

# **BucketList**

Requirements and Specification Document

2020-02-14, version 1.0

## **Project Abstract**

BucketList is an android mobile application that helps the user manage and conquer their bucket lists. It will allow the user to create and manage a wish list of activities he/she wants to do. The user can import their google calendar to the app. Based on the user's location and schedule, the app will then look at the user's bucket list to make suggestions of any items that the user can check off the list. In addition, it will allow the user to keep track of activities they have completed in the past.

## **Document Revision History**

Rev. 1.0 2020-02-13: initial version

## **Customer**

Anyone above the age of 13 years could be a valid user. The minimum age is specified in accordance with Children's Online Privacy Protection Act as the app will store some personal information. Since our app is meant for android platform, the target users will be the android users. Further, we aim to host our app on Google Play Store, which means that users will need a Google account to access the play store and download the app.

This app will be useful for anyone who has a bucket list that they need help conquering, as the app reduces the planning that the user needs to do by automating the search. For testing purposes as well, any student at University of Wisconsin-Madison would work. A few people that we have talked to mentioned that they currently have a bucket list of things they aim to do in Madison and will be happy to test our app and give feedback.

Our primary customer for the development and testing will be Yogesh Balaje Mahendran, a student at UW-Madison. He originally had the idea for this app and will assist us in giving feedback from a user's perspective. As our client he has been involved from the beginning and he will be a good judge of confirming whether the app fulfills the requirements or not.

## **Competitive Landscape**

Since the app is targeted for android, our closest competition are other apps on Google Play Store that aim to do the same thing. Google Maps can give you category-based recommendations based on your location. There are also a few apps like 'Buckist', 'Bucket List', 'Simple bucket list' which are amongst the highest rated apps, but they act more like a To-Do list and don't have any key features listed in our app. Another app TripBucket allows you keep travel related lists and incorporates google maps to make suggestions if you try searching within the app, but it doesn't make recommendations based on schedule and is geared more towards planning a vacation. The summary of strengths and weaknesses of the apps are as follows:

### **1)Google Maps:**

Features:

- Can give category-based search based on the user's location.
- Allows the user to look at the places visited in the past (Travel History).

Lacking:

- Does not plan around a user's calendar.
- No concept of bucket list; the users specify what they are looking for.

### **2) Buckist- Best Bucket List App (by Iced Tea Labs):**

Features:

- Has an 'inspirations' page where the user can find popular suggestions for what they might want to add on their bucket list.
- You can categorize the items that you add to the list into travelling, learning, etc.

Lacking:

- The user must enter everything manually. The app mostly just acts as an online journal.
- It doesn't have the feature to make suggestions tailored to the user.

### **3) Simple Bucket List (by TheVarunShah), Bucket List (by Leonardo Miyagi):**

Both simply act as a to-do list with none of the features that our app will offer.

#### **4) Trip Bucket (by TripBucket):**

Features:

- Allows keeping travel related lists and incorporates.
- Incorporates search based on google maps to make suggestions within the app.

Lacking:

- No option to make recommendations based on user calendar
- Geared more toward planning a vacation
- Even though the user can make a bucket list,

### **User Requirements**

#### **1. User**

- a. Create an account
  - i. Username (first name & last name)
  - ii. Email address
  - iii. Password
  - iv. Age
- b. Create a bucket list item
  - i. Edit
  - ii. Search
  - iii. Delete
- c. Enter schedule
  - i. sync calendar
- d. Location
  - i. Change location
  - ii. Use current location
  - iii. Change radius
- e. Recommendation
  - i. See the list
  - ii. View one of the items on recommendation list
  - iii. Accept / Deny a recommendation
- f. Mark bucket list item complete
- g. View “completed” items
- h. Sign out

**Basic overview of user roles - (i.e. admin, user)**

- The user manages personal bucket list, schedule and complete / incomplete log.
- This app does not require different types/roles of users

**Pages and Menu/Navigation bars** (if they are necessary or optional)

## 1. Login / Sign-up

- a. Page (1) Landing Page (necessary)
  - i. **Login [Login Page]**: Directs the user to the login page
  - ii. **Sign Up [Sign Up Page]**: Directs the user to the sign-up page
- b. Page (2) Login Page (necessary)
  - i. **Username**: Allows the user to enter their username
  - ii. **Password**: Allows the user to enter their password
  - iii. **Back [Landing Page]**: Takes the user back to the landing page
  - iv. **GO! [Home Page]**: Takes the user to the home page after correct login information
- c. Page (3) Sign Up Page (necessary)
  - i. **First Name**: Allows the user to enter their first name for their account
  - ii. **Last Name**: Allows the user to enter their last name for their account
  - iii. **Username**: Allows the user to create their username
  - iv. **Password**: Allows the user to create their password
  - v. **Age**: Allows the user to enter their age for their account
  - vi. **Sign me up! [BucketList Setup Page]**: Takes the user to the next setup page
  - vii. **Back [Landing Page]**: Takes the user back to the landing page
- d. Page (4) BucketList Setup Page (necessary)
  - i. **Item**: Allows the user to add the name of a bucketlist item
  - ii. **Add Item**: Allows the user to add the item specified in the field above
  - iii. **Skip for now [Calendar Setup Page]**: Allows the user to skip the setup and takes the user to the next setup page
  - iv. **Next [Calendar Setup Page]**: Saves the user's bucketlist and proceeds to the next setup page
- e. Page (5) Calendar Setup Page (necessary)
  - i. **Sync Calendar**: Allows the user to sync external schedules
  - ii. **Skip for now [Location Setup Page]**: Allows the user to skip the sync and takes the user to the next setup page
  - iii. **Next [Location Setup Page]**: Saves the schedule and proceeds to the next setup page
- f. Page (6) Location Setup Page (necessary)
  - i. **Enable Location Services**: Allows the user to turn on location services
  - ii. **Skip for now [Home Page]**: Allows the user to skip location settings and takes the user to the home page
  - iii. **Next [Home Page]**: Saves the user's location settings and takes the user to the home page

## 2. User

- a. Page (1) Home Page (necessary)
  - i. **Use Current Location or Enter**: Allows the user to use current location or custom location for recommendations
  - ii. **Profile [Profile Page]**: Directs the user to the profile page

