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**Meet Minder**

**Software Requirement Specification**

**Version 2.0**

CSIS 521

Saginaw Valley State University

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Version History

|  |  |  |  |
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# Introduction

This is the Software Requirement Specification (SRS) document for the application named Meet Minder which lays out the project plan for the application. This application was created by a team of graduate students at Saginaw Valley State University taking CSIS 521. The students include: Michael Mark (team leader), William D. Bodeis, Irina Gorlik, Samuel A. Grossmeyer, and Joseph G. Maes.

## Purpose

The purpose of this SRS document is to provide the requirements for the release version 0.0.1 Meet Minder application. The document will use the collective ideas of the group and sort and analyze the functions that the application is intended to perform. Parts 1 and 2 are intended for the customers of the application but may be of interest for the software engineers who build or maintain the software. Part 3 is intended mainly for software engineers but may be of interest for the customer who wants to know how the application works.

## Scope of the Project

The scope of Meet Minder is to provide an application for people to gather together better. It will be a platform for users to be able to communicate between each other giving each other status updates of when they might be arriving. The host of each event will be able to track the physical location of every participant, which makes it convenient to see if someone will make it on time or not. In this busy world, the application is intended to make life simpler by automating the overall meeting process and provide the users with an enjoyable experience.

## Definition, Acronyms, and Abbreviations

|  |  |
| --- | --- |
| **Term** | **Definition** |
| Administrator/Admin | A separate user account that has control functions to be able to maintain the users and events |
| Database | Organized storage of all of the data in the system |
| Event | An organized meeting for a specific purpose |
| Host | A user who has created a meeting and can edit the meeting, invite other users, and view the physical location of all participants at a specified time. |
| Participant | A user who has joined a meeting and now plans to attend it |
| Registered/Authorized User | A user who has registered into the Meet Minder system who is now able to be a participant or host |
| Software Requirements Specification | A document that describes all of the functions and constraints of a proposed project, such as this one |
| Stakeholder | Any person with an interest in the project who is not a developer |
| Unauthorized User | A user that has not registered yet in the system |
| User | A general user of the application; anyone from the general public |

*Figure 1.* Definitions and Terms Table

## References

IEEE. *IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications.* IEEE Computer Society, 1998.

*Software Engineering: Modern Approaches, 2nd ed.* Waveland Press Inc. 2016, ISBN: 978-1-4786-3230-6. E.J. Braude, M.E. Bernstein.

## Overview

The introduction and intended purpose of the application was introduced in Part 1. The authors of the application described and defined the application in this section. In Part 2 of this document, the overall description will be specified, somewhat informally. In Part 3 a much more in-depth technical description of the application will be given. In Part 3 all of the detailed requirements of the application will be specified.

# Overall Description

The Meet Minder application is intended to be a schedule assistant to provide the originator and the participants visibility on the scheduled event, focusing on the physical location of the event and notifications to allow the participants to be better prepared. The authors have come up with additional parameters the software should follow:

* The application will be able to track the visibility of all the meeting participants locations before the meeting, to allow the host to be better prepared for their arrival.
* This solution can be utilized in a business or casual environment, for example if a person would like to host an event at their house, and before the event they would like to be aware of the their guests location, they can simply open the app on their phone and view each of their guest’s location.
* A company can use the app to track the check-ins and check-outs of their employees and track their hours when they leave the business.

## 2.1 Product Perspective

Meet Minder is intended to have a strong influence in group collaboration. The application caters toward people who have busy lives. These people, or users, may be anyone from business people to people working in education, people hosting parties, or for the employed public. The application can serve a wide range of ages, but its main age range is from mid-twenties to mid-forties.

