

Software Requirements Specification

for

PlanIT

Version 1.0 approved

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Revision History

Name	Date	Reason For Changes	Version
Initial Version	10.12.2017	none	1.0

1. Introduction

1.1 Purpose

This document provides a complete description of the requirements for the PlanIt product version 1.0. It will cover purpose and product scope, and will explain features, interfaces and functions of the product. The purpose of this Software Requirements Specification document is to serve as the repository for all of the requirements that the PlanIt system shall or should possess. This specification is the primary document upon which all of the subsequent design, implement, and test plans will be based.

1.2 Document Conventions

This SRS document was written following standard English conventions. Any color or font style differences are used solely for visibility and readability. All requirements listed have their own priority defined.

1.3 Intended Audience and Reading Suggestions

This SRS document is intended for:

- Developers who wish to review project's capabilities so that they can easily understand where their efforts should be targeted to improve or add more features to it.
- Project testers so that they can use this document as a base for their testing strategy.
- End users of PlanIt who wish to read about this project's features and what it can do.

The rest of this document contains the overall description of the product, external interface requirements, system features, non-functional requirements and other requirements.

The developer should start paying close attention from the overall description of the product section especially sections 2.2 (Product Functions), 2.3 (User Classes and Characteristics), and 2.4 (Operating Systems), which are crucial to the developer's understanding of the software.

The Project testers should completely understand the external interface requirement section.

The end user can skip to section 4 the system features to read about what features the product has and what those features can do.

1.4 Product Scope

PlanIt is a web application specifically designed to function as an event managing app. PlanIt can be used by large or small corporations, organizations, or friend groups to more effectively manage their events or trips. While this app will primarily target larger groups (15+ individuals) it can be just as easily used by smaller groups. Through a user-friendly interface and sleek design PlanIt gives its users detailed and customizable ways to manage events like never before.

1.5 References

- IEEE. IEEE Std 829-2008 Standard for Software and System Test Documentation.
IEEE Computer Society, 2008
- IEEE. IEEE std 830-1998 Recommended Practice for Software Requirements Specifications. IEEE Computer Society, 1998
- [5.2] J.D. Meier, Alex Mackman, Michael Dunner, Srinath Vasireddy, Ray Escamilla and Anandha Murukan, *Improving Web Application Security: Threats and Countermeasures*, Microsoft Corporation, June 2003

2. Overall Description

2.1 Product Perspective

This document specifies the requirements of PlanIt, which is a standalone web-based application being developed with the goal of satisfying the needs of anyone planning a large-scale trip. While this is possible with current web-based applications, PlanIt aims to do this in a simple, more organized format, avoiding the chaos which very large groups may entail, and focusing more on event attendance than chatting between users.

2.2 Product Functions

- Web-based & mobile friendly
- Simple profiles with picture, contact info
- Create and manage events
- Send event invitations to selected individuals
- View group member acceptance status
- Poll groups to decide things such as time, place, or other itinerary items
- Broadcast important information to those who are attending your event
- In-app calendar of events with option to sync/send reminders

2.3 User Classes and Characteristics

This application is meant to be used by any member of a group planning or attending a trip. Uses could range from family vacations to business trips to getting lunch. The first user class is the event leader. The event leader is essentially the administrator of the group. The second user class, event members, encompasses the rest of our users. Members of an event must accept an invitation to join an event. Once a part of an event, their privileges will be determined by the event leader. By targeting only two user classes, we aim to fully satisfy the requirements of both. To read descriptions of the functions of each user class, see section 5.5.

2.4 Operating Environment

PlanIt will be developed to function on (minimum) Windows 7 and Mac OS X Lion operating systems as well as mobile Android [version#] and iPhone OS 9 web browsers. PlanIt will be optimized to run on the following browsers (minimum listed):

- Internet Explorer 10
- Safari 8.0
- Edge 12
- Firefox 30
- Chrome 30

PlanIt will have synergy with both mobile and desktop calendars & contact lists if the user wishes to export that data to his/her phone.

2.5 Design and Implementation Constraints

PlanIt will be developed over a three month period. It will include an opt-in policy for syncing user contact lists and calendar events. PlanIt will be written in English and follow TCP/IP communication protocols since an active internet connection will be required to use our app. The programming standards followed are outlined in ACM's Computer Code of Ethics. Users will not be required to maintain PlanIt because the development team will continually work to resolve bugs post-release.

2.6 User Documentation

PlanIt will have a help tab on the home page, which shows relevant details such as the application's purpose and abilities. This help tab will have links to pages that detail each major aspect of the program, such as creating a group, planning an event, and assigning roles. The help page will also include a brief list of frequently asked questions.

2.7 Assumptions and Dependencies

An assumption for PlanIt is that we will be able to access user contact (TBD #1) and calendar (TBD #2) lists. Without access to this information, a database with new account information will be required to maintain functionality of the project.

