunderbolts	Zach Galfinakis
<input type="checkbox"/> Edit   Del	Thunderbolts	Ronald McDonald
<input type="checkbox"/> Edit   Del	Viruses	Kevin Garnett
<input type="checkbox"/> Edit   Del	Viruses	Paul Pierce
<input type="checkbox"/> Edit   Del	Viruses	Rajon Rondo
<input type="checkbox"/> Edit   Del	Viruses	Dennis Rodman
<input type="checkbox"/> Edit   Del	Viruses	Scottie Pippen

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Search...

Search

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HomePeopleAddressesPlayersTeamsGamesTournamentsCitiesStatesRegionsTeamPlayerJunctions

Create New...

Recent Items

All

Edit | Delete | Create New View

New Tournament

Change Owner

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Other All

Action	Tournament Name	Region
<input type="checkbox"/> Edit   Del	Fall 2014	SouthEast
<input type="checkbox"/> Edit   Del	Fall 2014	Pacific
<input type="checkbox"/> Edit   Del	Spring 2015	SouthEast
<input type="checkbox"/> Edit   Del	Spring 2015	NorthEast
<input type="checkbox"/> Edit   Del	Spring 2015	MidWest

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Search...

Search

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HomePeopleAddressesPlayersTeamsGamesTournamentsCitiesStatesRegionsTeamPlayerJunctions

Create New...

Recent Items

Game Edit

New Game

Help for this Page

Game Edit

SaveSave & NewCancel

Information

Tournament

Team1

Team2

Game Time

Owner

Joseph Black

SaveSave & NewCancel

## 4. Glossary

Term	Definition
Game	A competitive event between 2 teams which is part of a tournament.
Graphical User Interface	The physical boundary between a user and the system.
mePage	A component of the GUI that displays a players myInfo as well as several navigation/operation buttons.
myInfo	A player's personal information.
myTeamsPage	A component of the GUI that displays all of the teams that a certain player plays for as well as several navigation/operation buttons.
NewPlayerPage	A component of the GUI into which a user may enter his myInfo to sign up with "Baller's World" as a player.
Player	A user who has signed up.
Register	The act of volunteering a team for a tournament.
SystemAdmin	A user that has access to all data and functions of the system.
Team	A group of 5 players organized to compete in games at tournaments.
TeamAdmin	A player who has either created a team or been transferred TeamAdmin credentials. May register a team for a tournament,
Terms and Conditions	A legal agreement between "Baller's World" and a user.
User	Anyone using the system that is not yet signed up.