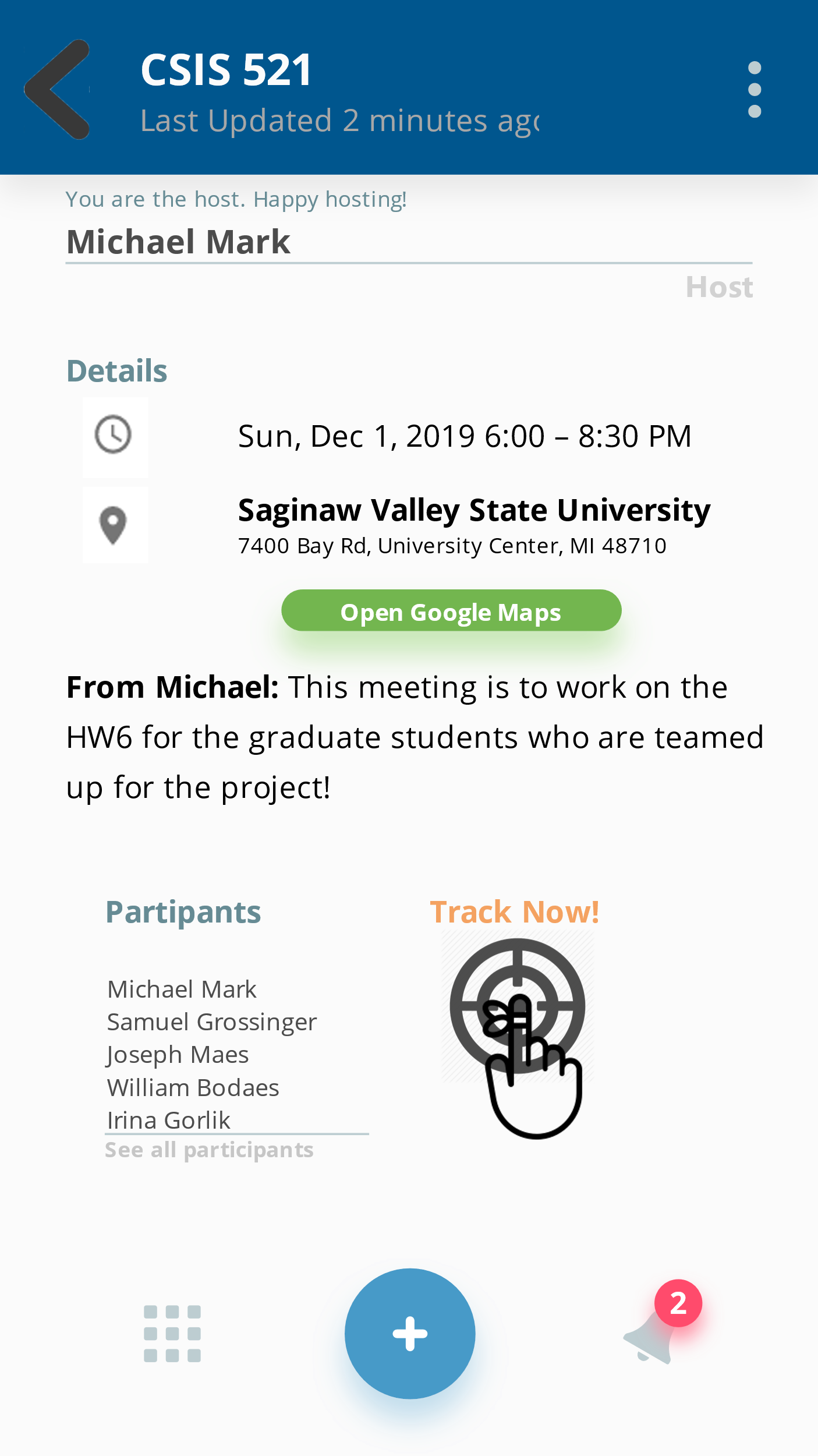
### 2.1.1 Concept of Operations

Meet Minder can have several states of function:

* **Register/Login** – An unauthorized user can log into the system or register.
* **Event views** – The registered user can view their events, either by daily, monthly, or via a meeting list.
* **Create or edit meeting** – A registered user can become a host and create or edit meetings.
* **View GPS Attendee Maps** – The host can view all attendee’s current locations at a specific time set before the meeting.

### 2.1.2 User Interface Screens

The authors have provided screenshots of the GUI in the included files. These files include:

* Login Screen
* Register Screen
* Daily calendar view
* Monthly calendar view
* User meeting list
* Participant meeting information screen
* Host meeting information screen
* Late notification
* Attendee map

See Figure 2 for an example of one of the screenshots.

*Figure 2*. Meeting information screen for the host

### 2.1.3 Hardware Interfaces

None

### 2.1.4 Software Interfaces

None

### 2.1.5 Communications Interfaces

All releases will interface with all mobile Internet capabilities, including Wi-Fi and cellular networks (i.e. 3G and 4G LTE) and any upcoming connections or networks.

### 2.1.6 Memory Constraints

Meet Minder shall mostly include database cloud storage, which may vary depending on the popularity of the application. As for the actual application itself, it is intended to be fast and light weight to create a good user experience.

### 2.1.7 Operations

It shall be possible to create and store an event in the database and recall it later. Also, backups of the entire database should be regularly done so that events can be recovered in the case of any corruption or loss of data.

### 2.1.8 Site Adaptation Requirements

Meet Minder shall be able to function in various native languages around the world, be able to translate from one language to another, in case there are international barriers.

