|  |
| --- |
| Programming Capstone |
| Web Application Proposal |
| For Lane County Search and Rescue Dive Team |
|  |
| **Andrew Christensen, James Powell, Kyle Hoppe** |
| **3/14/2016** |

|  |
| --- |
| This document outlines the requirements, needs, and process that will be used to create a web application for the Lane County Search and Rescue Dive Team. |

Table of Contents

[Summary: 2](#_Toc445665210)

[Scope: 2](#_Toc445665211)

[User Requirements: 3](#_Toc445665212)

[System Requirements: 4](#_Toc445665213)

[General Website (*Public Version*) 4](#_Toc445665214)

[Public Donations 4](#_Toc445665215)

[Application process 4](#_Toc445665216)

[Website Users 4](#_Toc445665217)

[Website Management (*Admin Version*) 5](#_Toc445665218)

[Notification System 6](#_Toc445665219)

[Sitemap: 7](#_Toc445665220)

[Diagrams: 8](#_Toc445665221)

[Classes and Attributes: 9](#_Toc445665222)

[Proposed Timeline: 10](#_Toc445665223)

[During Break: 10](#_Toc445665224)

[Week 1: 10](#_Toc445665225)

[Week 2: 10](#_Toc445665226)

[Week 4: 10](#_Toc445665227)

[Week 5: 10](#_Toc445665228)

[Week 6: 10](#_Toc445665229)

[Week 7: 10](#_Toc445665230)

[Week 8: 10](#_Toc445665231)

[Week 9: 10](#_Toc445665232)

[Week 10: 10](#_Toc445665233)

# Summary:

We will be planning and producing a web application for the Lane County Search and Rescue Dive Team (LCSARDT). The application will provide a publicly available website with an admin interface to manage content. Along with the public website we will develop a website designed to track and manage team tasks, trainings, certifications and equipment.

# Scope:

We plan to use Visual Studio and the ASP.net MVC framework to create the LCSARDT website. The publicly available website will consist of several, easy to navigate pages. The content on these pages will include the following:

1. The dive teams history
2. A calendar listing upcoming events
3. A “Who we are” section
4. A donation section
5. Images and videos

Nearly all content displayed on the page will be stored in a database and accessible via a web interface to allow a designated member from the dive team to make future adjustments and changes.

In the basic navigation on the public site there will be a link that will allow the LCSARDT members to log in and be redirected to the team page. Once logged into the team member website, a page with team announcements, notifications specific to the team member (expiring certificate/swim qualification tests/other), a team calendar, and upcoming trainings will be displayed. Admin navigation links will be available for team members with appropriate privileges. These links will include links to manage the public website content, edit member privileges, list/contact team members, view and edit a mission log, and view and edit equipment.

# User Requirements:

1. Public users should be able to access the website and view information regarding the dive team. This information will include the team’s history, how they define themselves and who they are, an event calendar, contact information, and media in the form of pictures and videos.
2. Public users should be able to make a donation to the team through the website.
3. Public users should be able to see the application process and requirements for becoming a member and be provided with forms necessary to begin the process.
4. An admin, from the team, needs an interface that will allow management of the information and media displayed on the public website.
5. All team members need to be able to log in and have access/edit their own information. This includes contact info, dive experience, other useful skills available to the team, dive certifications, and current qualifications.
6. All team members should be able to view their own mission eligibility and attendance percentage.
7. All team members should be notified in advance when any qualifications will be expiring and need renewal.
8. All team members that are mission eligible should be able to log in and add documentation to an ongoing mission log. This could be limited to a basic description, date, and current status of the mission.
9. A team admin needs to be able to manage a list of equipment. This list would include details for equipment that needs regular inspection/maintenance and provide a notification prior to the date that maintenance needs to occur. This list could also be used to track equipment that team members have checked out.
10. All team members should be able to view the rest of the teams basic contact information.
11. A team admin should be able to fill out a web form and have it email selected team members.

# **System Requirements:**

## General Website (*Public Version*)

* 1. The system will display a main page with media and information provided by the dive team in a blog format
  2. The system will include a navigation pane with links to an About Us page, Event Calendar, Login page, and Contact information page.