- iii. **Recommendation Card [Activity Details Page]**: Directs the user to the activity details page for more information about the activity
  - iv. **Add to wishlist**: Allows the user to add a recommendation to the wishlist
  - v. **Main Menu**: Allows the user to navigate to user pages 1, 4, 5, 6, 7
- b. Page (2) Profile Page (necessary)
  - i. **First Name**: Allows the user to enter their first name for their account
  - ii. **Last Name**: Allows the user to enter their last name for their account
  - iii. **Username**: Allows the user to create their username
  - iv. **Password**: Allows the user to create their password
  - v. **Age**: Allows the user to enter their age for their account
  - vi. **Save!**: Saves the new profile data
  - vii. **Back [Previous Page]**: Returns the user to their previous page
- c. Page (3) Activity Details Page (necessary)
  - i. **Back [Home Page]**: Returns the user to the home page
  - ii. **Add to Wishlist!**: Adds the activity to the wishlist
- d. Page (4) BucketList Page (necessary)
  - i. **Item**: Allows the user to add the name of a bucketlist item
  - ii. **Profile [Profile Page]**: Directs the user to the profile page
  - iii. **Add Item**: Allows the user to add the item specified in the field above
  - iv. **Remove Item**: Allows the user to remove the selected item
  - v. **Main Menu**: Allows the user to navigate to user pages 1, 4, 5, 6, 7
- e. Page (5) Wishlist Page (necessary)
  - i. **Profile [Profile Page]**: Directs the user to the profile page
  - ii. **Event Accept**: Allows the user to complete the wishlist item
  - iii. **Event Decline**: Allows the user to decline the wishlist item
  - iv. **Main Menu**: Allows the user to navigate to user pages 1, 4, 5, 6, 7
- f. Page (6) Calendar Page (necessary)
  - i. **Profile [Profile Page]**: Directs the user to the profile page
  - ii. **Back**: Allows the user to look at a previous date
  - iii. **Forward**: Allows the user to look at a future date
  - iv. **Main Menu**: Allows the user to navigate to user pages 1, 4, 5, 6, 7
- g. Page (7) Memories Page (necessary)
  - i. **Profile [Profile Page]**: Directs the user to the profile page
  - ii. **Main Menu**: Allows the user to navigate to user pages 1, 4, 5, 6, 7

## Key

**Buttons**: Represents interactive objects that either redirect the user to a specified page mentioned in brackets or performs a certain action mentioned in the button's details.

**User Inputs**: Represents input fields for the user to provide information to the application through text boxes

# Use Cases

## 1. All Users

<b>Name</b>	Login to account
Actors	All users who have already created an account
Trigger	Click Login button from homepage
Events	Enter a username and password
Exit Condition	A valid username and password are valid User clicks the enters the login button
Post Condition	User is redirected to the homepage
Acceptance Test	Upon entering valid username and password on login page, the user logs into the account, views homepage.

<b>Name</b>	Create an account
Actors	Users who do not currently have an account
Trigger	Click the signup button on the landing page
Events	Enter a first and last name, username, password, age
Exit Condition	Click the signup button
Post Condition	User will start to set up their account Begin with adding one item to the bucket list
Acceptance Test	User creates an account by entering personal information. App confirms the “new account” and brings the user to homepage

<b>Name</b>	Log out
Actors	Users who are logged into their account
Trigger	Click on profile button
Events	Click on the logout button User logged out of their account They are no longer to access anything from their account
Exit Condition	Logout button is pressed
Post Condition	User redirected to the landing page
Acceptance Test	After clicking the logout button, the user should be back to the main landing page

<b>Name</b>	Add to - bucketlist
Actors	All users

Trigger	Click + button
Events	Click on “My Bucketlist” from navigation bar Click + icon Type in bucketlist item Save it
Exit Condition	Click "save" button
Post Condition	Bucketlist view with new action added
Acceptance Test	User adds bucketlist item to the list, saves it and it shows up in the bucketlist view

<b>Name</b>	Edit – bucketlist item
Actors	All users
Trigger	Click edit button
Events	Click on “My Bucketlist” from navigation bar Click edit (near the item you want to edit) Edit the bucketlist item Save it
Exit Condition	Click "save" button
Post Condition	Bucketlist view with edited list item
Acceptance Test	User changes a bucketlist item, saves it and the updated edited list is viewed

<b>Name</b>	Delete – bucketlist item
Actors	All users
Trigger	Click delete button (next to the bucketlist item)
Events	Click on “My Bucketlist” from navigation bar Click X (near the item you want to edit) Edit the bucketlist item Save it
Exit Condition	Click “save” button
Post Condition	Bucketlist view without the deleted item
Acceptance Test	User goes to bucket list screen and clicks the “x” for the item to be deleted and makes sure the item is removed from the list

<b>Name</b>	Manage Profile
Actors	All users
Trigger	Go to profile

Events	Change the desired fields (first/last name, age, username?)
Exit Condition	Click save
Post Condition	User information is updated
Acceptance Test	User can edit personal details under profile page, and save it

<b>Name</b>	View list of Recommended activities
Actors	All users
Trigger	Go to homepage
Events	Scroll through list of recommended activities
Exit Condition	Navigate to any other page via the navigation bar
Post Condition	User can add to their in action/wish list
Acceptance Test	Go to any page and go back to home page and see that the activity cards show up and that they do not conflict with events on the calendar

<b>Name</b>	Add to wish list from homepage
Actors	All users
Trigger	Go to homepage to view all of the activities
Events	Click the add button on the activity cards
Exit Condition	The home page screen should still be up and unchanged
Post Condition	The activity will appear in their in action/ wish list
Acceptance Test	Press the plus button on an activity card on the home page and go to the in-action/wish list page and see that that activity was added there

<b>Name</b>	Remove from wish list
Actors	All users
Trigger	Go to in action/wish list
Events	Click the remove/delete button on the activity card
Exit Condition	
Post Condition	The deleted activity will no longer appear in the in action/wish list screen
Acceptance Test	Go the in-action page and click the "x" on an activity and then check to see that that activity has been removed from the list

<b>Name</b>	View individual activity
Actors	All users
Trigger	Click on the activity card



Events	Go on the home page to view all the recommended activities Click on the activity card that you want to maximize
Exit Condition	Click the back arrow to return to the home page
Post Condition	View all the recommended activities on the homepage
Acceptance Test	Go to home page and click on any activity card and see that the activity maximizes and takes up the whole screen

<b>Name</b>	Add activity to wish list from the maximized version of the activity card/page
Actors	All users
Trigger	Click on the activity card you want to maximize
Events	Go the home page View the scrollable list of recommended activities Click on the desired activity to view more details
Exit Condition	Click the back arrow to return to the home page
Post Condition	Home page view with all the recommended activities
Acceptance Test	After clicking on the add to wishlist button, check if the activity is in the wishlist

<b>Name</b>	Change location
Actors	All users
Trigger	Click on the enter location/use current location button
Events	Go on the homepage and click on the enter location or use current location button at the top of the screen
Exit Condition	Enter the location and click the button to enter
Post Condition	View the home page with the new recommendations in the new location
Acceptance Test	After clicking on the change location/use current location button, enter and see that the activity locations are changed to the newly entered location

<b>Name</b>	View past completed activities
Actors	All users
Trigger	Go to my memories screen
Events	Go to my memories located at the bottom of the screen

Exit Condition	Can click on any other item on the bottom navigation bar to view any other screen
Post Condition	Can view the list of completed activities
Acceptance Test	Go to my memories on the navigation bar and view the completed activities/memories

<b>Name</b>	Add to completed activities(memories)
Actors	All users
Trigger	Click the completed button
Events	Go to the in action/ wish list page Find the activity card of the activity your just completed and click the completed button Now you can view that activity in my memories
Exit Condition	Go to my memories to see the newly completed activity
Post Condition	The activity will be removed from the in-action screen and will show up in my memories screen
Acceptance Test	Mark an activity completed from the in-action screen and go to my memories screen and make sure the activity showed up in my memories