## 2.2 Product Functions

This section describes the function the Meet Minder application can perform, but does not provide detailed requirements that the function needs for these functions. See Part 3 for more complete descriptions and specifications.

### 2.2.1 User Register

An unauthorized user can register and put their information into the Meet Minder database.

### 2.2.2 User Login

The user then can log in with the credentials they created

### 2.2.3 Registered User Switch Views

A registered user can switch between several views, including:

* Monthly calendar view
* Daily view
* Agenda list

### 2.2.4 Registered User Join Event

A registered user can join an event they are invited to. This makes them a participant of that event.

### 2.2.4 Participant Select Event

The participant of an event can select the event from their list and be able to see all of the information regarding that event.

### 2.2.5 Registered User Create Event

A registered user can create an event and thus become the host of that event. They can edit details and invite other registered users to the event.

### 2.2.6 Host View Current Participant Locations

A host of an event can view the physical location of all of the participants of the event.

## 2.3 User Classes and Characteristics

The user is expected to be around mid-twenties to mid-forties.

## 2.4 Operating Environment / Constraints

Meet Minder is meant for Android operating system 4.0 and higher.

## 2.5 Assumptions and Dependencies

None.

## 2.6 Apportioning Requirements

In the SRS document, Parts 1 and 2 are meant for establishing requirements for the customer whereas Part 3 is meant mainly for setting requirements for the developers. Both of these sides are meant to be consistent. Any inconsistencies between them should be addressed up front to prevent any issues from occurring down the road since the authors want to minimize the intellectual distance of the software as much as possible.

# 3. Detailed Requirements

## 3.1 External Interface Requirements

### 3.1.1 User Interfaces

The Meet Minder app User Interface structure is mainly based around the calendar. When the user opens the app, they will be shown a login screen where they are to enter their login credentials. Logging in takes them to the Monthly Calendar view. This User Interface displays an image of the current month as one would typically expect from a physical calendar. When the user clicks on a day, the application displays that day's meetings.

The entire set of user interfaces are as follows:

* 1. A user interface for logging into the system.
  2. A user interface for displaying the current month (with ability to traverse to other months).
  3. A user interface for displaying the daily calendar
  4. A user interface for displaying the meeting details
  5. A user interface for displaying the location of participants for host use only
  6. A user interface for sending a notification to the meeting host that the participant is running late

In order to receive notifications, the user must allow notifications to be sent on their device. When the application is opened by the user, one of the above interfaces will be present on the device screen at all times. If a user is running late to a meeting, interfaces of type vi will be superimposed over the currently displayed interface.

### 3.1.2 Hardware Interfaces

None. (Meet Minder is controlled entirely by a touchscreen display.)

### 3.1.3 Software Interfaces

The Meet Minder application shall have integration with Google Maps. This will be used for when the user requests directions to a meeting by pressing the directions button in the MeetingDisplay view. For details on the directions button, see 3.2.MD.

### 3.1.4 Communication Interfaces

The Meet Minder application shall provide email notifications as well as push notifications. These notifications will be sent over a secure internet connection to the intended recipient.

## 3.2. Detailed Requirements by Category

Categories for the Meet Minder application sufficient for expressing the requirements are LoginDisplay, RegisterDisplay, MonthlyCalendar, DailyCalendar, MeetingDisplay, LocationDisplay, User, and Admin.

### 3.2.LO LoginDisplay

The LoginDisplay is the user interface that is displayed when the user opens Meet Minder, they are prompted to enter a username and password to login to the application.

#### 3.2.LO.1 Attributes of LoginDisplay

##### 3.2.LO.1.1 Username Field (essential)

This is the text field where the user enters their username. They registered this username in the user database when they registered for Meet Minder. Acceptable characters shall consist of characters 0 through 9, a through z, and A through Z only.

##### 3.2.LO.1.2 Password Field (essential)

This is the text field where the user enters their password. They registered this password along with their username in the user database when they registered for Meet Minder. Acceptable characters shall consist of characters 0 through 9, a through z, A through Z, and special characters excluding blank spaces.

##### 3.2.LO.1.2 Login Button (essential)

This is the button that the user presses when they have entered their username and password and intend to login.

##### 3.2.LO.1.2 Register Button (essential)

This is the button a person presses in order to register themselves as a new user in the Meet Minder application. Upon pressing this button, they are guided to the RegisterDisplay.

#### 3.2.LO.2 LoginDisplay Entities

None. (Just a simple login screen.)

#### 3.2.LO.3 LoginDisplay Functionality

None. (Just a simple login screen.)

