Project Charter

25ᵗʰ April 2017

Basic Information

Project Name: RAIHN Scheduling Application (RSA)
Team Leader: Kristen Merritt
Customer: RAIHN - http://www.raihn.org/
Sponsor: Kim and Dave
Team: Kristen Merritt, Zachary Cicora, Anthony Perez, Tiandre Turner, Ian Kitchen

Purpose

The intent of the RAIHN Scheduling Application (RSA) is to satisfy the scheduling needs of the Rochester Area Interfaith Hospitality Network (RAIHN).

Why it is being done? Streamline the creation of schedules to reduce their complexity

Its business value? This project would reduce the amount of time needed to create the schedules, allowing personnel more time to work on other tasks.

Organization supporting the project - Rochester Area Interfaith Hospitality Network(RAIHN) and the third-party ISP.

Business problem being solved - The manual generation of the following:

Congregation Schedule:

1. Direct contact with each congregation for their availability

2. Manual checking of previous years' position for every congregation

3. Manual checking of holidays list for every congregation's position

4. Manual generation of schedule based of the previous tasks (1-3)

5. Manual change of the schedule if any availability changes or any other schedule clashes

Bus driver Schedule:

1. Direct contact with each bus driver for their availability

2. Manual generation of schedule based off of driver's availability

3. Manual change of schedule if any availability changes or any other schedule clashes

Priority: This project has a moderate priority for the organization RAIHN. Since the business has been able to work without these new functionalities, one can consider this project as an enhancement to their current workflow.

Project Context

The RAIHN Scheduling Application (RSA) is related to various business goals for RAIHN. These include, but are not limited to:

1.) Conform to a singular process to plan, generate, communicate, and modify host congregation and bus driver schedules.
2.) Expedite business processes involved in planning, generating, communicating, and modifying host congregation and bus driver schedules.
3.) Provide vital documentation to new employees on the RAIHN process for planning, generating, communicating, and modifying host congregation and bus driver schedules.

When developing a platform to solve the in-scope goals of this project, various political factors must be taken into account due to the amount of people who will rely on RSA:

1.) The overall design of the application must be accessible to people of all ages, technological backgrounds, and education levels. This frees RAIHN of the burden of taking these factors into account for any future users of the application
2.) Various stakeholders of the project will want to provide feedback and change requests. Because of the nature of this project, our time restraints, and our desire to make the best possible product for RAIHN, we have put in place a rigid change request process. This assures that the quality of the project does not decrease as change requests are made from various lines of communication.

Other smallers projects that are involved within RAIHN could also impact RSA. Should RAIHN require additional funding for their projects, this could negatively impact their ability to provide the basic dependencies for RSA. These could include:

1.) Any changes to the RAIHN website that would require additional funding from their budget.
2.) Any new projects that RAIHN funds with their budget.
3.) Any volunteer work that RAIHN funds with their budget.

Goals and Objectives

The main goal of the RAIHN Scheduling Application (RSA) is to develop a scheduling system that enables the staff at RAIHN to create complete and valid congregation and bus driver schedules. A valid congregation schedule spans 13 weeks, accounts for blackout dates, holidays and past schedules, and is approved by all congregations involved. A valid bus driver schedule covers all bussing times across a 2 month span, accounts for driver availabilities, and is approved by all of the drivers.

- Congregation Schedule: Auto-generated schedule which will reduce or eliminate the need to manually create or edit the schedule by hand.
- Bus Driver Schedule: Auto-generated schedule which will reduce or eliminate the need to manually create or edit schedule by hand. Availabilities can be entered by the bus drivers themselves or the bus driver scheduler.
- Communication to bus drivers and congregations will be straight-forward and easy to use.

Stakeholders

There are five parties identified by the TAKZI team to be involved in, or concerned with, the process of the RAIHN Scheduling Application (RSA).

- The Host Congregation Scheduler (Kim) - Kim is the executive director of RAIHN and is the main host congregation scheduler for the organization. She will be the primary stakeholder.
- The Bus Driver Scheduler (Dave) - Dave is the main bus driver scheduler for the organization and is the the secondary stakeholder.
- The Host Congregations - The host congregations will be inputting dates into the application for scheduling purposes. The host congregations will also be approving created schedules made by Kim.
- The Bus Drivers - The bus drivers will be inputting dates into the application for scheduling purposes. The bus drivers will also be approving created schedules made by Dave.
- The RAIHN Families - RAIHN families will primarily be viewing the host congregation and bus driver schedules. They will have limited access, but will still be utilizing the application.