## Public Donations

* 1. The system will implement PayPal donations through the PayPal Donate Buttons (*The dive team will need to set up a PayPal account prior to this, and provide the required HTML code from the account.)*
  2. The system will include $1, $5, and custom amount buttons.

## Application process

* 1. The system will provide a list of steps the user will need to complete to gain membership to the team
  2. The system will provide a link to an application document in the form of a PDF document *(Provided by the dive team.)*
  3. The system will provide an E-mail link for submitting the application document. *(Link will open E-Mail application with “To” field set.)*
  4. The system will display address information if user wants to drop off application in person.

## Website Users

* 1. The system will include one custom user role (*Admin Role, possibly called Editor for ease-of-use?*)
  2. The system will determine user role on login, providing different interfaces depending on role (*Public members can view content on the site, only Admins can edit content and assign user roles*)
  3. The system will include a user profile page that will allow the user to view and edit their information (*Contact info, dive experience, other useful skills available to the team, dive certifications, and current qualifications.*)
  4. The system will provide information on the user's mission eligibility and attendance percentage.
  5. The system will provide logged in users with a list of contact information for each other team member.
  6. The system will allow mission eligible users the ability to edit ongoing mission logs, including description, date, and current status.

## Website Management (*Admin Version*)

* 1. The system will provide a page for assigning and revoking user Admin Roles, accessible only by Admins (*There is no need to allow adding or delete roles on this page, as there will only ever be the need for Admins and regular users*)
  2. The system will provide a form to manage front page content, including adding new posts, deleting posts, and editing posts.
     1. The system will display a form to allow specifying a Header, Body text, and optional media. (*Media here meaning images or YouTube embedded videos*)
     2. The system will store creator information for each post (*Created By, Last edited by, Creation date, and Edit date*)
  3. The system will allow editing of Contacts, and About Us pages (*With an edit button* o*nly displayed for users with the Admin role*)
  4. The system will allow adding new events, cancelling events, rescheduling events, and editing upcoming events. (*Edit controls only visible to users with the Admin Role.*)
     1. The system will display a form for adding new events, with options for setting Subject, Event Description, Event Start Date/Time, Event End Date/Time, and Recurring/One-Time event specification.
     2. The system will allow Admins to cancel events, with an optional field for specifying reasons for cancellation. (*Cancelled events can be left in the calendar, but changed visually to indicate they have been cancelled, so users looking for an event can still see it and that it was cancelled*)
     3. The system will allow rescheduling of events, with options for new schedule date, as well as a field for specifying reasons (*Rescheduled events can be left in the calendar, but changed visually to indicate they have been rescheduled, so users looking for an event can still see it and when it was moved to*)
     4. The system will allow editing of events, to change event description, or subject. (*This is quite similar to rescheduling events, whether edit and reschedule are kept separate or combined is a matter of usability and ease-of-use for the user.*)
  5. The system will allow the admin to maintain a list of equipment
     1. The system will provide a form for adding new equipment with equipment descriptions, last inspection date, and time between each inspection.
     2. The system will allow the user to checkout equipment, and allow the user to specify who it is checked out to.

## Notification System

* 1. The system will provide visual prompt of new notifications.
  2. The system will add notifications for upcoming events.
  3. The system will add notifications for messages address to the user
  4. The system will add notifications for any qualifications that are about to expire.
  5. The system will add notifications for equipment with upcoming inspections/maintenance.

# Sitemap:



# Diagrams:



# Classes and Attributes:



# Proposed Timeline:

## During Break:

Email client to prompt for content/style options for public website.

Create GitHub Repository and invite team members.

Create Pivotal Tracker Project and brainstorm tasks.

## Week 1:

Prioritize and assign tasks.

Plan/discuss visual design.

## Week 2:

Complete creation of classes.

Complete shared layouts in Visual Studio.

## Week 4:

Completion of public website (using placeholder content as necessary) and content management page(s).

## Week 5:

Seed Roles, Member log in, and member views.

## Week 6:

Admin pages for managing members and team calendar.

## Week 7:

Group email interface and functionality and form for submitting anonymous suggestions.

## Week 8:

Equipment management page and notifications for needed gear inspections, trainings, and qualifications.

## Week 9:

Testing and final revisions.

## Week 10:

Deployment to client hosting.