#### 3.2.LO.4 Events Pertaining to LoginDisplay

##### 3.2.LO.4.1 Display the username field (essential)

When Meet Minder is opened, the username field should appear in the LoginDisplay and prompt the user to enter it.

##### 3.2.LO.4.2 Display the password field (essential)

When Meet Minder is opened, the password field should appear in the LoginDisplay and prompt the user to enter it.

##### 3.2.LO.4.3 Display the login button (essential)

When Meet Minder is opened, the login button should appear in the LoginDisplay and allow the user to press it when they have entered in a username and password.

##### 3.2.LO.4.4 Display the register button (essential)

When Meet Minder is opened, the register button should appear in the LoginDisplay and allow the user to press it to open up the RegisterDisplay for registering a new user.

##### 3.2.LO.4.5 Pressing on login (essential)

When the user presses login and valid credentials have been entered into their corresponding fields on LoginDisplay, the user will be authenticated and the MonthlyCalendar user interface will be displayed. See 3.2.MC for details on this display.

##### 3.2.LO.4.6 Pressing on register (essential)

When the user presses register, they will be directed to the RegisterDisplay for registering themselves as a new user in the Meet Minder application. See 3.2.RD for details on this display.

### 3.2.RD RegisterDisplay

The RegisterDisplay is the interface that the user interacts with to register a new user so that they can be authenticated in the Meet Minder application. The information entered in this display will contain all information pertinent to the use of Meet Minder.

#### 3.2.RD.1 Attributes of RegisterDisplay

##### 3.2.RD.1.1 Username Field(essential)

This is the text field where the user enters their username. They registered this username in the user database when they registered for Meet Minder. Acceptable characters shall consist of 0 through 9, a through z, and A through Z only.

##### 3.2.RD.1.2 Password Field (essential)

This is the text field where the user enters their password. They registered this password along with their username in the user database when they registered for Meet Minder. Acceptable characters shall consist of 0 through 9, a through z, A through Z, and special characters excluding blank spaces.

##### 3.2.RD.1.3 Full Name Field (essential)

The users full name is entered in this field. This information is entered so that other users can tell specifically who the user is. Acceptable characters shall consist of a through z, and A through Z.

##### 3.2.RD.1.4 DOB Field (essential)

The users date of birth is entered in this field. This information is entered so that it is insured that people of age 18 or older are using the system. Acceptable characters shall consist of digits 0 through 9.

##### 3.2.RD.1.4 Email Field (essential)

The user enters the name they wish to display to other users within the application. This can be the same as their full name, a shortened version, or a nickname that they usually go by. Acceptable characters shall consist of characters 0 through 9, a through z, A through Z, and special characters excluding blank spaces.

##### 3.2.RD.1.5 Register Button (essential)

The register button is only allowed to be pressed when all of the fields in RegisterDisplay have been filled out with valid entries. When the button is pressed, a new user is created if there is no duplicate entry in the database.

##### 3.2.RD.1.4 Cancel Button (essential)

The cancel button is pressed if the user accidentally navigated to the RegisterDisplay or wants to leave without registering a new user.

#### 3.2.RD.2 RegisterDisplay Entities

None. (Simple registration display).

#### 3.2.RD.3 RegisterDisplay Functionality

None.

#### 3.2.RD.4 Events Pertaining to DailyCalendar

##### 3.2.RD.4.1 Pressing on Register Button (essential)

The user presses on the register button only when all fields in RegisterDisplay have been filled out with valid entries. Upon pressing of the register button, the entry is created, validated against duplicates, and entered into the user database. The user is then guided back to the LoginDisplay.

##### 3.2.RD.4.2 Pressing on Cancel Button (essential)

The user presses on the cancel button if they want to cancel creating a new user. Upon the press of the cancel button the user is navigated back to the LoginDisplay.

### 3.2.MC MonthlyCalendars

The MonthlyCalendar display defaults to the current month and displays a typical calendar view of the current month (default). The user has the ability to navigate forward and backward through the months of the year.

#### 3.2.MC.1 Attributes of MonthlyCalendars

##### 3.2.MC.1.1 MonthlyCalendar Month Name(essential)

This text field displays the currently selected month along with the year in the format *Month Year*. As the user navigates through months this field will change along with the image of the calendar.

#### 3.2.MC.1.2 MonthlyCalendar Image (essential)

This is an image of the calendar view of the currently selected month. As the user navigates through the months, this image will change to match the view of the calendar of the selected month.

#### 3.2.MC.1.3 MonthlyCalendar-specific Qualities (essential)

Months will have different amounts of days in them and different day numbers will align with different days of the week. These differences will be accounted for in the month image display and the month name text field.

