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. |

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## **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 Administrators | 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 |  |

### **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.
   1. When a user creates a new gathering, they will be given a link that allows other people to RSVP for the gathering
   2. 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.
    1. 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.