

Gathering Manager Website

Group 4

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1 Introduction

1.1 Purpose

The purpose of this document is to outline the major features and business case for the gathering manager website. It identifies the stakeholders and users for whom this system will be targeted and demonstrates the fundamental problem that they face and how this system will provide a solution to that problem.

1.2 Scope

This vision document lays out the high-level outline for the gathering manager website. This application will be developed to run primarily on desktop web browsers, but will be also be built to support mobile browsers as well. It will seek to resolve the issues of the inefficient and uncentralized nature of current technologies by providing a centralized and easy-to-use system for managing coordination and attendance tracking for events and gatherings.

2. Positioning

2.1 Business Opportunity

The demand for digital solutions to handle social and professional events has increased tremendously. Traditional approaches, such as manual sign-ups, spreadsheets, and diverse communication channels, frequently result in inefficiencies. The Gathering Management System tackles this issue by offering a consolidated platform for event planning, guest management, and automated communications. The system is helpful for corporations, community organizations, educational institutions, and individuals who want to organize social or professional events efficiently.

2.2 Problem Statement

Problem	Affects	Impact	Successful Solution Includes
Unorganized guest lists, last-minute changes, and poor communication in gathering management.	Hosts, Guests, and Administrators.	Leads to confusion, missed events, and inefficiencies in planning and coordination.	Automated RSVP system, secure access codes, email reminders, and a structured gathering management interface.

3. Stakeholder and User Descriptions

3.2 Stakeholder Summary

Name	Represents	Role	Skills
Hosts	Individuals organizing gatherings	Create and manage gatherings, invite guests, track attendance	
Guests	Individuals attending gatherings	RSVP for events, receive event notifications and check in via access codes	
System Administrator s	Platform maintainers	Ensure platform reliability, security, and data integrity	
Kaleb Scott	Developers	Frontend and backend development	Java, JavaFX, C#, SQL
Benjamin Johnson	Developers	Frontend development and documentation	Java, JavaFX, HTML, C, JavaScript, Haskell, Racket, Ruby
Sorelle Djuissi	Developers	Backend development	Java, Typescript, MySQL

Event Sponsors	Businesses or organizations supporting gatherings	Provide funding or promotional support for gatherings	
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3.3 User Summary

Name	Description	Stakeholder
Hosts	Users who create and manage gatherings, invite guests, and track attendance	Hosts
Guests	Users who RSVP to gatherings, receive event details and check in via access codes	Guests
Administrators	Users who ensure platform stability, monitor data security and provide support	System Administrators

4. Product overview

4.1 Product perspective

The gathering manager website is independently developed but will rely on several third parties to provide functionality. A server provider like Vercel will serve as the backend of the application, while SQL manages databases. An email provider such as Amazon Simple Email Service will allow the gathering manager to send reminders to users who have signed up for them, and the sign-in system will be implemented using the Google authentication API. All other features of the website will be developed using JavaScript and HTML.

4.2 Summary of capabilities

Customer benefit	Supporting features
User management	User sign-up, login, and user statistics features
Event creation and management	Registering and deleting gatherings
Privacy options	Public or private settings and access codes
Accessible attendee information	RSVP ability and attendee list
Gathering reminders	Email notification system
Event discovery	Public gatherings page and tag filtering system
Event privacy	Secure access codes with expiry times
User-friendly GUI	Web-based application supporting modern Chromium-based browsers

4.3 Assumptions and dependencies

The gathering manager website will always require a steady internet connection to be accessed and for the third-party email provider to remain functional when sending reminders. Since the application will be based on Google Chrome, it is assumed that users will access the website through a modern Chromium-based web browser. The sign-in system will rely on the Google authentication API and cannot provide any account services without it.

5. Product Features

- 1) The website will have a feature to allow users to log in and out.
- 2) It will include a feature to allow users to schedule a new gathering by providing a name, time, and description for the gathering.
 - a) When a user creates a new gathering, they will be given a link that allows other people to RSVP for the gathering
 - b) Hosts will receive a code that can be given to attendees to enter into the website to register them as having attended the gathering.
- 3) Users will be given the option to make their gatherings either private or public.
- 4) There will be a feature that allows users to remove events that they have created.
- 5) There will be an option to add various predefined tag-based descriptors to meetings.
- 6) The website will provide a page where users can view the past and upcoming gatherings that they created, as well as any gatherings that they have signed up for.
- 7) Users will be provided with the option to edit the information and request new links and access codes for their upcoming gatherings.
- 8) The host will also be able to view a list of people who have signed up for an upcoming gathering and a list of the people who actually attended their past gatherings.
- 9) There will be a feature allowing the user to view attendance statistics for a single meeting or for a subset of meetings filtered by the tag descriptors and time period.
- 10) There will be a page where users can look through a list of public gatherings and sign up for any of those gatherings.
 - a) This page will contain a feature that allows the user to filter the gatherings displayed based on the tag descriptors and the time the gathering takes place.
- 11) The site will support the ability to send email-based reminders up to one day before a gathering starts to anyone who is signed up for the gathering.

6. Constraints

The gathering manager is designed as a web application accessible only through a browser. Third-party email reminder features must work correctly and must follow legal guidelines regarding email spam. The system must be able to handle many gatherings with tags and user accounts registered to those gatherings. Access codes must remain secure as gatherings may contain private information of their hosts, requiring them to be difficult to guess and set to an expiry time. Gatherings will need to be filtered to remove any illegal or harmful events that are created.

There are also risks involved with the application, like managing an unexpectedly large number of users the system is not large enough to support. Since the gathering manager relies on third parties for two features, email notifications and account authentication, there is more room for error if either party is unavailable.

9. Other product requirements

The application must comply with the Web Content Accessibility Guidelines to make the website accessible to people with disabilities. Additionally, the website must comply with the CAN-SPAM act, which means having opt-in consent, having apparent sender and subject line accuracy, and having a simple unsubscribe link in all emails. Regarding security, the gathering manager will use Transport Layer Security encryption to keep information secure and OAuth 2.0 to have secure authentication with the Google authentication API. JSON Web Token, which is compatible with OAuth, helps securely share JSON data between communicating parties.

The application will be tested to work on most modern browsers like Google Chrome and Firefox. It will require users to be on at least somewhat modern versions of Windows, Mac, and Linux on desktop and updated versions of iOS and Android on mobile. It will also require a constant internet connection from the user. The application must handle many users concurrently and the events they may create or join. A goal of 99% data accuracy and 99.9% uptime per year will be met even during peak load conditions. Users' response time should remain under a few seconds at all times.

The gathering manager will support an adaptive UI and UX, allowing users to have a positive experience regardless of their environment or device (as long as it meets the minimum standards). Maintenance, performed as needed, will avoid causing downtime whenever possible, and regular tasks like indexing and data cleanup will be performed during periods of low traffic. In the case of errors, users will be provided specific error messages that allow them to either troubleshoot their problems or receive direct support.