<b>Name</b>	Search the bucketlist
Actors	All users
Trigger	Click the search bar at the top of the bucketlist
Events	Go to the bucket list screen Find the search bar at the top Click on the search bar Enter the key words enter
Exit Condition	Clear the search bar and enter
Post Condition	View all the items containing the entered key words
Acceptance Test	See that a certain item is in the list then search for it via the search bar and see that the item shows up in the search

<b>Name</b>	View calendar
Actors	All users
Trigger	Click in the calendar on the bottom navigation
Events	Go the calendar screen Scroll through all the events in your calendar

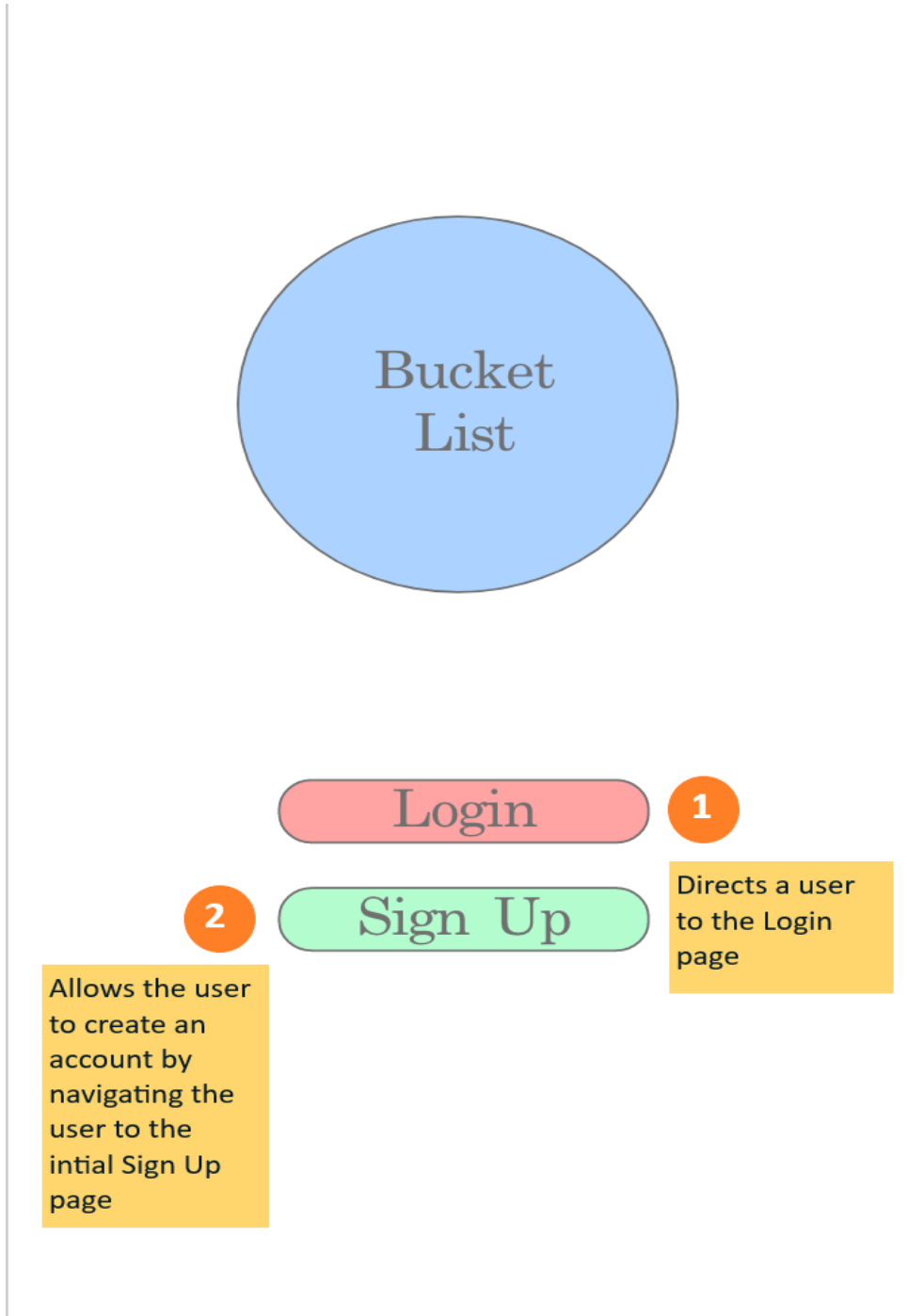
Exit Condition	Can click on any other thing on the bottom navigation to navigate away from this screen
Post Condition	Can view all the entered events in the calendar
Acceptance Test	Go to calendar view and see that the calendar events show up

<b>Name</b>	Sync Calendar
Actors	All users
Trigger	Sync calendar button
Events	Go to calendar screen from the navigation bar Click on the sync calendar button Complete the steps to sync your Google calendar
Exit Condition	Task is complete when user has gone through all of the steps and finished syncing
Post Condition	The users google calendar will have been taken into consideration for the recommended activities
Acceptance Test	After syncing the calendar make sure that the events from your calendar are present