3. External Interface Requirements

3.1 User Interfaces

A first-time user will be greeted with a login page where they can create an account in our system. Once logged in, the user will see the default home page, with the following standard user interface tabs:

- Home
- Groups
- Contacts
- Calendar
- Profile
- Help/FAQ

3.2 Hardware Interfaces

Supports the following minimum browser requirements:

- Internet Explorer 10
- Safari 8.0
- Edge 12.0
- Firefox 30.0
- Chrome 30.0

To use PlanIt, an active internet connection is required.

3.3 Software Interfaces

PlanIt can be used on any desktop or mobile operating system using a browser defined above in sections 2.4 and 3.2. The communication between the database and the web application will consist of both reading and modifying operations. PlanIt will be designed using a combination of HTML5, Javascript, PHP, and JavaServerPages (jsp). For database management, we will use MySQL.

3.4 Communications Interfaces

PlanIt will contact users (opt-in policy) via email, phone badges/reminders, and in-app reminders using standard TCP/IP communication protocols. How a user connects to PlanIt via browser on desktop or mobile phone is up to them.

4. System Features

4.1 Create Events

4.1.1 Description and Priority

The 'Create Events' feature is intended to be the basis of the application where a user will create an event and invite contacts to the group from their contact list. To create an event, the user will be appointed the event director of the event and will be able to have control of aspects such as naming the group, listing details and descriptions of the event, as well as other management necessities when creating the event. These aspects are able to be edited later by the event director of the group. As it is the foundation of the application, it is of *HIGH* priority.

4.1.2 Stimulus/Response Sequences

- From the home screen, a user will be able to press a button and create an event.
- A new page will open where the details of the event (name of group, description, etc.) can be filled out by the user.
- Once this page is finished, the user chooses to go to the next page where their contacts can be invited to join the group.
- After the user has invited every contact that they desire, the user will be taken to their event home page.
- In addition, the event invitation will have the event details included such as event name, event description, and the name of the user that invited them.

4.1.3 Functional Requirements

REQ-1: The system should provide a home screen where they can access the 'Create Event' page through a button.

REQ-2: The 'Create Event' page should give the user the capacity to edit fields pertaining to the description of their event, including name of event, event description, and other information to briefly describe the event.

REQ-3: The system should provide the user's list of contacts for the user to send an invitation request.

REQ-4: After the contacts are invited and the event is created, the user should be taken to their event home page.

REQ-5: The invitation sent to other users will include event details and the user's name of who invited them.

4.2 Manage Events

4.2.1 Description and Priority

The 'Manage Events' feature allows the event director of the group to manage and edit certain aspects of the event, including the event name, event description, list of members within the event, member ranks/permissions, calendar events, and create member polls. Since this feature allows the event director to manage much of the functionality that this application is centered around, this feature is of **HIGH** priority.

4.2.2 Stimulus/Response Sequences

- From the event home page, the event director will be able to press a button that will take them to the event management page.
- Certain fields will be able to be edited directly from there such as event name and event description.
- The other functionality listed above will each be on a separate page, accessible through a specific button.
- The list of contact page will show all current members of the event, allowing the event director the option to remove them from the event.
 - In addition, the event director will be able to press a button and see their entire list of contacts to add another person to the group.
- The member ranks/permissions will be a separate page from the event management page. It will list each person into what rank they belong. This page will also allow the event director to edit rank permissions.
- Calendar events will be a separate page that will include editable details such as date, name, and time.

- Creating a poll will also be on a separate page that will allow the event director to edit poll question and poll choices.

4.2.3 Functional Requirements

REQ-1: The system should provide a home event screen that will allow the event director to access the 'Event Management' page.

REQ-2: The event director should be able to edit specific fields, such as event name and description, as well as access the separate pages associated with the other functionality of the event management page.

REQ-3: The system should be able to provide the list of users that are within the group (along with their rank) as well as an entire list of contacts available for invitation to the group.

4.3 Calendar of Events

4.3.1 Description and Priority

The calendar of events contains a full calendar view of events for a specific user based on the event groups they are a member of. The calendar only shows events for groups that are currently designated as active. The user can view their calendar by year, month, or week. The user can also choose to export the calendar events to their mobile or desktop integrated calendar. This feature is of *HIGH* priority.

4.3.2 Stimulus/Response Sequences

- From the home page, the user can select the 'Calendar' tab that will take them to the calendar page.
- Once on the calendar page, the user will be viewing the default calendar style which is set to month.
- The user has the option at the top of the screen to change the month being viewed as well as the style from monthly to weekly or yearly.
- The user will be able to see what days have events scheduled on them.
- By clicking on a day with an event, the user can see the event details.
- The user can choose to export their event details to their desktop or mobile phone integrated calendars.

