RoseIM

Problem Statement

Rose-Hulman Institute of Technology – CSSE333

Jacob Petrisko

Praneet Chakraborty

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1. Executive Summary

This document will provide a detailed explanation on the complications with the current management system of Intramural Leagues and how we intend to fix it. This document contains several sections including an introduction, a high level problem summary, a detailed problem statement, information about stakeholders, and an ER diagram with schema.

Intramural Sports are an organized way for people of the same community to be involved in athletic competition with and against each other [2]. These activities are predominant in colleges and universities around the world. Currently, an outdated and highly complained about monopoly runs 95% of intramural league systems in universities and colleges across the country. We propose a solution to provide a streamlined and user friendly website to manage intramural sports at Rose-Hulman Institute of Technology.

2. Introduction

This is the first document outlining the foundations of RoseIM and its intentions to better the Intramural League experience. This document will include an ER diagram, followed by a security analysis, a relational schema, reports, and a final presentation. This problem statement will highlight the requirements for the system while the security analysis and data will highlight the implementation. The relational schema will outline the ER diagram, showing the foreign key constraints as a part of the database. The completed project will be demonstrated during the final presentation. We will also discuss the implementation process of the system during the final presentation.

3. High Level Problem Summary

3a. Elevator Statement

IMLeagues has a monopoly on intramural management at schools and colleges around the country. RoseIM strives to change that and provide a better, more user friendly solution to intramural management through efficient data usage, a clean and intuitive user interface, and a universal setup to account for any type of intramural.

3a. Primary Success Criteria

RoseIM will succeed based on a number of things which will put it over IMLeagues. These include: Easy and fast access to intramural data (teams, games, etc.), a clean interface with which to interact and change desired information, convenient derived information to track different statistics of each team. This project's success depends on having these main points met by the end of Winter Quarter 2019.

Not included in RoseIM will be the following: extensible to other schools outside of Rose-Hulman, accepting payments, mobile app support (website only), tracking statistics outside of scores and records for each game and team respectively.

4. Detailed Problem Statement

4a. Key Stakeholders

Name	Role
Sriram Mohan	*Project Advisor*
Jacob Petrisko	*Project Team*
Praneet Chakraborty	*Project Team*
Rose-Hulman Students	*End Users*
Rose-Hulman SRC Staff	*End Users*

4b. Functions

1. Ability to create and join teams
2. Ability to track different teams of players for different intramural sporting events
3. Ability to schedule different events at certain times and places with different teams
4. Ability to view:
   a. Your schedule
   b. Your teams
   c. Your roster
   d. League Standings
   e. Team Wins/Losses
   f. Facility locations
5. Ability for users to log in with Rose-Hulman email
6. Ability to limit data displayed for different user permissions (student vs admin)
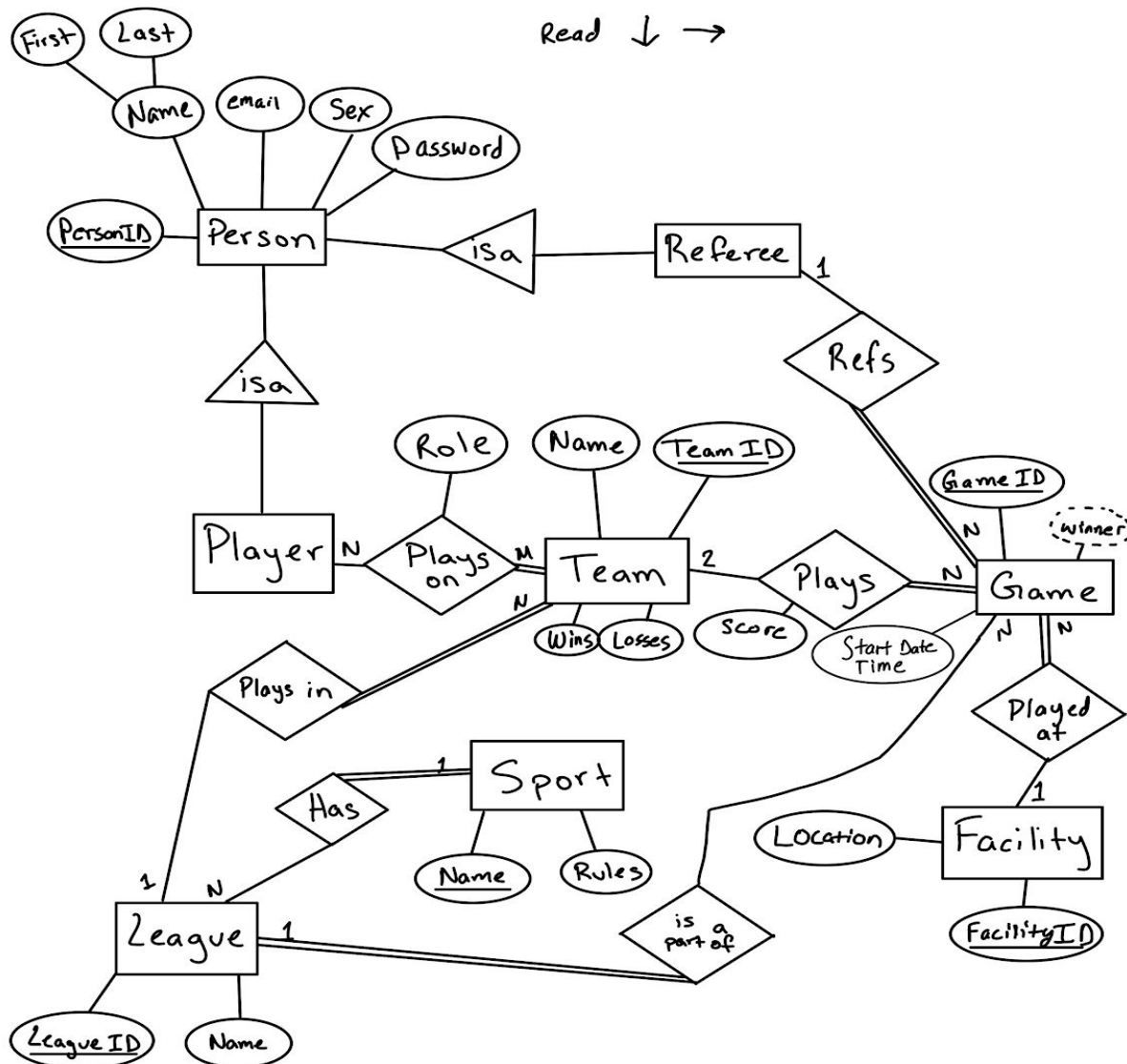
5. References