# User Interface Requirements

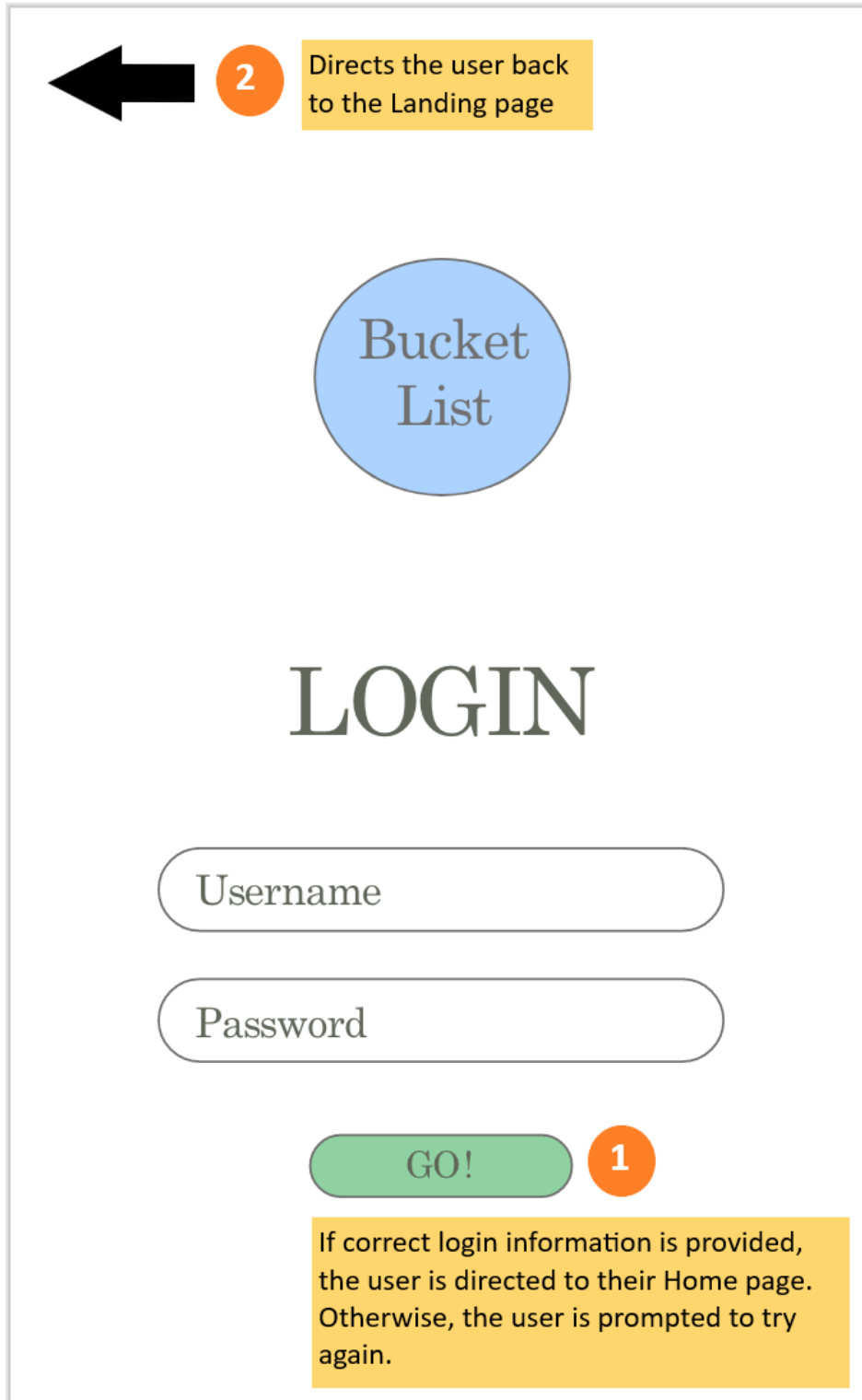
## Landing Page

When the user first loads up the app, this will be the first page the user sees. If the user is a returning user, the user can press the Login button (1) to access the Login page while a new user can press the Sign Up button (2) to proceed in creating a new account.



## Login Page

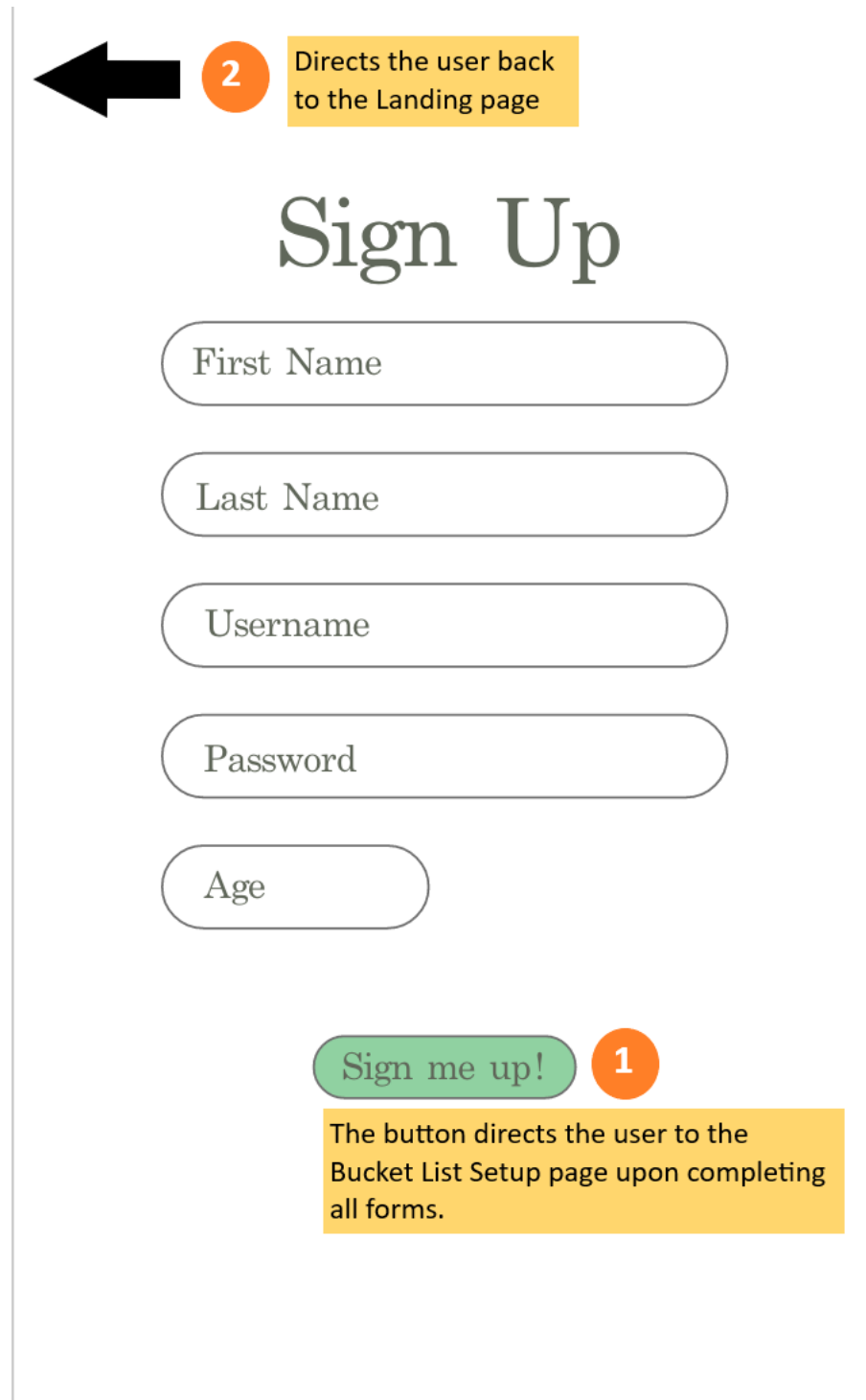
Provides the user with a basic login interface (1) and a back button (2) if the user needs to return to the Landing page. After filling in the correct login information, the user will be redirected to the Home page.



The image shows a login page layout within a light gray rectangular frame. At the top left, there is a black left-pointing arrow next to an orange circle containing the number '2'. To the right of this is a yellow rectangular box with the text 'Directs the user back to the Landing page'. In the center of the page is a light blue circle containing the text 'Bucket List'. Below this is the word 'LOGIN' in a large, dark gray, serif font. Underneath 'LOGIN' are two rounded rectangular input fields. The first field is labeled 'Username' and the second is labeled 'Password'. Below the 'Password' field is a green rounded rectangular button labeled 'GO!'. To the right of the 'GO!' button is an orange circle containing the number '1'. Below the 'GO!' button and the number '1' is a yellow rectangular box containing the text: 'If correct login information is provided, the user is directed to their Home page. Otherwise, the user is prompted to try again.'

## Sign Up Page

Provides the user with a basic sign-up interface (1) and a back button (2) if the user needs to return to the Landing page. After filling in the required information, the user will be redirected to the Bucket List Setup page.



