Requirements Specification

Wisconsin Hoofers Puddles System

1.0 Software Development Team

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2. Customer Information

Organization: Hoofers Outdoor Recreation Club
Acting Body for Customer: Hoofers Council
Customer Contacts:

  Dakota Dux, Hoofer Council Vice-President
  Prem Mansukhani, Hoofer Council Fund raising Chair

3. Introduction

The Hoofer Outdoor Recreation Club (Hoofers) provides numerous recreation opportunities for its broad member base. Seven different clubs are part of Hoofers: Sailing, Outing, SCUBA, Gliding, Riding, Ski/Snowboard, and Mountaineering. A Hoofers member may belong to any number of clubs.

Hoofers offers classes, trips, and equipment for its members. Currently, Hoofers uses a paper-based system for the administration of its operations. Hoofers would like to switch to a more efficient and reliable system. A web-based system, as we propose to build, would meet these goals as well as provide additional benefits. Those additional benefits would include demographic information for the administrators and account management tools for the members.

This document outlines the requirements, gathered from our customer, that will be implemented in Puddles. Note that Secondary Requirements will be indicated with italics.
4. **Terminology**

4.1. Activity: An activity is a class or trip sponsored by one of the Hoofers clubs.

4.2. Ratings Option: A ratings option is a category under which club members can be given skill ratings, such as swimming ability. Each club has a different set of ratings options.

4.3. Rating or Rating Points: A rating, or a number of rating points, is measurement of a club member’s skill in a certain situation or on a certain class of equipment. A club member will have a rating for each or the club’s ratings options.

4.4. Membership Option: Membership options define the different membership plans for a club. Membership options can define different costs and lengths of membership.

4.5. Puddles user: A Puddles user is any user that has registered with Puddles.

4.6. Suspension: A user that has misbehaved may be suspended. They can be suspended from a club, meaning that their membership privileges are revoked. They can also be suspended from Hoofers, meaning that they lose all of their user privileges.
5. **Platform Requirements**

5.1. **User Interface / Front-end**

5.1.1. All user interface elements will be written in the English language

5.1.2. A web browser shall be used to access and interact with the system

5.1.2.1. The interface must comply with the current UW policy on web accessibility as found at http://www.doit.wisc.edu/accessibility

5.1.2.2. All HTML documents generated by system must be compliant with W3C’s *HTML 4.1 Transitional* specification

5.1.2.3. Web interface functionality must be achieved with Internet Explorer 5.x/6.x, Mozilla 1.x, and Netscape 4.7x

5.2. **Back-end Database System**

5.2.1. The database must be based on the Oracle 7 database management system

5.2.2. Database must be designed such that it can be supported by DoIT

5.3. **Choice of middle-layer technologies must be consistent with those deployed by DoIT**

5.4. **System Security**

5.4.1. Access to the system by users must only be possible through the web interface

5.4.2. System shall be implemented using techniques and platforms designed to prevent unauthorized access to user information

5.4.3. Sensitive information, such as usernames and passwords, must not be transmitted over the network in cleartext

5.4.4. Any passwords must be stored in an encrypted matter

5.5. **Maintainability**

5.5.1. System shall use technologies that are in alignment with what DoIT currently uses

5.5.2. Delivery of system shall include documentation designed to ease the transition to a different development team

5.5.3. All dynamically generated HTML pages shall be based on templates such that the style can be customized by a web designer without modifying system code
6. Data Requirements

6.1. The system database shall contain user accounts that store the following information:

- name
- mailing address
- e-mail address
- phone numbers
- emergency contact name and phone number
- student, faculty, staff, or union ID#
- list of club memberships, each containing:
  - ratings for each of the clubs rating options
  - membership option
  - join and expiration dates

6.2. The system shall store activity entities to represent activities offered by the clubs. Activity entities shall consist of the following data items:

- an HTML file describing the activity
- membership and membership rating requirements
- cost
- number of availabilities
7. **Functional Requirements / Use Cases**

7.1. The system shall support the following classes of user:

- **Unregistered User (special):** Anyone can be an unregistered user.
- **Registered User (level 0):** A registered user has a Puddles account.
- **Clerk (special):** A clerk is a Hoofers employee that can help users manage their accounts. They have Registered User privileges for all user accounts.
- **Member (level 1):** A Registered User can become a member of one or more clubs. They gain level 1 permissions for each club they join.
- **Instructor (level 2):** A member of a club may be an instructor for the club. Instructors manage activities sponsored by the club. An instructor keeps their Member privileges for the club.
- **Club-level superuser (level 3):** A club-level superuser for a club has administrative privileges within that club. A club-level superuser has Instructor and Member privileges for the club.
- **System administrator (level 4):** A system administrator manages Hoofers accross club boundaries. System administrators have club-level superuser privileges for all clubs, and thus also has Instructor and Member privileges for each club.

7.2. **Unregistered User Functionality**

7.2.1. Create an account with Puddles
7.2.2. Provide anonymous feedback to Hoofers
7.2.3. **Access activity availability**

7.3. **Registered User Functionality**

7.3.1. Purchase club memberships using a credit card
7.3.2. Update basic account information such as mailing address
7.3.3. **Join an activity that has no membership requirement**

7.4. **Member functionality**

7.4.1. Renew club membership using a credit card
7.4.2. **Join an activity that requires membership in the club**

7.5. **Instructor functionality**

7.5.1. Give rating points to those members in the instructor’s club. Instructor can not rate him/herself and cannot remove ratings from accounts
7.5.2. **Create/modify an activity to be sponsored by the club**
7.5.3. **Cancel an activity sponsored by the club. System will notify participants of cancellation via automated e-mail**

7.6. **Club-level superuser functionality**
7.6.1. Upgrade/downgrade a member of the club to instructor status
7.6.2. Modify the club’s automated e-mail messages
7.6.3. Remove ratings from a member of club
7.6.4. (Un)Suspend an account’s privileges for this club
7.6.5. Modify a club member’s number of volunteer hours worked
7.6.6. Remove a user from a club sponsored activity
7.6.7. Create/modify/delete membership options
7.6.8. Create/modify/delete rating options
7.6.9. Make bulk rating changes

7.7. Clerk functionality
7.7.1. Create a Puddles account for arbitrary person
7.7.2. Add or renew club memberships for an arbitrary registered user
7.7.3. Sign up an arbitrary registered user for an activity
7.7.4. Modify a user’s basic information (phone number, etc)

7.8. System administrator functionality
7.8.1. Upgrade/downgrade Puddles to club-level superuser status
7.8.2. Upgrade/downgrade Puddles to system administrator status
7.8.3. Upgrade/downgrade Puddles user to clerk status
7.8.4. (Un)Suspend all privileges for a Puddles user

7.9. Additional functionality provided by system
7.9.1. Generate membership reports based on various queries
7.9.2. Maintain waiting lists for activities with automated e-mails
7.9.3. Send automated e-mails to users when membership expiration nearing