MIAMI

CSC 431

OneStat and WARLeagues

Software Requirements Specification (SRS)

Team 10

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Version History

Version	Date	Author(s)	Change Comments
1.0	2/21/2021	Nolan	First Draft
2.0	3/8/2021	Nolan/Zach/Talon	Added Use Case Diagrams, constraints, more non-functional requirements.
2.1	3/9/2021	Nolan/Zach/Talon	Added a few constraints, tweaks
3.0	4/13/2021	Zach	Fixes Based on TA Feedback
3.1	4/29/2021	Nolan	Final fixes

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1. System Requirements

1.1 Functional Requirements

1.1.1 Player Comparison

Title	Player Comparison
Description	User wants to compare the stats of 2 players
Priority	1
Precondition(s)	User must be authenticated
Basic Flow	1. User chooses the "player comparison" option. 2. User enters 2 names into player comparison prompt. 3. User is presented with a comparison of the default stats.
Postconditions(s)	User can change players or statistics presented
Use Case Diagram	3.1.1

1.1.2 OneStat Leaderboard

Title	Leaderboard
Description	User wants to view the leaders of the default stats.
Priority	0
Precondition(s)	None (homepage, no authentication needed)
Basic Flow	1. User selects "OneStat leaderboard" option. 2. User is presented with a comprehensive leaderboard of the default statistics of all qualified players from the most recent year.
Postconditions(s)	User can change order, year, position or team statistics presented
Use Case Diagram	3.1.1

1.1.3 Custom Leaderboard Creation

Title	Custom Leaderboard Creation
Description	User wants to create a leaderboard with specific statistics
Priority	1
Precondition(s)	User must be authenticated
Basic Flow	1. User chooses the "create custom leaderboard" option. 2. User chooses the stats, position, team, year for the leaderboard to present. 3. User is presented with his custom leaderboard
Postconditions(s)	User can change order, year, position, or team statistics presented
Use Case Diagram	3.1.1

1.1.4 Statistic Dictionary

Title	Statistic Dictionary
Description	User wants to see definitions and explanations of statistics.
Priority	3
Precondition(s)	User must be authenticated
Basic Flow	1. User chooses the "statistic dictionary" option. 2. User is presented with a cumulative list of definitions and examples of the statistics.
Postconditions(s)	User can navigate to other view
Use Case Diagram	3.1.3

1.1.5 User Signup System

Title	User Signup System
Description	User creates a username and password for the software.
Priority	0
Precondition(s)	N/A
Basic Flow	1. User enters a username and password for a personal account. 2. The system stores the information for future authentication.
Postconditions(s)	User can navigate to other view
Use Case Diagram	3.1.1

1.1.6 User Authentication System

Title	User Authentication System
Description	User logs in by matching username and password to existing account.
Priority	0
Precondition(s)	N/A
Basic Flow	1. User enters their username and password to by authenticated. 2. If the system has a match for the user entry, the user is authenticated.
Postconditions(s)	User can navigate to other view
Use Case Diagram	3.1.1

1.1.7 WARLeague Creation

Title	WARLeague Creation
Description	User wants to create a fantasy WARLeague
Priority	2
Precondition(s)	User must be authenticated
Basic Flow	1. User chooses "Create WARLeague." 2. User fills out league information. 3. User can invite other players to join the league. 4. User can draft.

Postconditions(s)	User can navigate to other views
Use Case Diagram	3.1.2

1.1.8 WARLeague Drafting

Title	WARLeague Drafting
Description	User wants to draft teams for his WARLeague
Priority	2
Precondition(s)	N/A
Basic Flow	1. User chooses "Draft." 2. User and any other members choose players to fill out their team.
Postconditions(s)	User can navigate to other views
Use Case Diagram	3.1.2

1.1.9 WARLeague Standings

Title	WARLeague Standings
Description	User wants to view the standings for his WARLeague
Priority	2
Precondition(s)	N/A
Basic Flow	1. User chooses "View Standings." 2. User is presented with the standings of the WARLeague
Postconditions(s)	User can navigate to other views
Use Case Diagram	3.1.2

1.2 Non-Functional Requirements

1.2.1 Fast Player Comparisons

Title	Fast player comparisons
Description	When the player comparison feature is used, it returns the results in under a minute
Priority	0
Applicable FR(s)	1.1.1 Player comparisons

1.2.2 Visually Pleasing Leaderboards

Title	Visually pleasing leaderboards
Description	Leaderboards should have clear and consistent formatting
Priority	3
Applicable FR(s)	1.1.2 OneStat Leaderboard, 1.1.3 Custom Leaderboard Creation