The image shows a sign-up page layout. At the top left, there is a black left-pointing arrow next to an orange circle containing the number '2'. To the right of this is a yellow callout box with the text 'Directs the user back to the Landing page'. Below this is the title 'Sign Up' in a large, dark serif font. Under the title are five rounded rectangular input fields, each with a label: 'First Name', 'Last Name', 'Username', 'Password', and 'Age'. At the bottom of the form is a green rounded button labeled 'Sign me up!'. To the right of this button is an orange circle containing the number '1'. Below this is a yellow callout box with the text 'The button directs the user to the Bucket List Setup page upon completing all forms.'

2 Directs the user back to the Landing page

# Sign Up

First Name

Last Name

Username

Password

Age

Sign me up! 1

The button directs the user to the Bucket List Setup page upon completing all forms.

## BucketList Setup Page

Allows the new user to add items (1) to their BucketList, or setup their list later (2). After the user is done, pressing the arrow (3) will take the user to the Calendar Setup page.

# My Bucketlist

Add item

Allows the user to add an item to their Bucketlist after completing the above form

+

1

2

Skip for now

3

—>

## Calendar Setup Page

Allows the user to sync their calendar (1) from an external application. Once complete, the user can proceed to the Location Setup page.

# My Calendar

Sync Calendar

1

In a pop-up, the user is able to select the service from which they want to import their schedule

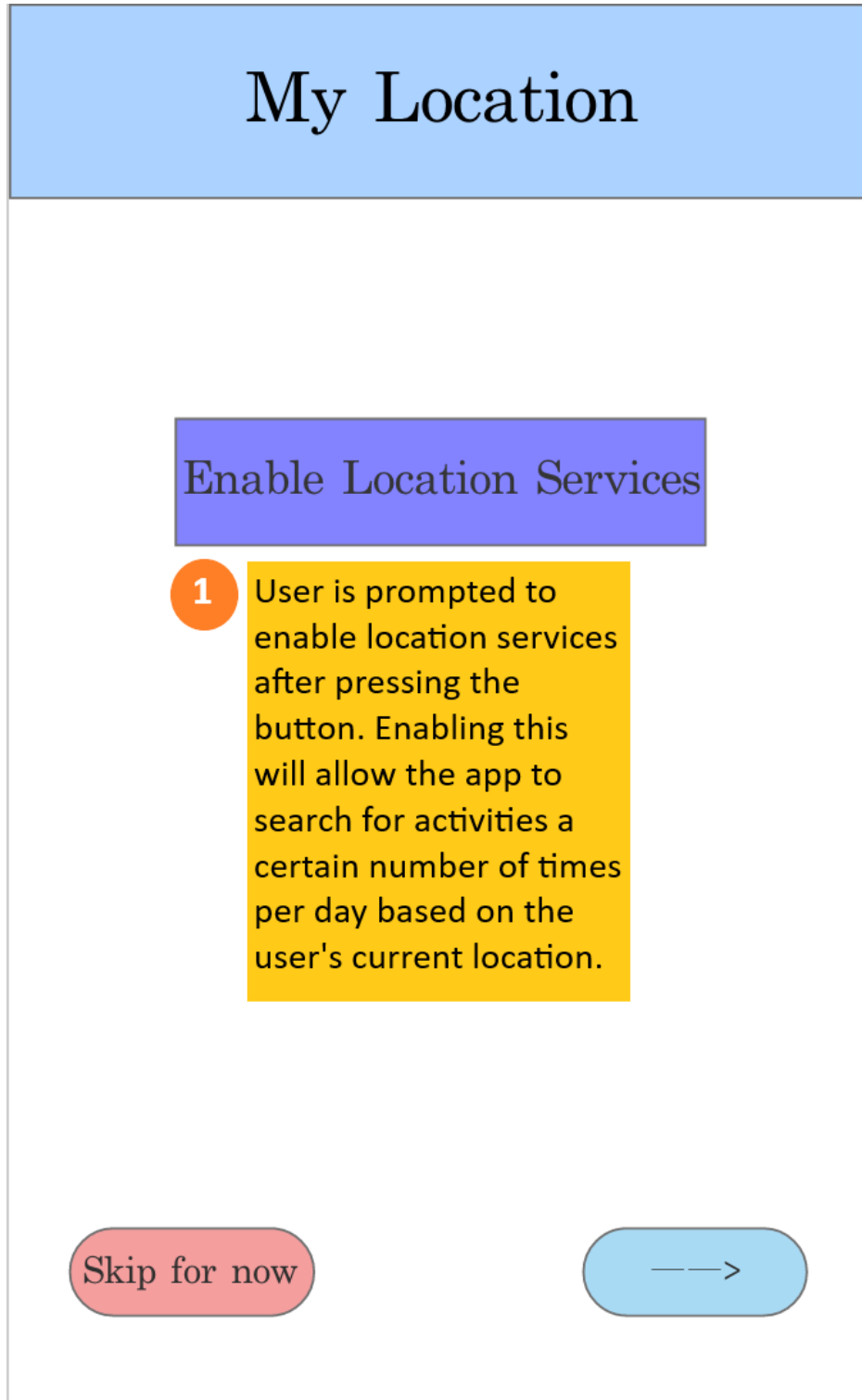
Skip for now

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## Location Setup Page

Allows the user to enable location services (1) for the application. After finishing, the user's setup process is completed and will be taken to the Home page.



The mockup shows a mobile app screen for location setup. At the top is a light blue header with the text "My Location". Below this is a large white area. In the center of this area is a purple rectangular button with the text "Enable Location Services". To the left of this button is a red circle containing the number "1". To the right of the circle is a yellow rectangular callout box containing the text: "User is prompted to enable location services after pressing the button. Enabling this will allow the app to search for activities a certain number of times per day based on the user's current location." At the bottom of the screen are two rounded buttons: a pink one on the left with the text "Skip for now" and a light blue one on the right with a right-pointing arrow.