Success Criteria

For the RAIHN Scheduling Application (RSA) to be successful, the following must be accomplished:

- A scheduling application hosted on the web for RAIHN to complete their bus driver and congregation scheduling.
  - The Congregation Scheduler will be able to generate a schedule automatically, modify the schedule manually if necessary, and post it online for the congregations to see if desired.
    - Congregation schedules will be 13 (39?) weeks long
  - The Bus Driver Scheduler will be able to generate a schedule automatically, modify the schedule manually if necessary, and post it online for the drivers to see if desired.
    - Bus driver schedules will be two months long
  - Schedules can be viewed in a weekly, monthly, or yearly format
  - Schedules can be downloaded as a pdf, png, jpg, and/or a CSV file for importing into excel.
- An algorithm to generate a schedule based on the black-out dates provided by the Congregations, holidays, and previous schedules.
  - The algorithm will create rules based off of the congregation's blackout dates and past holidays they were assigned in order to prevent them from getting scheduled on those blocks
  - It will then start to fill in weeks based off of previous schedules to avoid placing congregations in the same weeks if possible
    - We may assure that the first, second and/or last congregation from previous schedule will not be the first or second congregation for the new one.
- Allows for ease of communication between bus drivers and bus driver scheduler, and congregations and congregation scheduler
  - Generated schedule can be emailed to all congregations by the press of a button
  - Congregations can click a link in the email to approve or decline proposed schedule
  - A final schedule will be emailed to all the bus drivers by the press of a button
  - Bus drivers can either click a link in the email or reply to the Bus Driver Scheduler about any conflicts or to approve the schedule
  - Notifications will be sent automatically to congregations and bus drivers when it comes close to their time to host/drive
- An admin interface for creation and modification of bus driver accounts and congregation accounts
  - Bus driver accounts are optional based on bus driver's preference
  - Will be able to reset passwords

○ Separate interface for creation of bus driver accounts and congregation accounts as each account has different responsibilities

Project Dependencies

The following dependencies are required in order for the RAIHN Scheduling Application (RSA) to be successful.

RAIHN Requirements

Staffing Requirements

1.) *Systems Administrator*. Someone who will be able to support the application after delivering the final product.
2.) *Bus Driver Manager*. Someone who will be the main point of contact between the bus drivers and the rest of the RAIHN Staff. This manager will also be required to manage the generation of the bus driver schedule, check for incorrect data, fix incorrect data, and communicate any changes to the bus drivers.
3.) *Congregation Manager*. Someone who will be the main point of contact between the congregations and the rest of the RAIHN Staff. This manager will also be required to manage the generation of the congregation schedule, check for incorrect data, fix incorrect data, and communicate any changes to the congregations.

Resource Requirements

1.) Server Requirements
   a.) Host PHP
   b.) Host MySQL Databases / phpMyAdmin
   c.) Minimum of 10GB of database storage
   d.) Be a dedicated server
2.) Funding to support the server
3.) A computer to access the application

Developer Team Requirements

Basic Team Requirements

1.) All team members must be able to work on the project for a minimum of 6 hours a week
2.) All team members must have access to a computer to work on the project

3.) All future team members must be able to agree upon and sign the current group contract

Specific Skillset Requirements

1.) Front End Developer (1)
2.) Back End Developer (3)
3.) Network/Sys Admin (1)
4.) All team members must have basic knowledge of Git/GitHub before beginning the project.

Environment Requirements

1.) Kelvin account / space must be created before any development begins
2.) GitHub repository space for the project
3.) Sublime Text Editor and any plugins agreed upon by the dev team

Constraints (ANTHONY)

The following constraints will be observed throughout the duration of this project:

- Project development + documentation is constrained to 12 semester weeks (time)
- Resources (we only have RIT resources)
- Limited availability to Kim and Dave
- Experience working in large scale projects (we are students)
- server limitations (in terms of space, security wise, possibly not in budget)

Communication

The following communications will occur throughout the duration of the project:
1.) **Change Requests**
   a.) Issued By: Kim or Dave
   b.) Recipient: Team Leader (Kristen)
   c.) Response: Change Request sections as appropriate between parties.
2.) **Requests for Detail**
   a.) Issued By: Team Leader (Kristen) on behalf of the development team
   b.) Recipient: Juba, Kim or Dave
   c.) Response: Email response to questions, comments, concerns from the development team
3.) **Arranged Class Meetings**
   a.) Issued By: Mark Juba

b.) <u>Recipient</u>: Kim and Dave

c.) <u>Response</u>: Questions and conversation during class meetings

Scope Specifications

It was determined by the TAKZI team that, regarding the RAIHN Scheduling Application (RSA), the following are in scope:

- A congregation and bus scheduling application
  - Schedule auto-generation
  - Application access to
    - RAIHN Director - Kim
    - Bus Scheduler - Dave
    - Host Congregations
    - Bus Drivers
  - E-mail Notification System (Sent to Bus Drivers & Host Congregations)
- Low budget
- Application ease of use
- Relatively short amount of time for application development

Out of Scope Specifications

Contrary to the above scope specifications, the following was determined to be out of scope. Items in this section will only be considered "In-Scope" if there is a proper change request form (found at the end of this charter) is approved by the development team:

- Families being able to access the application
- Scheduling maintenance of busses
- Storing detailed information about the congregations
- Storing detailed information about bus drivers
- Storing ANY information about residents

Assumptions

The RAIHN Scheduling Application's success criteria is based off the following assumptions:

1. Users will have Internet access.
2. Users are willing to use the system for the intent of the application.
3. ISP's servers will be up and running at the time the application is being accessed.

4. The application will not be subject to major overhauling of project requirements half-way through the development of the application.
5. There will be a System's administrator who can give support to this application and its users after development is finished.
6. The RAIHN staff have the technological knowledge to use the application as designed for their skill level.

Change Management

Any and all change requests must go through the following process:

1.) Requester must fill out a change request form in order to process a change for the application.
    a.) Section 1 must be filled out in its entirety and then sent to the Project Manager, Kristen Merritt via email or in person.
    b.) The requester will receive a response with an approval or a denial of the change request within 1 week of when the Project Manager received the change request.
    c.) The requester must indicate that they have read the comments of the dev team by filling out Section 3 of the form and returning it to the Project Manager, Kristen Merritt, via email or in person.
2.) A meeting between the requester and the development team will be scheduled should the need arise.

Change request form:

Change Request Form	
Section 1 Requestor must fill out Section 1 before sending the form to the Project Manager	
Date of Request	MM/DD/YYYY
Requester Name	
Is this request for an **additional feature**, a **change of a current feature**, or a **removal of a feature**?	❏ Additional Feature ❏ Change of Current Feature ❏ Removal of Feature
Summary of Change Request	
How will this change benefit the project overall?	
If this is an **additional feature**:	❏ I am willing to sacrifice another feature

Would you be willing to **sacrifice another feature** for your request? **If yes**: Please list the features you would be willing to sacrifice for this request **If no**: Please indicate that you understand the **overall quality of the project may decline** because of this request	for this change request **Features**: ❏ I am not willing to sacrifice another feature for this change request ❏ I understand that the overall quality of this project may decline due to this change request
Signature of the Requestor (initial if electronic) This field indicates that the above information will remain static throughout the processing of this change request	MM/DD/YYYY Signature

Section 2
Project Manager must fill out Section 2 before sending the form back to the Requestor

Date Request was Received	MM/DD/YYYY
Dev Team Comments	
Dev Team Approval / Denial	❏ Approved ❏ Denied
Project Manager Signature (initial if electronic) This field indicates that the above information was discussed in detail with the development team and the comments/decision was based on the position of creating the best possible product for the customer	MM/DD/YYYY Signature

Section 3
Requestor must fill out Section 3 before sending the form back to the Project Manager

Was a meeting held?	❏ Yes
	    Date meeting was held: MM/DD/YYYY
	    ❏ Request is Approved
	    ❏ Request is Denied
	❏ No

Signature of the Requestor (initial if electronic) This field indicates that the requestor has reviewed the decision of the Dev Team and understands the reasoning behind its approval/denial	MM/DD/YYYY Signature

Risks (TIANDRE)

Controllable Risks

- Issue with the database due to injection or special characters so on.
- Schedule generation takes too long that could leads to no solution
- UI Design that could cause confusion
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Uncontrollable Risks

- Server crashes/shut down
  - Server interrupted
  - Storage may run out
- Nature causes (rainstorm, snowstorm)
  - Network Interference
  - Power outages

Schedule Milestones

Schedule milestones text

Cost Estimates

The main cost of this project will not be in currency, but in time. The only cost in currency to RAIHN will be whatever is needed to upgrade their current server plan. Since the hosting is contracted through midphase, and assuming that the base plan is being used, this will need to be upgraded to the [Professional Hosting](#) plan. This would increase their monthly spending of $3.48 a month to $4.48 per month. Since this is charged bi-yearly, the figures are $83.40 every two years to $107.40 every two years.

We estimate the total time to complete this project to be 1000 hours split between the five of us. For a more detailed breakdown on time estimates and time costs, see the Schedule Milestones section and the Work Breakdown Structure.

Signature of Congregation Manager   _____

Signature of Bus Driver Manager   _____

Signature of Mark Juba   _____

Signature of Development Team Manager _____