#### 3.2.MC.2 MonthlyCalendar Entities

##### 3.2.MC.2.1 January MonthlyCalendar (essential)

There shall be a MonthlyCalendar view dedicated to display January of the current year. This entity will display January as seen on a typical calendar in the given year, reading left to right and entering new lines on Sundays.

##### 3.2.MC.2.2 February MonthlyCalendar (essential)

There shall be a MonthlyCalendar view dedicated to display February of the current year. This entity will display January as seen on a typical calendar in the given year, reading left to right and entering new lines on Sundays.

##### 3.2.MC.2.3 March MonthlyCalendar (essential)

There shall be a MonthlyCalendar view dedicated to display March of the current year. This entity will display January as seen on a typical calendar in the given year, reading left to right and entering new lines on Sundays.

##### 3.2.MC.2.4 April MonthlyCalendar (essential)

There shall be a MonthlyCalendar view dedicated to display April of the current year. This entity will display January as seen on a typical calendar in the given year, reading left to right and entering new lines on Sundays.

##### 3.2.MC.2.5 May MonthlyCalendar (essential)

There shall be a MonthlyCalendar view dedicated to display May of the current year. This entity will display January as seen on a typical calendar in the given year, reading left to right and entering new lines on Sundays.

##### 3.2.MC.2.6 June MonthlyCalendar (essential)

There shall be a MonthlyCalendar view dedicated to display June of the current year. This entity will display January as seen on a typical calendar in the given year, reading left to right and entering new lines on Sundays.

##### 3.2.MC.2.7 July MonthlyCalendar (essential)

There shall be a MonthlyCalendar view dedicated to display July of the current year. This entity will display January as seen on a typical calendar in the given year, reading left to right and entering new lines on Sundays.

##### 3.2.MC.2.8 August MonthlyCalendar (essential)

There shall be a MonthlyCalendar view dedicated to display August of the current year. This entity will display January as seen on a typical calendar in the given year, reading left to right and entering new lines on Sundays.

##### 3.2.MC.2.9 September MonthlyCalendar (essential)

There shall be a MonthlyCalendar view dedicated to display September of the current year. This entity will display January as seen on a typical calendar in the given year, reading left to right and entering new lines on Sundays.

##### 3.2.MC.2.10 October MonthlyCalendar (essential)

There shall be a MonthlyCalendar view dedicated to display October of the current year. This entity will display January as seen on a typical calendar in the given year, reading left to right and entering new lines on Sundays.

##### 3.2.MC.2.11 November MonthlyCalendar (essential)

There shall be a MonthlyCalendar view dedicated to display November of the current year. This entity will display January as seen on a typical calendar in the given year, reading left to right and entering new lines on Sundays.

##### 3.2.MC.2.12 December MonthlyCalendar (essential)

There shall be a MonthlyCalendar view dedicated to display December of the current year. This entity will display January as seen on a typical calendar in the given year, reading left to right and entering new lines on Sundays.

#### 3.2.MC.3 MonthlyCalendar Functionality

None.

#### 3.2.MC.4 Events Pertaining to MonthlyCalendars

##### 3.2.MC.4.1 Display the current Month (essential)

When the user is logged into the system, the current month is automatically displayed. When navigating forward and backward through the months, the display is updated to reflect the desired month. Each month has its own unique image.

##### 3.2.MC.4.2 Highlight the current Date (essential)

The current Date is highlighted when viewing the calendar from the monthly view. This is automatically updated to the next day every night at 12:00 AM.

##### 3.2.MC.4.3 Navigate through Months (essential)

Arrow buttons will be available to navigate through the months of the year. Upon pressing the forward button, the month will be incremented and the next sequential month will be displayed. Upon hitting the backward button, the month will be decremented and the previous sequential month will be displayed.

##### 3.2.MC.4.4 Pressing on a Day (essential)

When the user presses on a day of the month, the DailyCalendar will be displayed containing a list of all of that days meetings. See 3.2.DC for details on DailyCalendars.

### 3.2.DC DailyCalendars

The DailyCalendar view displays a complete list of the meetings that a user has been invited to or accepted on a given day. It will show the times of each of the meetings and a title inside a box that when pressed, opens up the MeetingDisplay. See 3.2.MD for details on MeetingDisplay.

#### 3.2.DC.1 Attributes of DailyCalendars

##### 3.2.DC.1.1 DailyCalendar Date (essential)

A text field that displays the date of the day selected shall be present in format *Month Day, Year*.

##### 3.2.DC.1.2 DailyCalendar Image (essential)

The image that is displayed in the DailyCalendar view shall be a background covered by a scrollable list view of all of the meetings in chronological order. The meetings will be ordered by start time from earliest to latest.