4.3.3 Functional Requirements

REQ-1: The system should provide a home screen where they can access the 'Calendar' page through a button.

REQ-2: The 'Calendar' page should give the user the ability to view their calendar by week, month, or year.

REQ-3: The system should fill in the user's calendar with information from their event groups.

REQ-4: The user should be able to view each event and see details on each event such as date, time, place, and other event-specific items.

REQ-5: The system should provide an option and method for exporting user calendar data to an external calendar system such as Microsoft outlook.

4.4 Contact List

4.4.1 Description and Priority

The contact list can be accessed from the home page by selecting the 'contacts' tab. A user can view all of their contacts as well as add and accept contact requests. This feature is of *HIGH* priority.

4.4.2 Stimulus/Response Sequences

- From the home page the user can select the 'Contacts' tab to access the contact list page.
- The user has the option to import contacts into their contact list from an external source such as Microsoft Outlook or add contacts by name.
- Once on the contacts page, the user will see an alphabetical list containing all of their contacts.
- The user will have the option to filter their contacts by last name, first name, or by common event.
- The user can also see notifications with contact requests sent to them by other users.
- The user can then accept, decline, or block those contact requests.
- The user has the option to add a user by contact name.

4.4.3 Functional Requirements

REQ-1: The system should provide a home screen where users can access the 'Contacts' page through a button.

REQ-2: The 'Contacts' page should give the user the ability to view their contacts.

REQ-3: The system allow users to filter their contacts by last name, first name, or common event.

REQ-4: The user should be able to accept, decline, or block contact requests.

REQ-5: The system should provide an option and method for importing contact information from a source such as Microsoft outlook.

4.5 Profile

4.5.1 Description and Priority

The user's profile can be accessed from the home page by selecting the 'profile' tab. From there the user can view their profile as it is displayed to others. The information visible includes a profile picture (170x170 pixels), email address, phone number, and name. This feature is of *MEDIUM* priority.

4.5.2 Stimulus/Response Sequences

- From the home page the user can select the profile tab to access their profile.
- Once on their profile page, the user will by default see their profile as it is displayed to others.
- The user can then choose to edit their profile picture by uploading a new photo within size constraints from their desktop or phone.
- The user can edit their email address and phone number as well as choose to have them visible or hidden from public view.

4.5.3 Functional Requirements

REQ-1: The system should provide a home screen where the user can then select the profile tab to access their profile.

REQ-2: The 'Profile' page should give the user the ability to view their profile.

REQ-3: The system allow users to edit their profile picture by uploading a new picture from their desktop or mobile phone.

REQ-4: The user should be able to edit the visibility of their email address and phone number.

4.6 Communication

4.6.1 Description and Priority

The communication feature allows users to communicate with each other within their event groups. Once part of a group, if your rank allows this permission, you can send chat messages to the other members of your event. Users will always be able to participate in polls sent to the group. This feature is of *HIGH* priority.

4.6.2 Stimulus/Response Sequences

- From the home page, the user can select the 'Events' tab to see a list of all of their current event groups.
- By selecting one of the events the user will be brought to a screen that shows a group chat containing all other members of that event.
- Users can vote in polls sent by high ranking members and, if allowed, send messages.

4.6.3 Functional Requirements

REQ-1: The system should provide a home screen where the user can then select the events tab to access their event groups.

REQ-2: The 'Events' page should give the user the ability to view the events that they have been invited to.

REQ-3: The system allow users to accept event invitations and select an event to enter.

REQ-4: Once the user has selected an event, they can view chat history, vote in active polls, and invite contacts to the group (provided them have the rank and permission to do so).

5. Other Nonfunctional Requirements

5.1 Performance Requirements

The application will use minimal resources, and as such system requirements should match the minimum necessary to run a simple browser. To see a specific list of the supported minimum browsers, see section 2.4 or 3.2.

5.2 Safety Requirements

These are the factors that would protect the software from accidental or malicious access, use, modification, destruction, or disclosures. Specific requirements in this area would include the need to:

- Separate public and private groups.
- Use account lockout policies for end-user accounts.
- Require strong Passwords
- Restrict user access to system-level resources
- Maintain separate administration privileges
- Use Data Protection API (DPAPI)

5.3 Security Requirements

Identity verification will be implemented with the standard method used by most apps and websites that use account systems: anybody will be able to attempt to register any unregistered email, and the registration is complete when the user clicks a verification link in an email message sent to the specified email address. A similar service, also widely used by current applications and websites, will be used to change an account's password.

5.4 Software Quality Attributes

The app should incorporate a mobile-friendly version to be displayed on the browsers of mobile devices. This version, like most mobile-friendly sites and apps, should be displayed in a 9:16 ratio rather than 16:9, and should rearrange the UI as necessary to be more easily visible on a smaller screen. The service should be accessible by users 24/7. Maintenance will be applied in the form of updates, which will be administered as the maintenance team sees fit.