# My Location

Enable Location Services

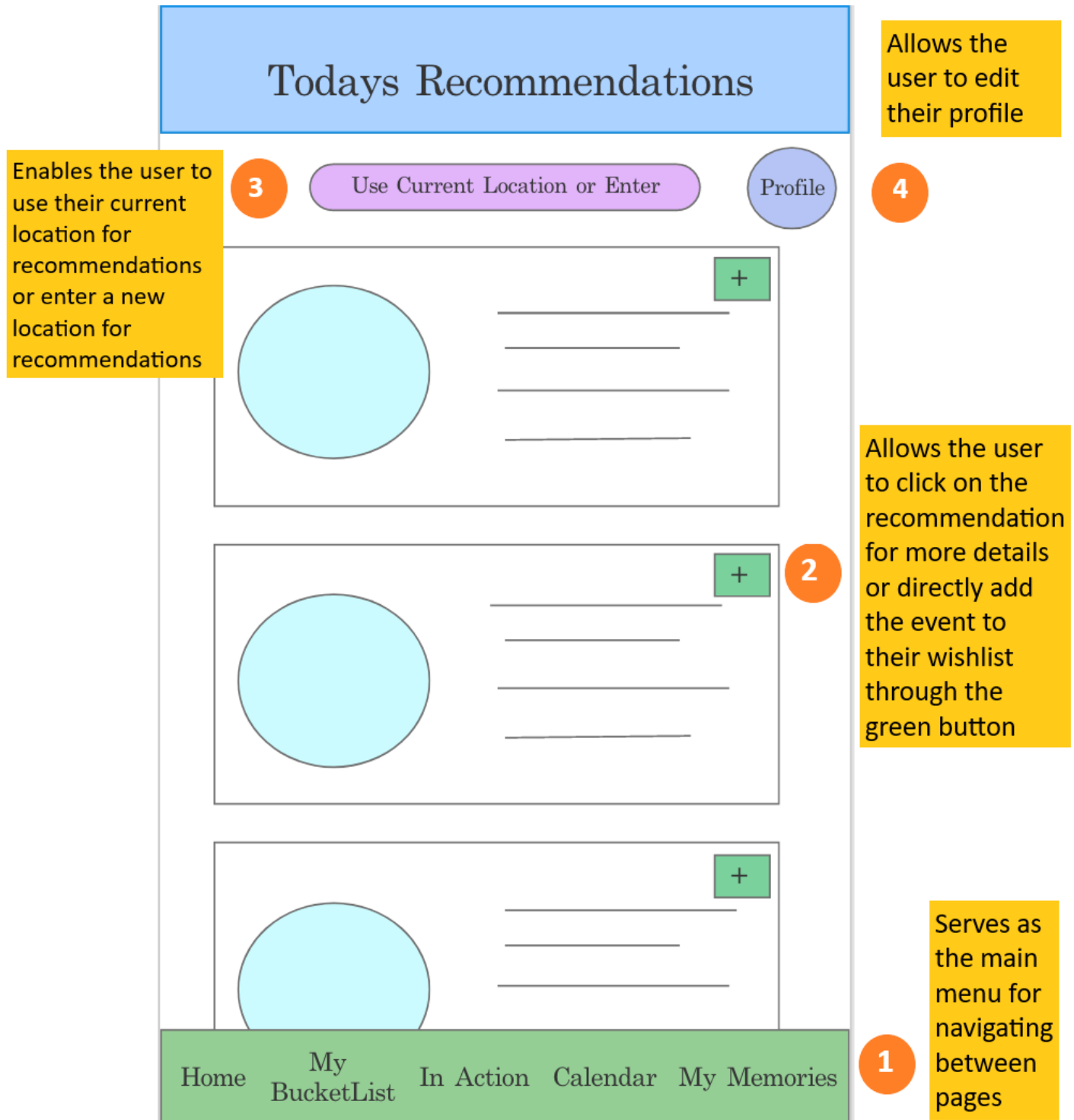
1 User is prompted to enable location services after pressing the button. Enabling this will allow the app to search for activities a certain number of times per day based on the user's current location.

Skip for now

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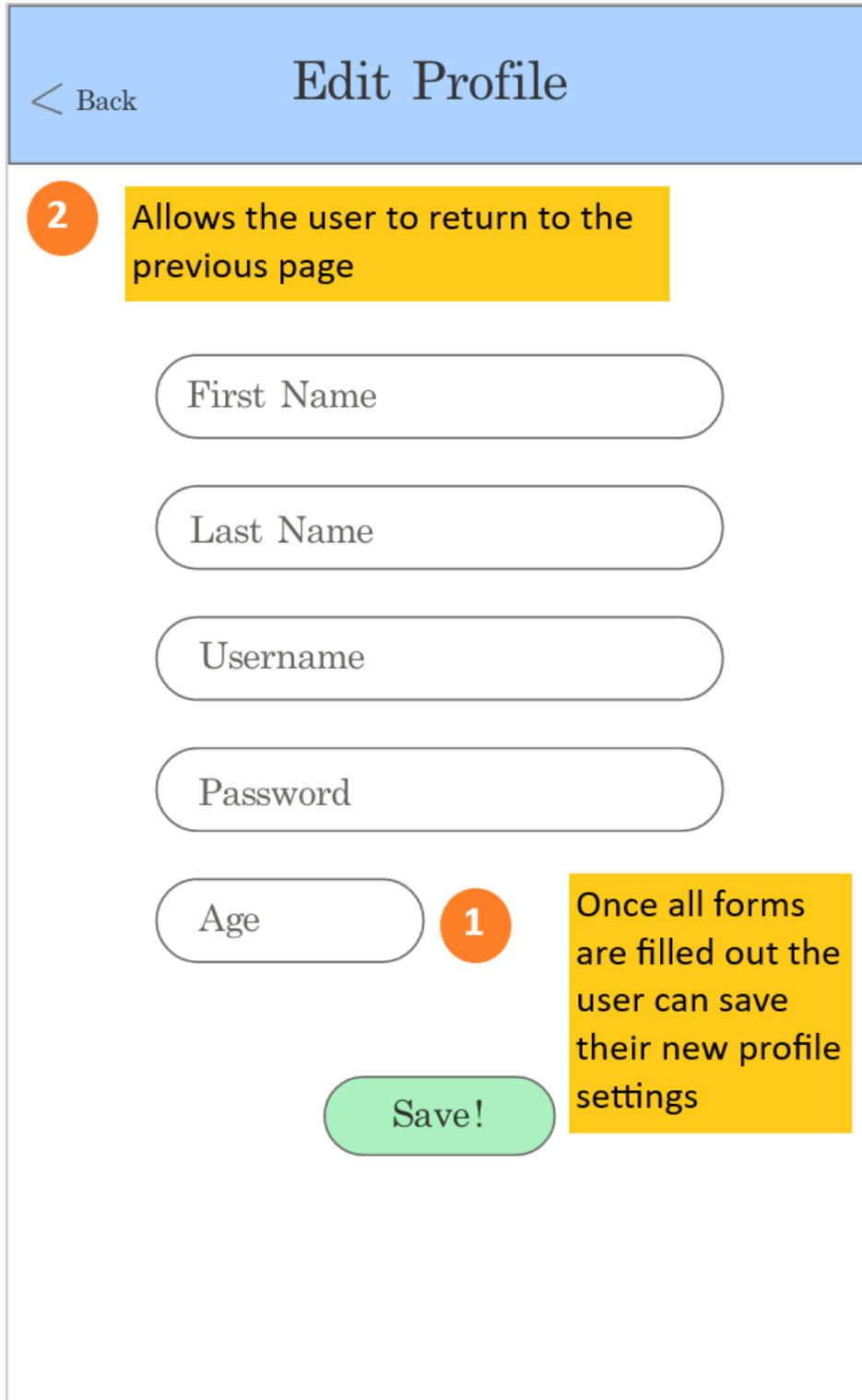
## Home Page

Serves as the main hub for the user. The user can choose to go to any of the pages listed in the bottom menu (1) or interact with recommendations (2) presented to the user. If the user is planning on travelling, the user can enter their future location (3) for suggested events. Additionally, the user can edit their profile by pressing the button (4).



## Profile Page

Provides the user with a basic profile editing interface (1) and a back button (2) if the user needs to return to their previous page. After filling in the required information, the user will be redirected to their previous page.