##### 3.2.DC.1.3 DailyCalendar-specific Qualities (essential)

Each day will have its own date and unique meetings associated with it. Every day will be different assuming that a person has differently scheduled meetings each day.

##### 3.2.DC.2 DailyCalendar Entities

There will be a daily view for each of the days of the month.

##### 3.2.DC.3 DailyCalendar Functionality

None.

#### 3.2.DC.4 Events Pertaining to DailyCalendar

##### 3.2.DC.4.1 Display all Meetings in the day (essential)

When a day is pressed from the MonthlyCalendar, the DailyCalendar is opened and all of the meetings of the day are displayed in a scrollable list view. Each meeting is displayed with its start time and its name that was specified by the host on the meeting invite.

##### 3.2.DC.4.2 Pressing on a Meeting (essential)

When a meeting is pressed, the MeetingDisplay is opened for the meeting that was pressed by the user.

### 3.2.MD MeetingDisplays

The MeetingDisplay is the display that users will see when they press on one of the meetings from the DailyCalendar view of the application. This view will display the meeting name, time, location, a list of participants, a button to show directions, a button to show location for hosts only, and a button to add notes to the meeting with a list of the notes already added

#### 3.2.MD.1 Attributes of MeetingDisplays

##### 3.2.MD.1.1 MeetingDisplay Name (essential)

The name of the meeting is set by the host when creating the meeting. This is to be a descriptive name that conveys the purpose of the meeting to the participants. The purpose is also to identify the meeting later. This name can be edited by the host.

##### 3.2.MD.1.2 MeetingDisplay Time (essential)

The time of the meeting is set by the host when creating the meeting. The time specified is the time that the meeting is to start. This name can be edited by the host if need be, or if a new time is proposed by one of the participants.

##### 3.2.MD.1.3 MeetingDisplay Location (essential)

The location of the meeting is set by the host when creating the meeting. This shows where the meeting will be held and will be the destination for directions to the meeting as well as the center of the location view radius for hosts. The location can be edited by the host.

##### 3.2.MD.1.4 MeetingDisplay Participant List(essential)

The participant list is set by the host when creating the meeting. This is to be the complete list of participants that are expected to attend the meeting. This list can be edited by the host.

##### 3.2.MD.1.5 MeetingDisplay Accept Button (essential)

The accept button is to be pressed by the user invited to the meeting if they choose to accept the meeting invite and notify the host they attend the meeting.

##### 3.2.MD.1.6 MeetingDisplay Decline Button (essential)

The decline button is to be pressed by the user invited to the meeting if they choose to not accept the meeting invite and notify the host they will not attend the meeting.

##### 3.2.MD.1.7 MeetingDisplay Propose Time Button (essential)

The propose time button is pressed by the user invited to the meeting if they would like to attend the meeting but feel a different time would work better. The host is notified of this new proposed time and may change the time if desired.

##### 3.2.MD.1.8 MeetingDisplay Directions Button(essential)

The directions button directs users to Google Maps where the current location of the user and the location of the meeting are used to create directions to the meeting.

##### 3.2.MD.1.9 MeetingDisplay Location Button (host-only) (essential)

The location button is a host-only feature that directs the user to the LocationDisplay. For details on the LocationDisplay see 3.2.LD.

##### 3.2.MD.1.10 MeetingDisplay Notes (essential)

The notes on the meeting can be added by pressing the Add Notes button at the bottom of the MeetingDisplay. Notes that can be added include an itinerary of the meeting, notes taken during the meeting, and follow-up notes.

##### 3.2.MD.1.11 MeetingDisplay Image (essential)

The MeetingDisplay Image shall match the style of the Calendar views and the flow should continue throughout the use of the application.

##### 3.2.MD.1.12 MeetingDisplay-specific Qualities (essential)

Each meeting will have its own details that are specified by the host when creating the meeting.

#### 3.2.MD.2 MeetingDisplay Entities

#### None.

#### 3.2.MD.3 MeetingDisplay Functionality

None.

#### 3.2.MD.4 Events Pertaining to MeetingDisplays

##### 3.2.MD.4.1 Display the name of the meeting (essential)

The name of the meeting shall be displayed at the top of the screen. This is the name that the host enters when creating the meeting.

##### 3.2.MD.4.2 Display the time of the meeting (essential)

The time of the meeting shall be displayed below the name. This is the time that the host enters when creating the meeting.

##### 3.2.MD.4.3 Display the location of the meeting (essential)

The location of the meeting shall be displayed below the time. This is the location that the host enters when creating the meeting.