5.5 Business Rules

A leader role will be assigned to the creator of the group. This role will have full control over all aspects of the group, including the administrative privileges of other users. The other administrative positions could be held by people with responsibilities to fulfill for the trip, such as collecting funds and planning constructing itineraries. The group leader may choose any subset of his or her own permissions to give to each administrative member. Users who hold a default position or above will be able to RSVP to events, and, depending on their permission settings determined by the group leader and/or other administrative members, send messages to the group.

6. Other Requirements

Appendix A: Glossary

RSVP: in the context of social invitations, RSVP is a process for a response from the invited person or people.

App: short for application.

TCP/IP: transmission control protocol/internet protocol (TCP/IP) is the language a computer uses to access the Internet.

FAQ: frequently asked questions

TBD: to be determined. See Appendix C.

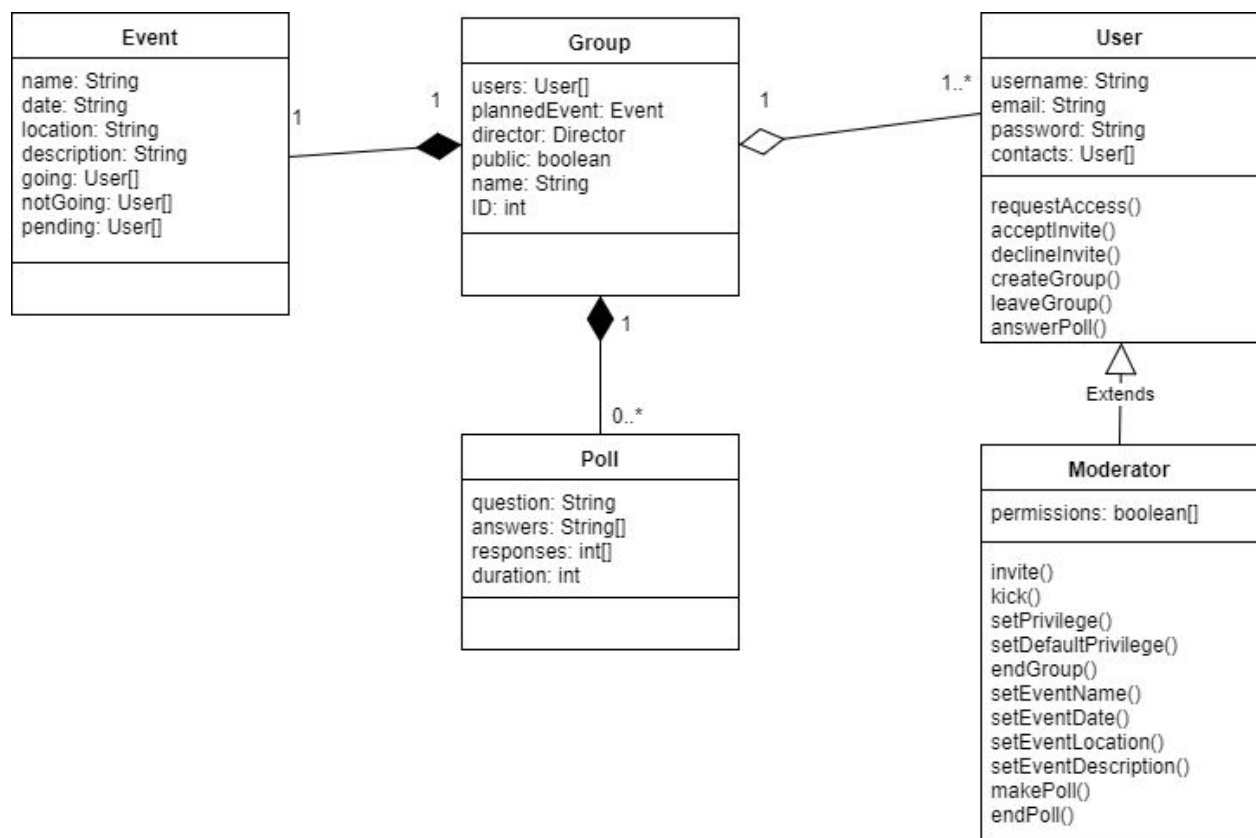
DPAPI: Data Protection Application Programming Interface is a simple cryptographic application for performing symmetric encryption of asymmetric private keys.

MySQL: My Structured Query Language is the world's most used open source relational database management system as of 2008 that runs as a server providing multi-user access to a number of databases.

HTML: HyperText Markup Language is the main markup language for displaying web pages and other information that can be displayed in a web browser.

Appendix B: Analysis Models

Class Diagram:



Appendix C: To Be Determined List

1. Ability to access user's contacts
2. Ability to access user's calendar
3. Password standards