The image shows a mobile app interface for editing a profile. At the top is a blue header bar with a back button (a left-pointing chevron) and the text 'Back' on the left, and the title 'Edit Profile' in the center. Below the header is a white form area. On the left side of the form, there is a vertical list of five rounded rectangular input fields, each containing a label: 'First Name', 'Last Name', 'Username', 'Password', and 'Age'. To the right of the 'Age' field, there is an orange circle with the number '1' inside. Further to the right, there is a yellow rectangular callout box containing the text: 'Once all forms are filled out the user can save their new profile settings'. Below the 'Age' field and to the left of the yellow callout box is a green rounded rectangular button with the text 'Save!' inside. At the top left of the white form area, there is an orange circle with the number '2' inside, and to its right is a yellow rectangular callout box containing the text: 'Allows the user to return to the previous page'.

**2** Allows the user to return to the previous page

First Name

Last Name

Username

Password

Age

**1** Once all forms are filled out the user can save their new profile settings


Save!

## Activity Details Page

Provides the user with additional information on the selected activity (1) and gives the user the option to add the activity to their Wishlist (2).

[< Back](#)

# Activity Name



1

Gives a picture of the activity and associated details such as location and time

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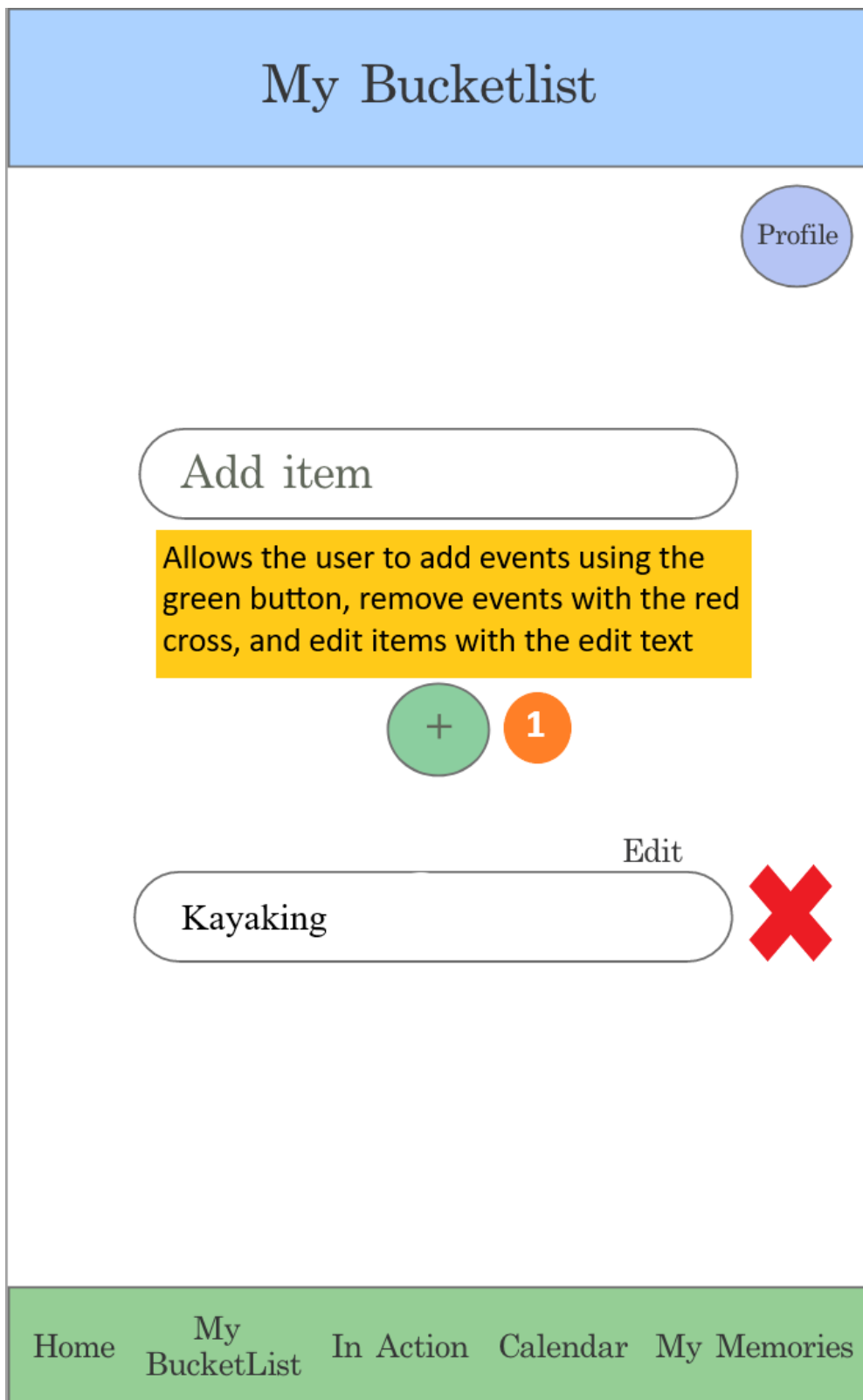
Allows the user to add the activity to their Wishlist

2

Add to Wishlist!