##### 3.2.MD.4.4 Display the participant list of the meeting (essential)

The participant list of the meeting shall be displayed below the location. This is the list of participants that are to be expected at the meeting.

##### 3.2.MD.4.5 Pressing on accept meeting invite(essential)

When the user presses on the accept meeting invite button, a notification will be sent to the host that they are planning on making it to the meeting. Their location will be tracked within the time frame specified in 3.2.LD.

##### 3.2.MD.4.6 Pressing on decline meeting invite (essential)

When the user presses on the decline meeting invite button, a notification will be sent to the host that they are not going to be able to make it to the meeting. Their location will not be shared with the host of the meeting.

##### 3.2.MD.4.7 Pressing on show directions (essential)

When the user presses on the show directions button, they will be directed to Google Maps where directions to the meeting will be displayed.

##### 3.2.MD.4.8 Pressing on view location (host only) (essential)

This is a capability that only the host has. When the host presses on this button, they will be taken to the LocationDisplay. See 3.2.LD for details on the LocationDisplay.

##### 3.2.MD.4.9 Pressing on add notes (essential)

When the user presses on the add notes button, they will be prompted to add a note file to the meeting. These notes will display at the bottom of the MeetingDisplay.

### 3.2.LD LocationDisplay

The LocationDisplay is a view only accessible by the host from 30 minutes before the meeting time to 15 minutes after the meeting time. This view shows the user the location of the participants in its associated meeting within a 50 mile radius of the meeting location. The purpose of this is to make sure all participants will arrive on time and plan accordingly if that is not the case.

#### 3.2.LD.1 Attributes of LocationDisplay

##### 3.2.LD.1.1 Participants Locations (essential)

Each participant that accepted the meeting invite will be associated with a location on the map if they are within the 50 mile radius. If there are 8 or less participants, their face icons will show. If there are more than 8 and less than or equal to 50 participants, their location will be shown by a red pin. If there is greater than 50 participants, only the 50 farthest participants will be shown with a pin. This is to indicate which participants are most at risk of being late. The location will be available to the host in the time limit specified above in 3.2.LD.

##### 3.2.LD.1.2 Map Image (essential)

The map image will be a map view of the surrounding area centered at the meeting location.

##### 3.2.LD.1.3 LocationDisplay-specific Qualities (essential)

Each meeting will have its own LocationDisplay associated with it centered at the meeting location. These LocationDisplay objects will only display the participants of that particular meetings location.

#### 3.2.LD.2 LocationDisplay Entities

None.

#### 3.2.LD.3 LocationDisplay Functionality

None.

#### 3.2.LD.4 Events Pertaining to LocationDisplay

##### 3.2.LD.4.1 Display location of the participants in the meeting (essential)

The LocationDisplay shall indicate the location of the participants that accepted the meeting invite with an arrow and their username.

##### 3.2.LD.4.2 Pressing on a participant shows their details (essential)

When the host presses on a participant’s arrow or username, the rest of their details shall be displayed so that they can be properly identified.

### 3.2.US Users

#### 3.2.US.1 Attributes of Users

##### 3.2.US.1.1 Username (essential)

The username is what the user enters in the username field at the LoginDisplay to login. Each username must be unique and may contain characters 0 through 9, a through z, and A through Z.

##### 3.2.US.1.2 User Password(essential)

The password is what the user enters in the password field at the LoginDisplay to login. Each password may contain characters 0 through 9, a through z, A through Z, and special characters excluding blank spaces.

##### 3.2.US.1.3 User Full Name (essential)

The users full name is their full legal name. If a user does not recognize another user’s username, they can view the full name, and this could help them identify that person. Each full name may contain characters a through z, A through Z.

##### 3.2.US.1.4 User DOB (essential)

The date of birth is necessary to ensure that people of age 18 or older are using the application. Each date of birth may contain characters 0 through 9.

##### 3.2.US.1.5 User Email (essential)

The user email is entered for notification purposes. All notifications are sent to the user’s email. Each email may contain characters 0 through 9, a through z, A through Z, and special characters excluding blank spaces.

##### 3.2.US.1.6 User-specific Qualities (essential)

Each user will have their own personal calendar with different meetings and invites. The user database will manage each user’s attributes.

#### 3.2.US.2 User Entities

##### 3.2.US.2.1 Meeting participant (essential)

When a user is invited to a meeting, they become a participant of that meeting. These participants have read-only access to the meetings they are invited to and can see the details specified in MeetingDisplay. See 3.2.MD for detials on MeetingDisplay.

##### 3.2.US.2.2 Meeting host (essential)

When a user creates a meeting, they become that meetings host. These hosts have read and edit access to the meetings created. They can read the details, edit them, and cancel the meeting. In addition, they can see the location of participants within the time window specified in 3.2.LD.