1.2.3 Up-to-date Standings

Title	Up-to-Date Standings
Description	The WARLeague standings are updated to reflect the most recent in game results.
Priority	3
Applicable FR(s)	1.1.9 WARLeague Standings

1.2.4 Information Encryption

Title	Information Encryption
Description	The user's information (Username, Password) is store under encryption to ensure safekeeping
Priority	2
Applicable FR(s)	1.1.5 User Signup System, 1.1.6 User Authentication System

2. System Constraints

2.1 Tool Constraints

2.1.1 MySQL

Title	MySQL
Description	MySQL is used for the OneStat database
Priority	0

2.1.2 PyMySQL

Title	PyMySQL
Description	PyMySQL is used for by the software to interact with the database and the UI.
Priority	0

2.2 Language Constraints

2.2.1 Python Based

Title	Python Based
Description	The core function of the program is written in python for easy updating, readability, and functionality.
Priority	0

2.2.2 SQL Database

Title	SQL Database
Description	The OneStat Database will be in SQL for fast and easy to write queries of large data.
Priority	0

2.3 Platform Constraints

2.3.1 IOS Support

Title	IOS Support
Description	The application can run on IOS
Priority	2

2.3.2 Desktop Support

Title	Desktop Support
Description	The application can run on Desktop
Priority	0

2.3.3 Android Support

Title	Android Support
Description	The application can run on Android
Priority	4

2.4 Hardware Constraints

2.4.1 Memory

Title	Memory Requirement
Description	Must be able to run on a platform with 5 GB DDR3 RAM
Priority	0

2.4.2 Processor

Title	CPU requirement
Description	Must be able to run using an Intel Pentium i5 processor or comparable
Priority	0

2.5 Network Constraints

2.5.1 Network Connection

Title	Network Connection Requirement
Description	Software must work with any network connection
Priority	0

2.6 Deployment Constraints

2.6.1 Coordinated Release

Title	Coordinated Release
Description	All versions are released at the same time
Priority	3

2.7 Transition & Support Constraints

2.7.1 PayPal Donations

Title	PayPal Donations
Description	Software accepted PayPal Donations for support in server costs
Priority	5

2.8 Budget & Schedule Constraints

2.8.1 500 Hour Maximum

Title	500 Hour Maximum
Description	The project must be completed in under 500 hours of work
Priority	1

2.8.2 $500 Budget

Title	$500 Budget
Description	Project must be completed for under $500
Priority	0

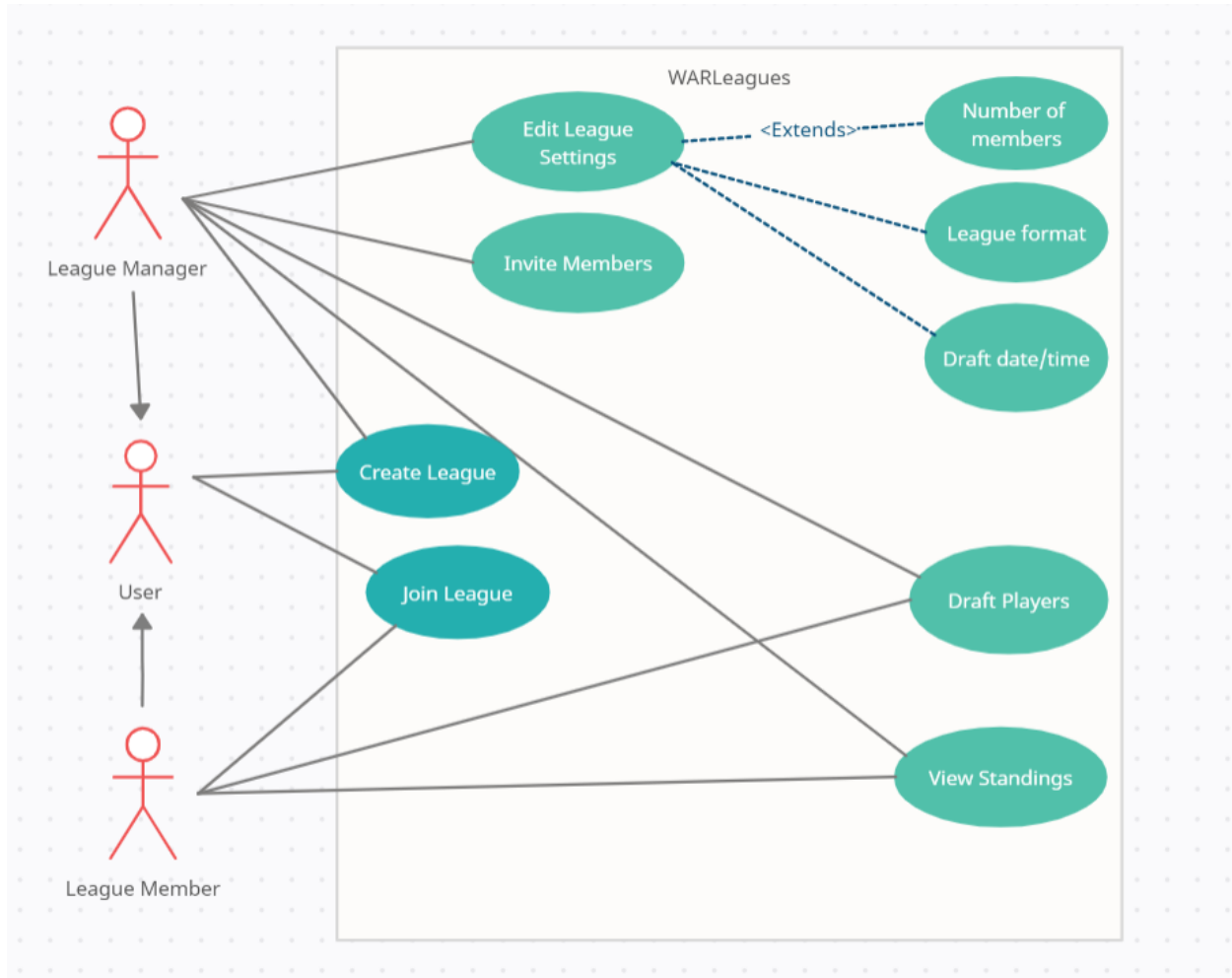## 2.8.3 May 9th Deadline

Title	May 5th deadline
Description	Project must be completed by May 5th
Priority	0

3. Requirements Modeling

3.1.1 OneStat Use Case
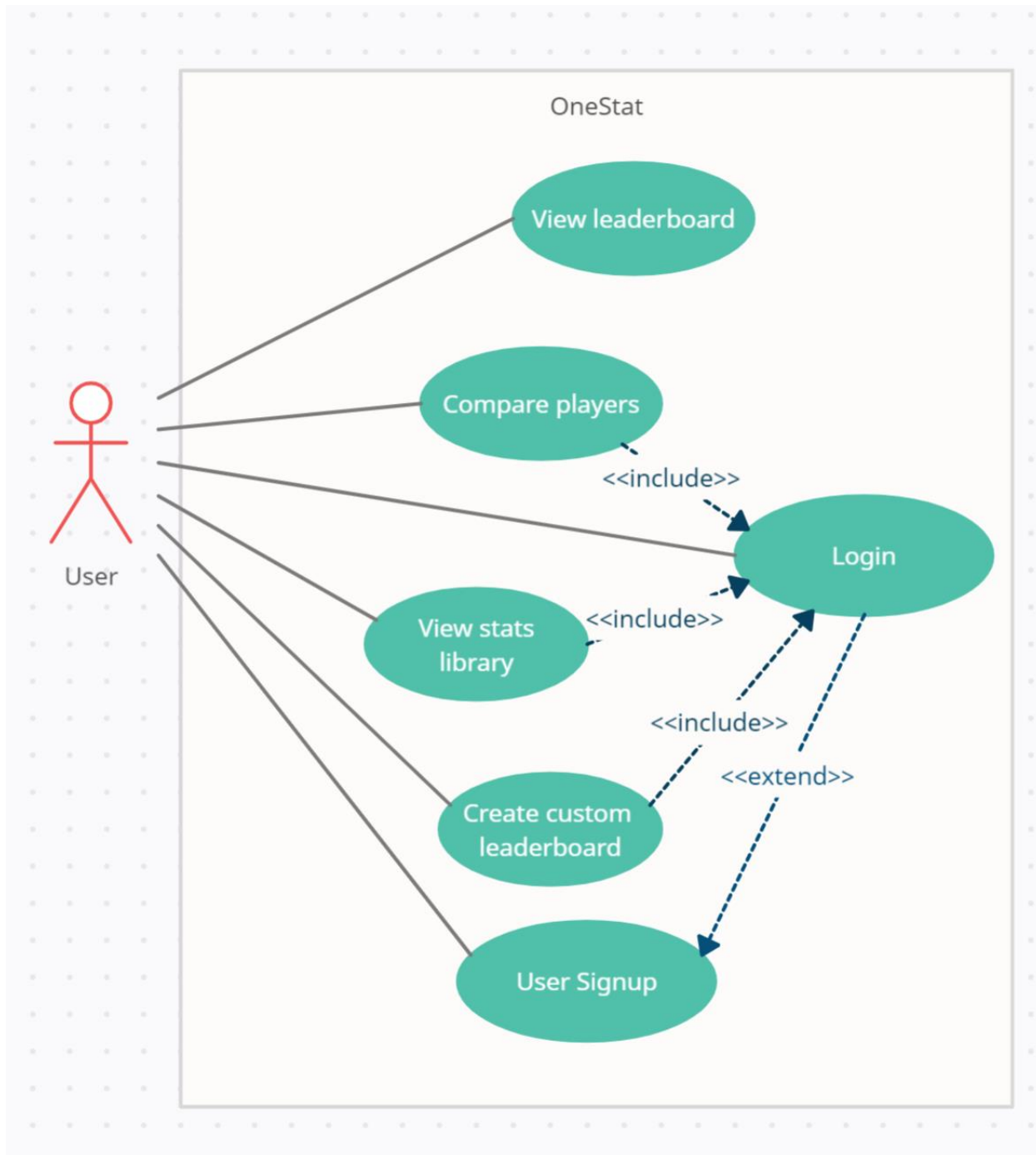
3.1.2 WARLeagues Use Case

3.1.3 Stats Dictionary Use Case

OneStat: Define and view a statistic

Check Player's statistic

Write and Check definition

Search Statistic definition

extend

Fetch definition

include

View definition

User

Admin
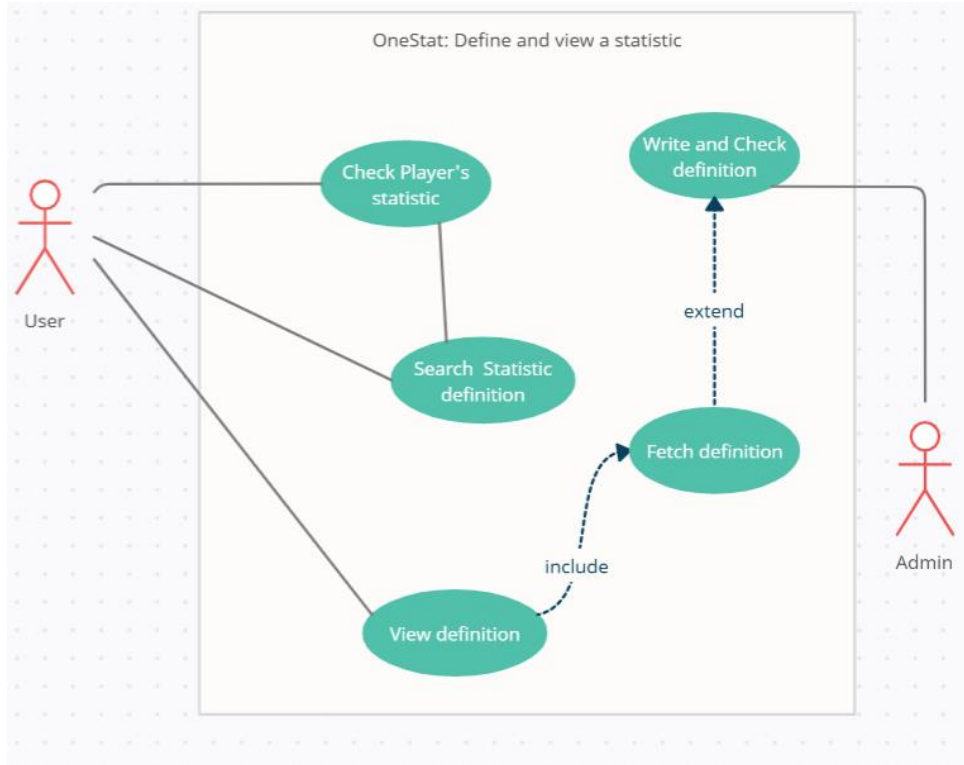
4. Evolutionary Requirements

4.1 Functional Requirements

4.1.1 Chart Creation

Title	Chart Creation
Description	Users will be able to generate their own charts and graphs based on site data.
Priority	4
Precondition(s)	User is authenticated
Postconditions(s)	Chart displayed
General flow	1. User chooses stat and clicks "Create chart." 2. Chart is created and presented to the user.

4.2 Non-Functional Requirements

4.2.1 Database Creation

Title	Creating Backend Database for OneStat
Description	We would use a DBaaS to not rely on third parties for data
Priority	3
Applicable FR(s)	1.1.2 OneStat Leaderboard

4.2.2 Sport Expansion

Title	Creating OneStat for other sports
Description	Once the baseball OneStat is up and running, expand into building specialized statistics for other sports.
Priority	5
Applicable FR(s)	1.1.2 OneStat Leaderboard, 1.1.4 Statistic Dictionary