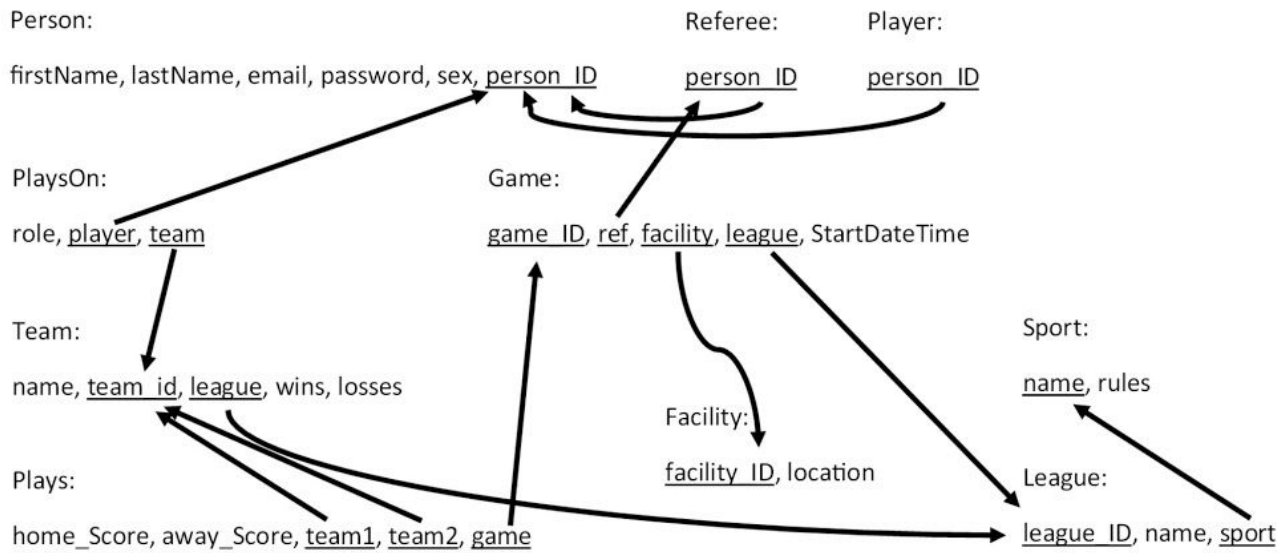[1] "IMLeagues." *IMLeagues*, www.imleagues.com/.

[2] "What Are Intramural Sports??" *NOVA Athletics*, 2018,
www.novaathletics.com/athletics/intramural_files/whyintramurals.

6. Appendix

6a. Entity Relation (ER) Diagram

6b. Relational Schema

Person:

firstName, lastName, email, password, sex, person_ID

Referee:

person_ID

Player:

person_ID

PlaysOn:

role, player, team

Game:

game_ID, ref, facility, league, StartDateTime

Team:

name, team_id, league, wins, losses

Sport:

name, rules

Plays:

home_Score, away_Score, team1, team2, game

Facility:

facility_ID, location

League:

league_ID, name, sport

7. Index

8. Glossary

Entity relationship (ER) diagram - an abstract way of representing the layout of a database [2].

Intramural League (IM) - an organized way for people of the same community to be involved in athletic competition with and against each other.