#### 3.2.US.3 User Functionality

##### 3.2.US.3.1 Creating a Meeting (essential)

All users shall have the ability create meetings. They will be able to fill and edit all the details on meetings that they have created.

##### 3.2.US.3.2 Editing User Information (essential)

All users shall have the ability to change the user information on their account at all times.

##### 3.2.US.3.3 Notifications control (essential)

All users will have control over the notifications they receive and choose to send out. This includes sending and receiving running late notifications, meeting invites, and meeting cancels.

### 3.2.AD Admins

A Meet Minder Admin has complete control over the Meet Minder application and access to the user database. The admin can see all meetings and can edit or intervene with all facets of the application in case of technical difficulty.

#### 3.2.AD.1 Attributes of Admins

##### 3.2.AD.1.1 Admin Username (essential)

Admins shall have a username that they must enter to authenticate into the system. The username must be unique and may contain characters 0 through 9, a through z, and A through Z.

##### 3.2.AD.1.2 Admin Password(essential)

Admins shall have a password that they must enter to authenticate into the system. The password may contain characters 0 through 9, a through z, A through Z, and special characters excluding blank spaces.

##### 3.2.US.1.2 Admin Full Name (essential)

Admins shall have a full name that can be used to identify their legal name. The full name may contain characters a through z, and A through Z.

##### 3.2.US.1.2 Admin DOB (essential)

Admins shall have a date of birth to identify that they are of age 18 or older. The date of birth may contain characters 0 through 9.

##### 3.2.US.1.2 Admin Email (essential)

Admins shall have an email entered for notification purposes. All notifications are sent to the admin’s email. The email may contain characters 0 through 9, a through z, A through Z, and special characters excluding blank spaces.

##### 3.2.AD.1.3 Admin-specific Qualities (essential)

Admins will all be able to view all meetings in the application for their organization. They will be able to see and edit everything that users in the organization can see.

#### 3.2.AD.2 Admin Entities

None.

#### 3.2.AD.3 Admin Functionality

##### 3.2.AD.3.1 Editing Admin Information (essential)

Admins shall have the ability to change their user information at any time.

##### 3.2.AD.3.2 Edit all Meetings (essential)

Admins shall have the ability to edit all meetings in the system at any time.

##### 3.2.US.3.3 Create, Delete, and Edit Users (essential)

Admins shall have the ability to create, delete, and edit all users in the system.

## 3.3 Performance Requirements

Meet Minder must load and display the logon screen in under 5 seconds. The login must take under 5 seconds including loading the initial MonthlyCalendar.

Transitions between different Calendar views must take no longer than 1 second and loading the MeetingDisplay must also take no longer than 1 second.

Displaying the LocationDisplay and the Directions must take no longer than 10 seconds.

## 3.4 Design Constraints

Meet Minder shall be designed using UML and object-oriented design. It shall be implemented using Android Studio in the Java programming language. It shall be designed in such a way that it can be relatively easy for developers to make changes to the application so that user feedback can be given attention.

## 3.5 Software System Attributes

### 3.5.1 Reliability

Meet Minder shall not fail more than once in every 10,000 display changes. Meet Minder must not fail more than once every 10,000 meeting creations, acceptances, and declinations. Meet Minder must not fail more than once every 1,000 location displays.

### 3.5.2 Availability

Meet Minder shall be available for download on the Google Play Store for Android devices. Meet Minder requires an internet connection to be able to use its complete functionality

### 3.5.3 Security

Each user must be authenticated with a username and password. These authenticated users have access to their information and certain details on other users they are invited to meetings with depending on their role in the meeting, host or participant.

Admins have full rights over the whole application.

### 3.5.4 Maintainability

#### 3.5.4.1 Changing Calendars and Meeting style

It shall be straightforward to change the style of the Calendars and MeetingDisplays. These changes shall maintain the congruence and flow of the style between the different displays and shall be changed globally.

#### 3.5.4.2 Changing Meeting Details

It shall be straightforward to add or take away from the meeting details allowed to be attached to a meeting.

#### 3.5.4.3 Altering Details on Location Sharing

It shall be straightforward to alter the details on how and when meeting participants location is shared. Location sharing is a sensitive and socially complex functionality that is will certainly have to be adjusted. Specifications such as tracking radius size, amount of time shared, and amount of detail displayed should be straightforward to alter.

## 3.6 Other Requirements

None.

# 4. Supporting Information

None.

## 4.1 Table of Contents and Index

On the top before Page 1.

## 4.2 Appendixes

None.