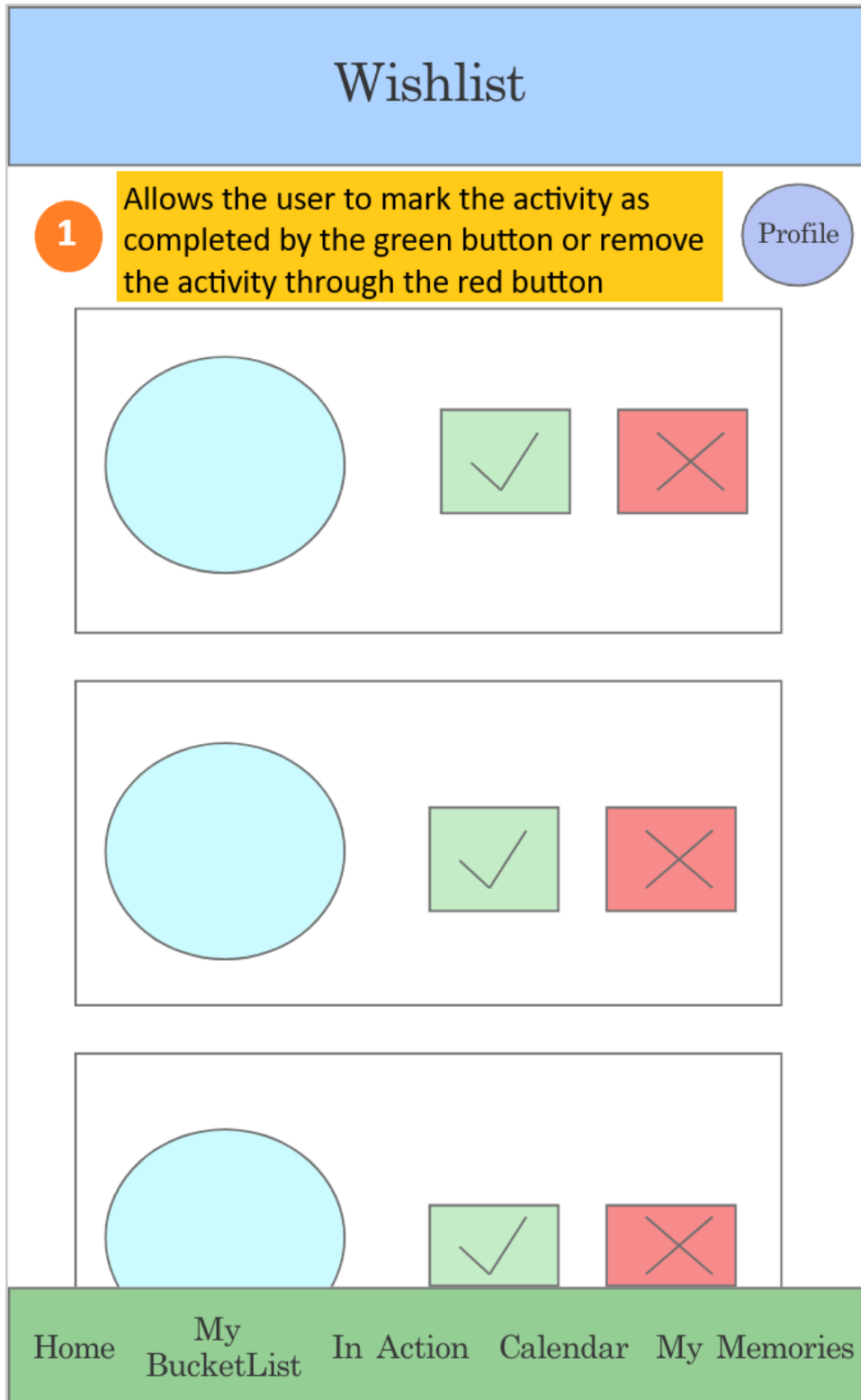
## BucketList Page

Allows the user to add to, edit entries, and view their BucketList (1).



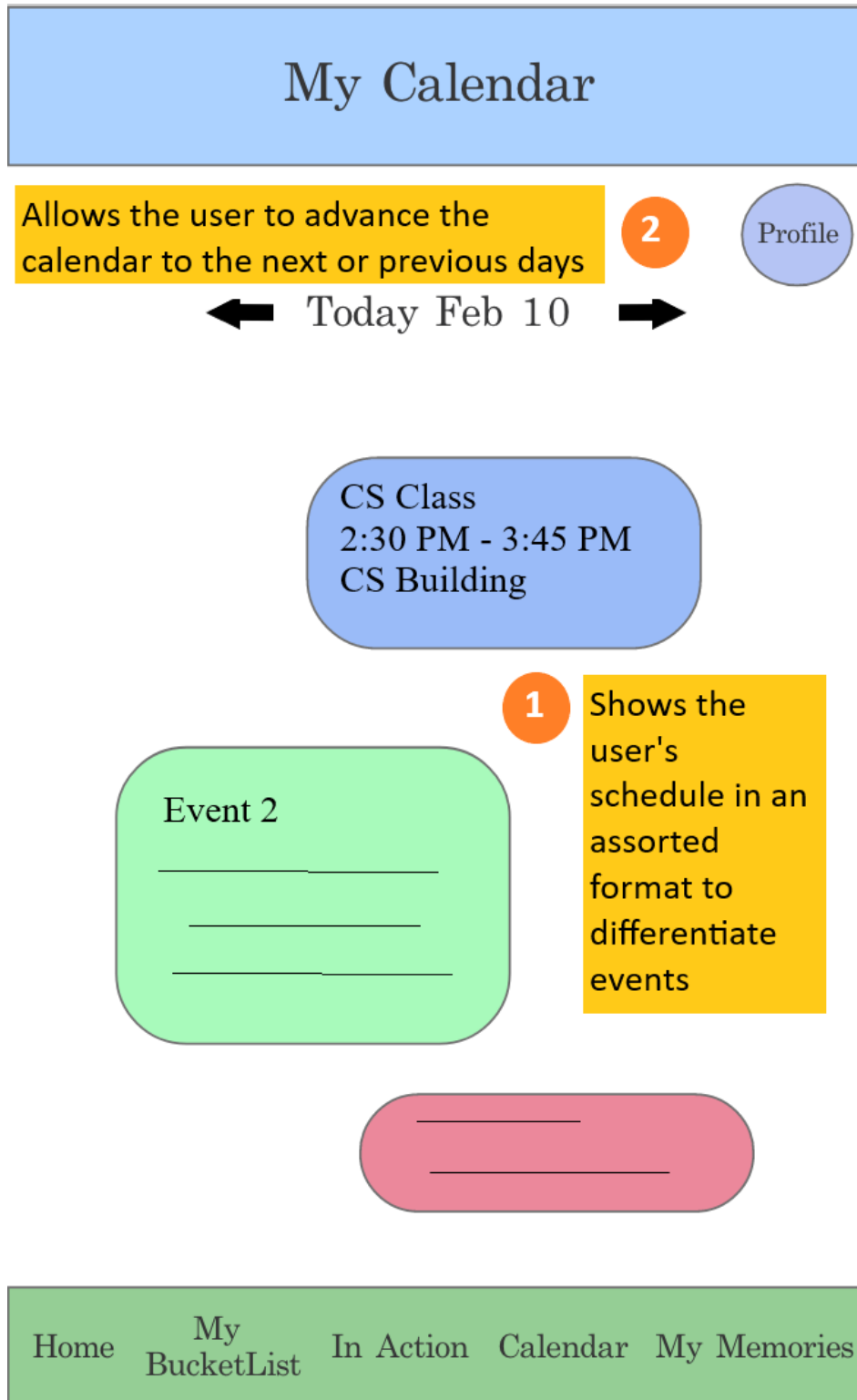
## Wishlist Page

Provides the user with a list of activities within their Wishlist and allows the user to complete or remove them (1).



## Calendar Page

Provides the user with a layout of their schedule for the day (1). Additionally, enables the user to change the date (2).



Memories Page

Provides the user with a history of completed Bucket List items (1).

My Memories

1

The user is able to view their completed Bucketlist items along with the date completed and additional details

Profile

Sky Diving

March 19, 2019

Mountain Climbing

June 5, 2019

Kayaking

July 29, 2019

Home

My  
BucketList

In Action

Calendar

My Memories



## Security Requirements

There will be minimal user data acquisition. Some user information will be used for log in. The app will also need user location. Only the authorized user should be able to access their information. Since for now most of the information stored in the app will be on user's phone, the built-in functions that we use should be able to tackle the classic security issues.

## System Requirements

- Our app is targeted to be compatible with Android 9 and above. This is in accordance with the Google Play's target API level requirements for the course of this semester.
- We estimate the internal storage needed to be 50 MB. This will be to maintain the user's list, store the recommendations of the users and load graphics within the app.
- This app is targeted for smart phones with touch screens. The app will need access to Wi-Fi or data services, GPS services and Google calendar.
  - While the user can have limited functionality without the internet, such as editing their list, the app needs access to the internet to make recommendations for places, which is the key feature of the app.
  - The GPS services are needed so that the recommendations can be made based on the user location
  - Google calendar is needed so that the app can make recommendations tailored to user's schedule
- At this stage we haven't decided on any external entity that the app might need to interact with. However, in the future, we might need to interact with some database.

# Specifications

Flowcharts of the screen navigation:

