

Lunch Money Buddy App

Kelly Van Wert

Interaction Design

August 20, 2017

Table of Contents

Problem.....	3
Project Background.....	3
Problem Statement.....	3
Actions	3
Approach & Actions Taken.....	3
Discoveries That Motivated Change	4
Results.....	4
Lessons Learned	7
Appendices.....	8
I – User Journeys.....	8
II – Full Site Map.....	12
III – Wireframes.....	13
IV – Prototype	21

Problem

Project Background

We've been tasked with creating a mobile app titled "Lunch Money Buddy" that will allow parents and legal guardians to manage their school aged children's lunch and subsidy accounts. Some of the functionality to include was to create a new "Lunch Money Buddy" account, to view and add money to their children's lunch accounts, view and favorite upcoming school lunches, and receive notifications for upcoming favorite lunches.

Problem Statement

The main purpose of the project was to answer the following question:

How might parents / legal guardians most effectively manage their school-aged children's lunch and subsidy accounts in a mobile app?

Actions

Approach & Actions Taken

The application specifics and personas for the app had already been identified and provided. With this information in hand, we took the following action plan:

1. **User journeys** were created to reflect the provided personas. There were a total of 2 personas and 2 user journeys were created for each persona. The personas and corresponding user journeys are listed below. *See Appendix I for full user journeys.*

Persona	User Journey
Samantha and Jorge, Parents of 2 Young Children	Select their children's favorite lunches and receive alerts so they know not to pack a lunch on those days.
Samantha and Jorge, Parents of 2 Young Children	Know when the account balance is low and/or have the account auto refill.
Henry, Grandfather and Legal Guardian of Grandson	Set up a new lunch money account with Lunch Money Buddy.
Henry, Grandfather and Legal Guardian of Grandson	View and add money to Lunch Money Buddy account.

2. A **site map** was digitally created utilizing the application specifications and the personas' user journeys. All application specs and user journeys were incorporated into the site map. *See Appendix II for full site map.*
3. **Draft wireframes** were digitally created based off the site map. These wireframes included specific user journeys, as well as a full wireframe of the entire app. A peer group critiqued the wireframes and provided constructive feedback so that the app could be even better.
4. Based off the feedback received from the peer group, the **wireframes were finalized**. *See Appendix III for wireframes.*
5. The finalized wireframes were used to create a **draft digital prototype** using the online tool, Proto.io. A peer group then critiqued the draft prototype and provided constructive feedback.

6. The **prototype was updated** based off of peer feedback. The prototype was shared with a larger pool of peers to provide their thoughts, feedback, and suggestions.
7. The **prototype was finalized** based off of peer feedback. *For screenshots of prototype design, see Appendix IV.*

Discoveries That Motivated Change

There were a several instances where my thinking or approach changed.

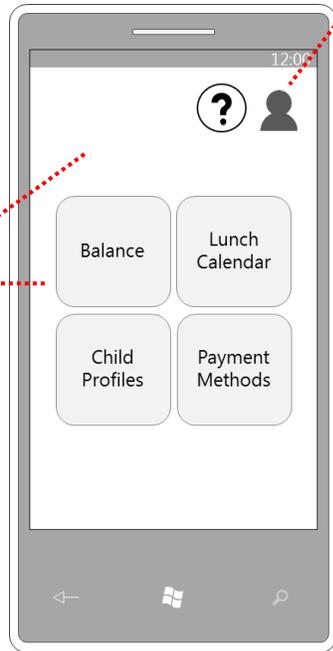
- When creating the prototype, it became obvious that it was frustrating to have to go back to the Balance or Lunch Calendar pages in order to see another child's information. Why couldn't the user easily switch between children on the same page?
- Showing a full calendar on the Lunch Calendar page would not be the best approach for what it was needed for. If a user tapped on a specific day in the calendar, it would automatically add the lunch as a favorite; however, what if the user was looking for more information on the lunch and didn't want to add it as a favorite? The information would already have to be on the calendar view, which could look chaotic since there would be so much information. Showing just a week's worth of lunches provides more space to include this kind of information right on the calendar. Star icons were also incorporated so users can choose favorite lunches simply by clicking the star associated with a specific lunch.
- There was no place that included all information for a child. A user wouldn't be able to see the balance, a child's favorite lunches, and other pertinent information unless the user went in and out between screens, which could be very frustrating. A profile page for each user was incorporated into the design.
- Almost everything is buried under 4 buttons on the home page. A user would have to click into each button to see the information. Additional information was added on a couple of buttons to show the total balance and number of children right on the home page.
- In the draft prototype, it wasn't obvious which items initiated an interaction on the screen. Change of color can really help with this.
- A user had no way to see a history of what their children had previously bought, or subsidies that were added to their account. This is something that became noticeable during large peer group testing.

Results

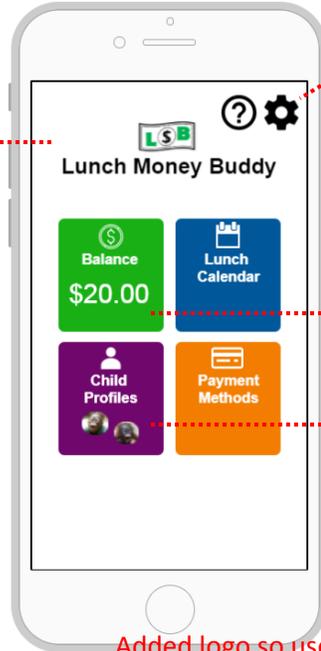
The problem statement was effectively answered using the approach outlined in the Actions section. After several iterations of the wireframes and prototypes, all of the work during this project resulted in a final prototype for the Lunch Money Buddy app. [Click here to see final prototype.](#) Below are screenshots of the initial wireframe (left) and the final prototype (right) to demonstrate the progress that was made during this project.

Icon in wireframe resembles a common profile icon and may have gotten confused with the Child Profiles button

No title, no logo and no dashboard feel



Added Lunch Money Buddy title and logo

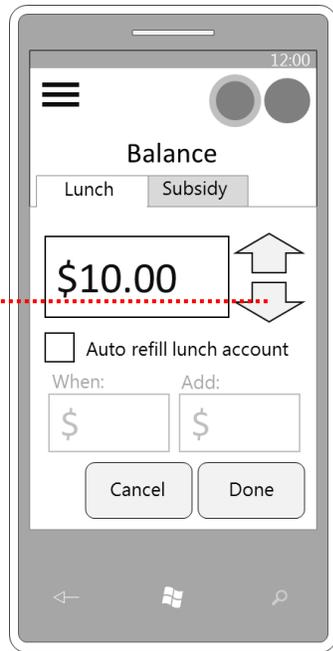


Changed icon to a gear

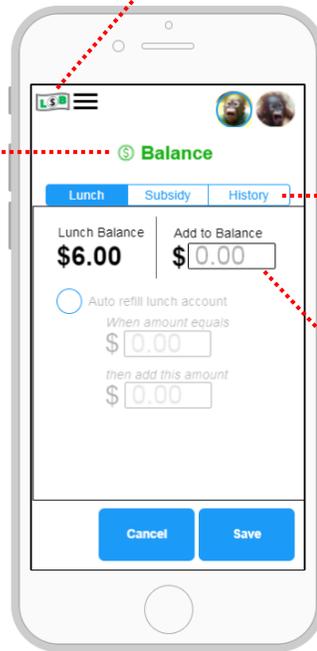
Added total balance and child profile pictures on home page to resemble a dashboard

Added logo so users are able to easily go back to the home page

Down arrow could be misleading since the user wouldn't actually be able to decrease the amount if it's already been charged

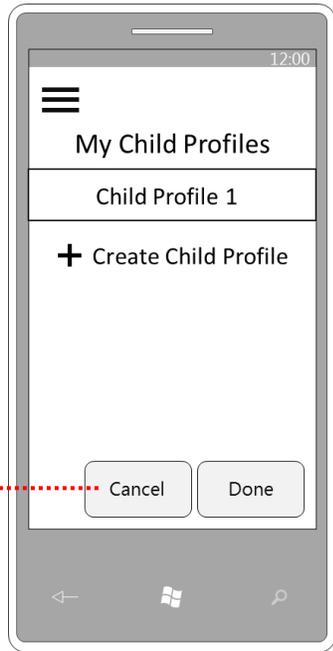


Icon and color matches Balance button on home page

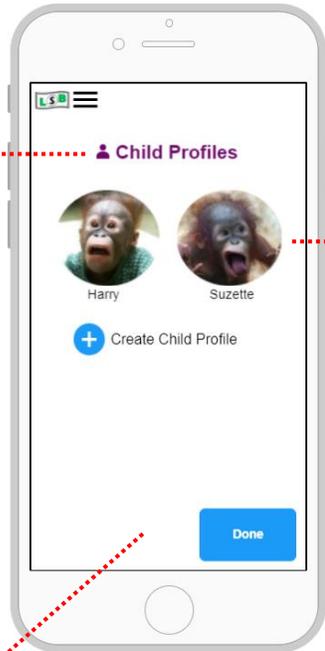


New History tab so users can view the history of lunches bought and subsidies added

Changed from arrows to a text box so users can easily input amount they want to add



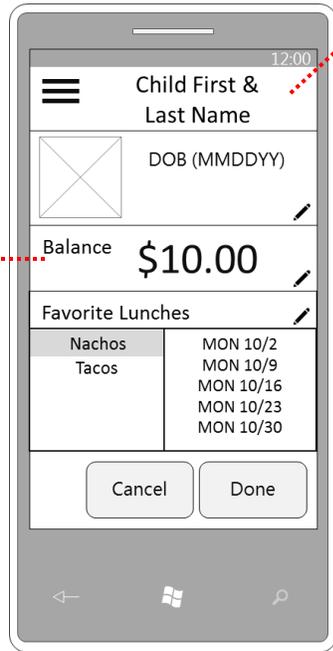
Cancel button is not needed since nothing will be saved on this page



Changed from plain rectangles to pictures. This provides more engagement and visual cues for the users.

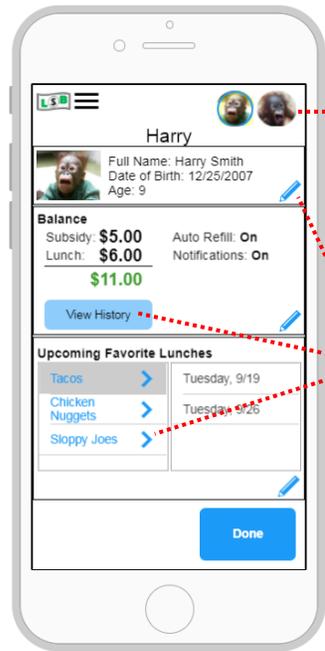
Icon and color matches Child Profiles button on home page

Removed Cancel button



User could only see total balance of child instead of breakdown of subsidy and lunch balance

No easy way to switch between children's profiles, thus causing frustration



Easily switch between children's profiles

Blue color provides easy detection of clickable areas on screen

Lessons Learned

To continuously improve and be more skilled and knowledgeable for the next project, reflecting on what was learned is an important part of the process. Here are the lessons learned:

Personal

- Anticipate change. It's okay if things change, as long as you're driving toward the end goal and keep the users in mind.
- Take negative and positive criticism as a way to improve your design. Although it can be difficult to hear at times, you'll remember it for your next project; therefore, your projects will continue to get better and better.

Design

- It should be obvious which items initiate an interaction on the screen.
- The space on a screen should be effectively utilized whether it be in portrait or landscape orientation.
- Having a logo as a way to go back to the main screen can be helpful and seems to be a common practice.
- Have a warning message if a user wants to close their account, or in any case where a user could lose a lot of information.
- In this particular project, having one screen for the user to input just the access code is less frustrating since the user doesn't end up inputting a bunch of information before being told the information is incorrect. This same technique could be applied in other projects.
- Having visual cues or color coordination could be beneficial for users in some, if not most cases.
- Although not used in the final prototype, having navigation tabs at the bottom of the screen can be effective because it allows users to navigate with only one thumb. This is something that I will take into consideration for future projects.

Appendices

I – User Journeys



My Children's Favorite Lunches

Persona: Samantha and Jorge, Parents of 2 Young Children

Goal/Context: To easily select their children's favorite lunches and receive alerts so they know not to pack a lunch on those days.



Rationale: These parents are organized and always on the go. They need to easily know when they don't need to prepare lunches for their kids. This could also free up some time in their busy schedules.

	Open App	Access Lunch Calendar	Select 1 st Favorite	Favorites Alert Settings	Select More Favorites	Receive Alert
	1	2	3	4	5	6
	<p>Functionality: User clicks app on mobile device.</p> <p>Progression: User expects to go to home page when they open app. Home page opens and displays main menu.</p> <p>Emotion: Engaged</p>	<p>Functionality: User clicks on "Lunch Calendar" on home page.</p> <p>Progression: Lunch calendar opens and allows users to see school lunches and expects to be able to select favorites.</p> <p>Emotion: Intrigued</p>	<p>Functionality: User clicks on "Add Favorite" for the first time.</p> <p>Progression: Clicking on "Add Favorite" for first time will bring up a pop-up. Text changes to "Unfavorite".</p> <p>Emotion: Decisive</p>	<p>Functionality: User chooses if they want to be alerted 1 day before lunch, and by what method. They then click "Save".</p> <p>Progression: One time pop-up allows user to choose alert settings now for all favorite lunches. They don't have to find settings later.</p> <p>Emotion: Surprised</p>	<p>Functionality: User clicks "Add Favorite" for other lunches they want to add as a favorite.</p> <p>Progression: Text changes from "Add Favorite" to "Unfavorite". Favorites are recorded in database.</p> <p>Emotion: Empowered</p>	<p>Functionality: User receives text/email alert one day before favorite lunch.</p> <p>Progression: User will receive an alert one day before each favorite lunch selected.</p> <p>Emotion: Happy</p>



Low Account Balance & Auto-Replenish

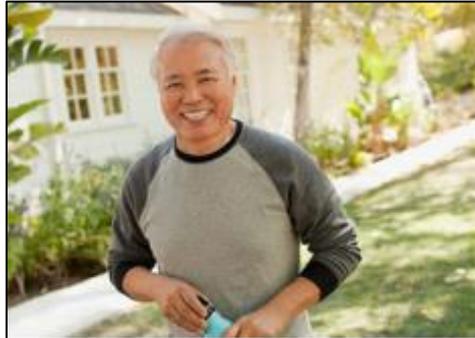
Persona: Samantha and Jorge, Parents of 2 Young Children

Goal/Context: To easily know when the account balance is low and/or have the account auto refill.



Rationale:
These parents love the convenience of online banking, and having more organization in their lives and less chaos in their busy schedules is always welcome.

Open App	Account Balance	Auto Refill Settings	Save Settings	Mission Accomplished
<p>1</p>	<p>2</p>	<p>3</p>	<p>4</p>	<p>5</p>
<p>Functionality: User clicks app on mobile device.</p> <p>Progression: User expects to go to home page when they open app. Home page opens and displays main menu.</p> <p>Emotion: Engaged</p>	<p>Functionality: User clicks on "Account Balance" on home page.</p> <p>Progression: Account balance page opens and displays balance. User sees option on page to set up auto replenishing of account.</p> <p>Emotion: Intrigued</p>	<p>Functionality: User clicks on "Auto Replenish" radio button. More options appear. User fills in preferences.</p> <p>Progression: Gives users option to set up auto replenish, and how much and when to refill.</p> <p>Emotion: Decisive</p>	<p>Functionality: User clicks "Save".</p> <p>Progression: This is a one-time setup. User is automatically redirected to home page.</p> <p>Emotion: Relieved</p>	<p>Functionality: No action needed by user.</p> <p>Progression: User journey is complete. User has option to perform another task or exit app.</p> <p>Emotion: Accomplished</p>



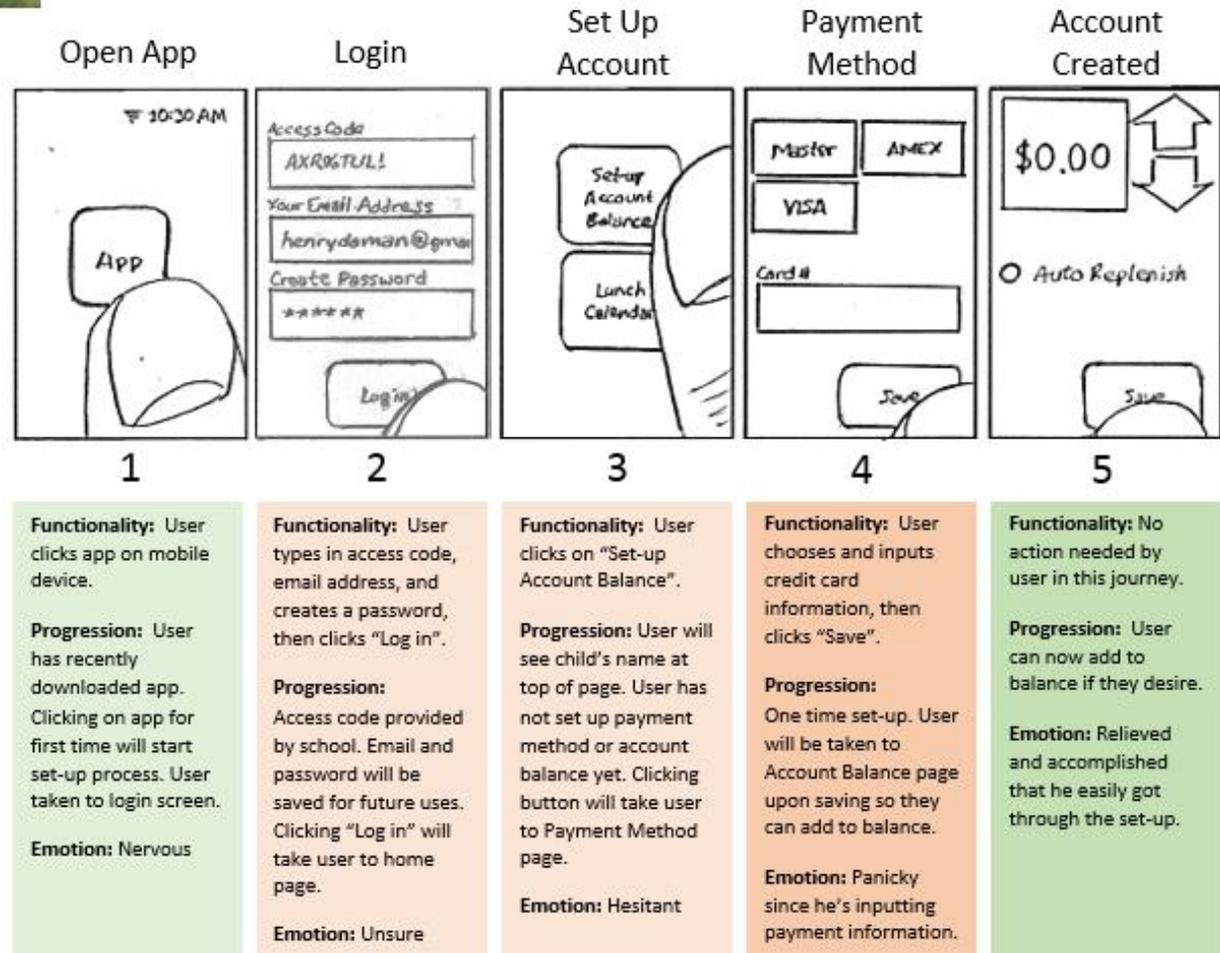
Set Up New Lunch Money Buddy Account

Persona: Henry, Grandfather and Legal Guardian of Grandson

Goal/Context: To easily set up a new lunch money account with Lunch Money Buddy



Rationale:
The school lunch model is changing and the retired legal guardian will be forced to use the app. His friends and family are also encouraging him to get with the times.





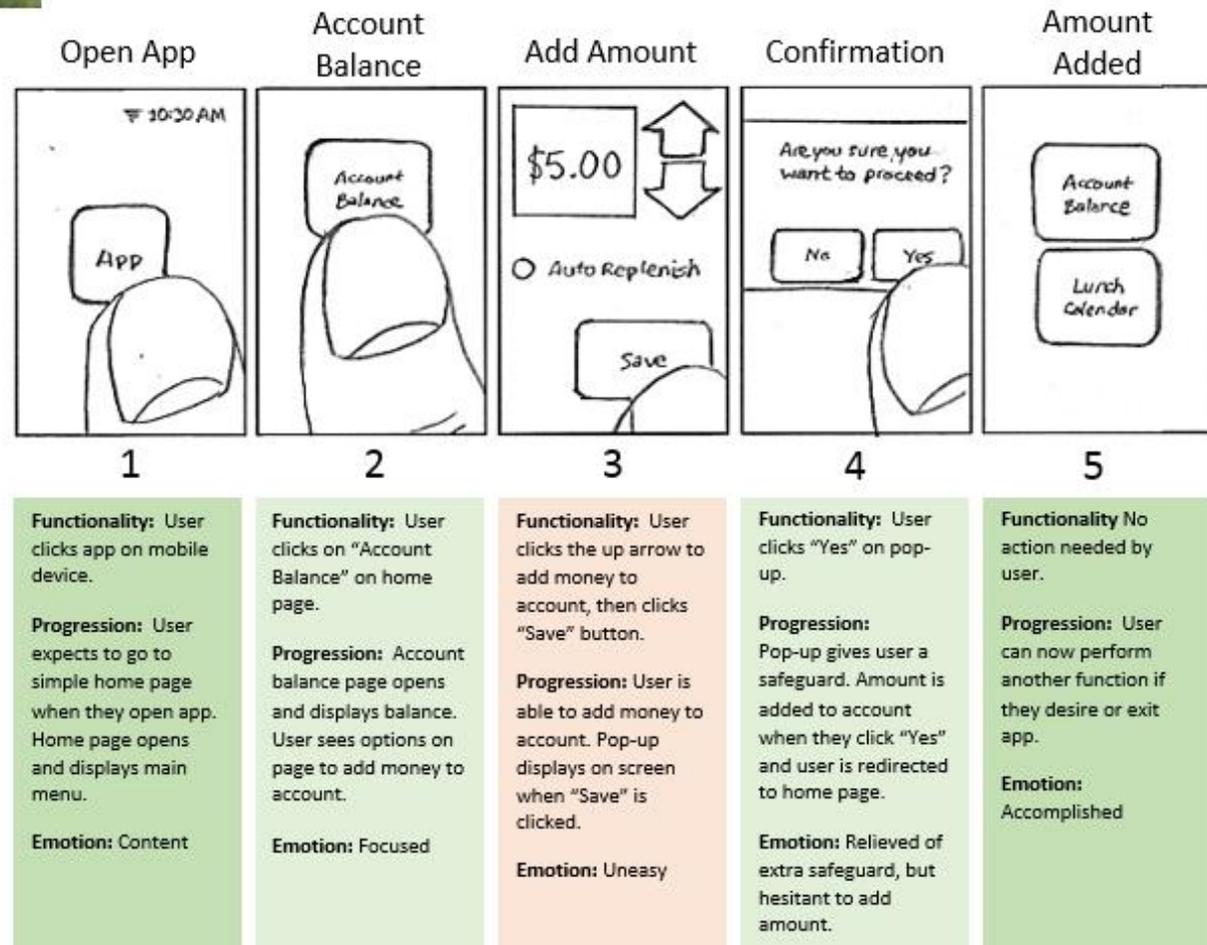
View and Add Money to Account

Persona: Henry, Grandfather and Legal Guardian of Grandson

Goal/Context: To easily view and add money to Lunch Money Buddy account.

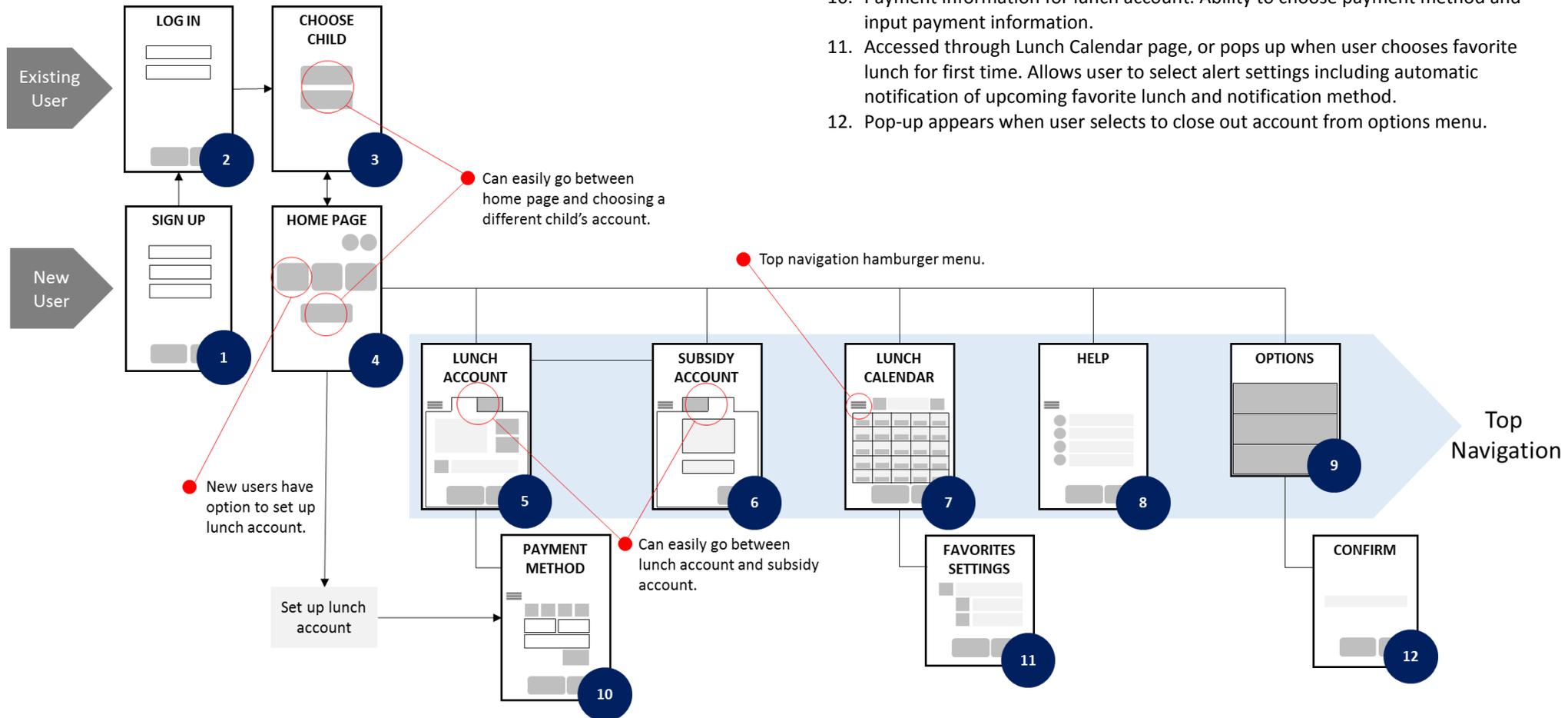


Rationale:
The grandson is not big on cooking and almost always buys lunch at school. So, the grandfather needs to make sure his grandson has enough money for lunches. Being able to view and add funds to the account balance is a must.



II – Full Site Map

1. After downloading app, new user opens app and sees this screen. They sign up by entering email address and access code provided by school, and create a password.
2. User enters email address and password to log into app.
3. User chooses child's name to proceed. If more than 1 child, all children's names will appear here.
4. Home page includes Lunch Account, Subsidy Account, and Lunch Calendar as main tile items. User can also choose a different child's account, get help on how to use the app, and log out or close account.
5. Displays lunch balance for selected child. Ability to add to account and option to auto refill balance.
6. Displays subsidy amount and status, if applicable to user.
7. Displays school lunch calendar for current month and ability to navigate between different months. User can choose to add lunches to favorites and change favorites settings.
8. Includes help topics that user can read if they need help using the app.
9. Dropdown menu. Includes options such as change email or password, log out, and close account.
10. Payment information for lunch account. Ability to choose payment method and input payment information.
11. Accessed through Lunch Calendar page, or pops up when user chooses favorite lunch for first time. Allows user to select alert settings including automatic notification of upcoming favorite lunch and notification method.
12. Pop-up appears when user selects to close out account from options menu.



III – Wireframes
Create & Access Account

User receives access code from school and types it in here.

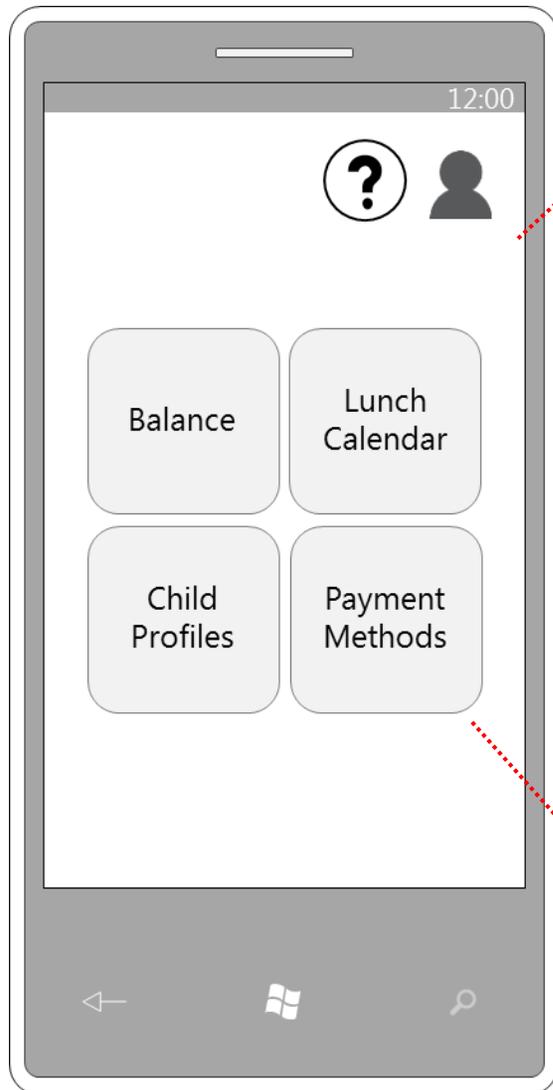
Pressing this button creates the account and takes user to Login screen. If access code is not valid, an error message will appear.

The wireframe shows a mobile phone screen with a status bar at the top displaying the time 12:00. The main title is "Create Account". Below the title are three input fields: "Access Code", "Email Address", and "Create Password". At the bottom right of the form area is a rounded rectangular button labeled "Done". The phone's navigation bar at the very bottom contains three icons: a back arrow, a Windows logo, and a search magnifying glass.

Since app has payment information, user is required to log in every time. This provides a layer of security.

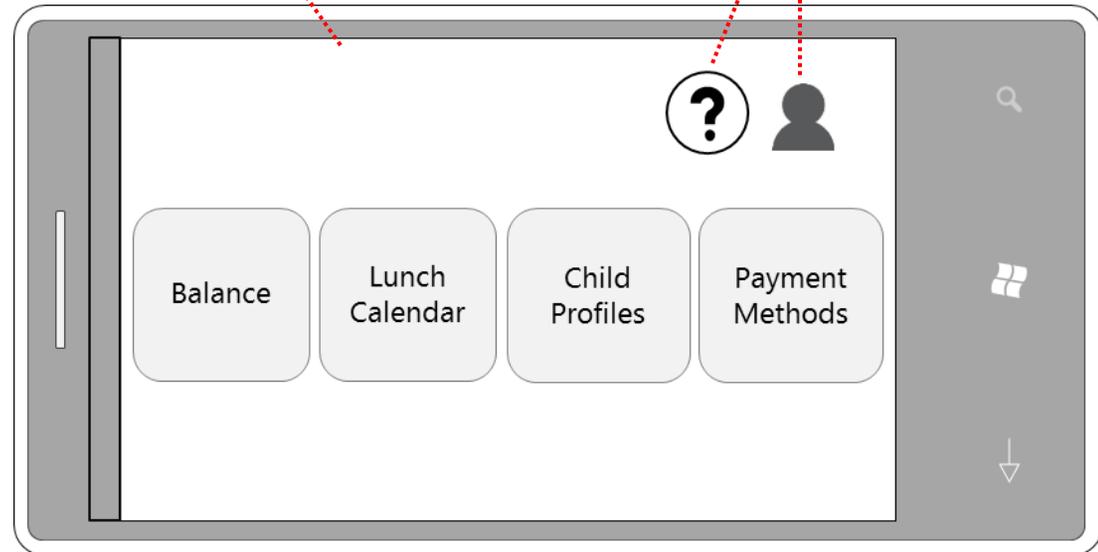
The wireframe shows a mobile phone screen with a status bar at the top displaying the time 12:00. The main title is "Log In". Below the title are two input fields: "Email" and "Password". Below the "Password" field is a button labeled "Forgot Password?". At the bottom right of the form area is a rounded rectangular button labeled "Log In". The phone's navigation bar at the very bottom contains three icons: a back arrow, a Windows logo, and a search magnifying glass.

Home Page



Home page is simple and only has a few options so user doesn't get overwhelmed.

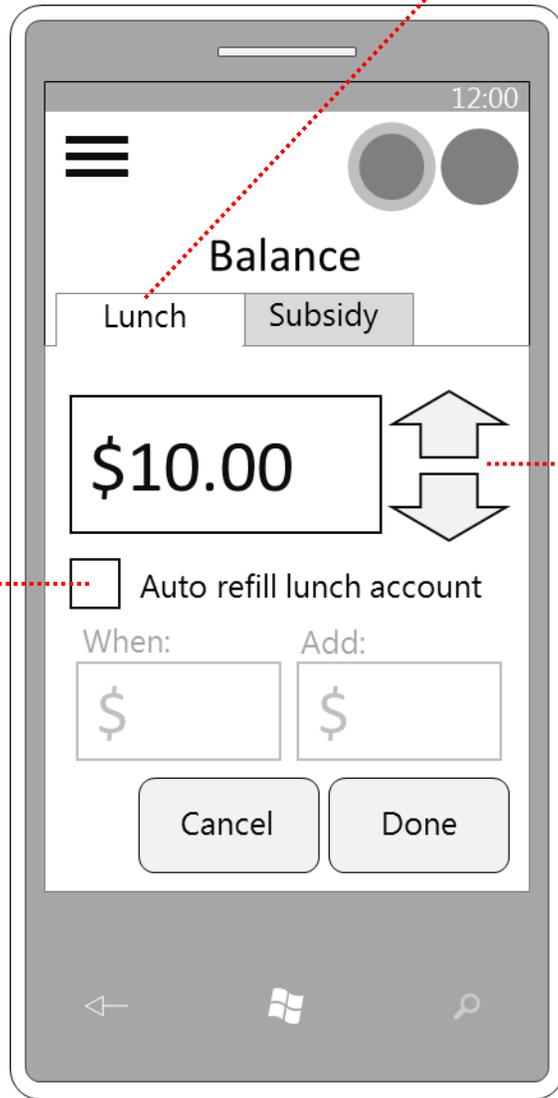
Less important options on the page, but still necessary for the user.



Tiles are the most important options on the page, so they are more prominent.

Horizontal view rearranges the tiles to better fit the space and so they don't appear squished in the square format.

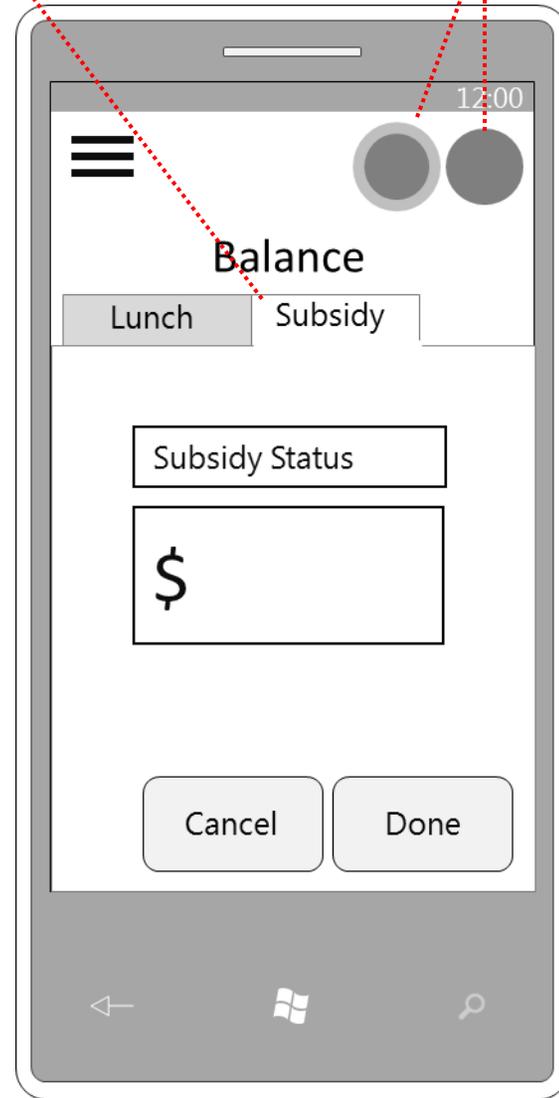
Balance



User can choose to auto refill balance by clicking on checkbox, which enables options beneath it.

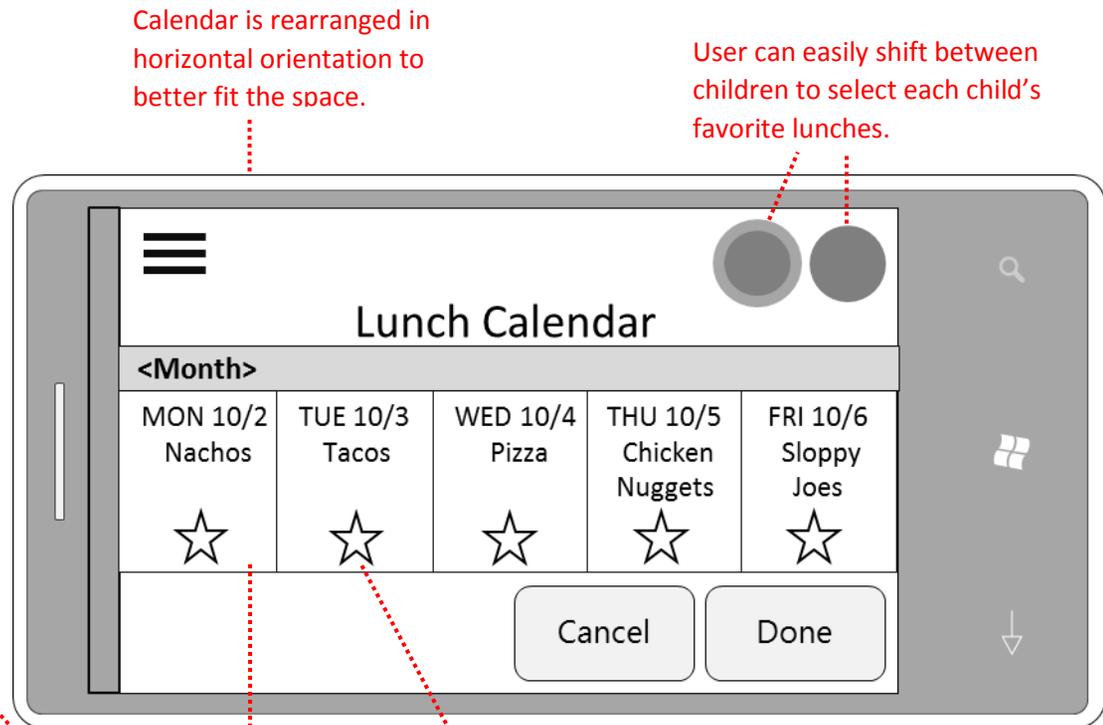
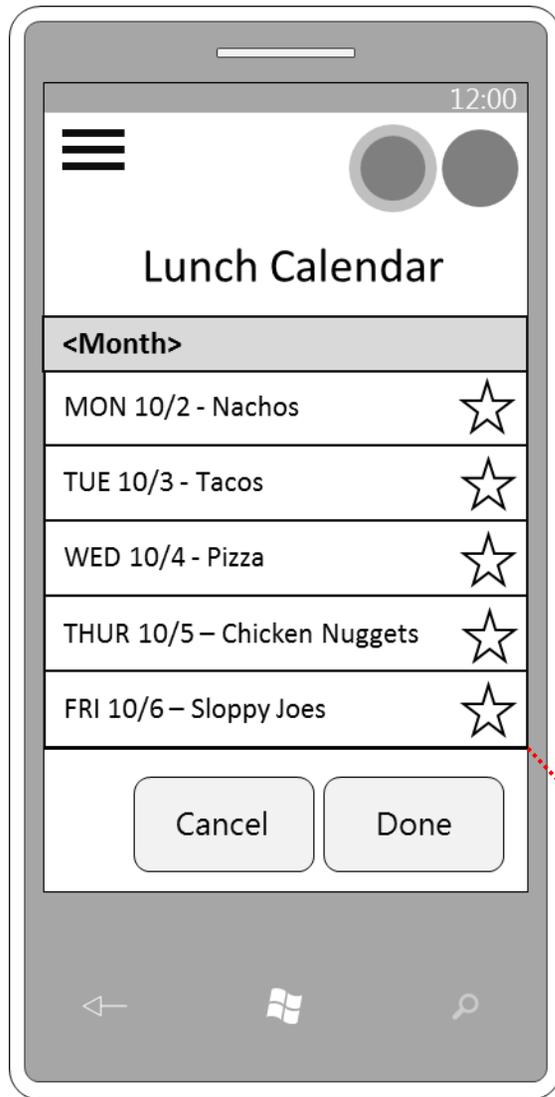
User can easily switch between the lunch and subsidy balances.

Clicking the up and down arrows adds or subtracts money from the balance.



User can easily switch between children by clicking the child's picture; picture is highlighted if selected.

Lunch Calendar



Calendar is rearranged in horizontal orientation to better fit the space.

User can easily shift between children to select each child's favorite lunches.

User uses thumb to scroll down in vertical orientation to view future scheduled lunches; user scrolls to the right in horizontal orientation.

User presses the star icon to mark a lunch as their child's favorite and icon turns a different color; user can choose settings for favorites on the Settings page, including alerts.

Payment Method

Users have the option to make a payment method their primary since users may add more than 1 payment method.

Clicking this takes user to Add Payment Method page.

Clicking this button adds the new payment method.

All children use the same primary payment method; user does not need to create a payment method for each child.

Child Profiles

Clicking a child in the list will take user to that child's profile page.

12:00

☰ Create Child Profile

Child's First Name

Child's Last Name

Child's DOB (MMDDYY)

Add Picture

Cancel Done

12:00

☰ My Child Profiles

Child Profile 1

+ Create Child Profile

Cancel Done

Child's profile page includes picture of the child, their current balance, and their favorite lunches.

12:00

☰ Child First & Last Name

DOB (MMDDYY)

Balance \$10.00

Favorite Lunches

Nachos	MON 10/2
Tacos	MON 10/9
	MON 10/16
	MON 10/23
	MON 10/30

Cancel Done

Clicking this button allows a user to add the child's picture; will be shown on child's profile page and at top, right-hand corner of Balance and Lunch Calendar pages.

Clicking the Done button saves the new child profile.

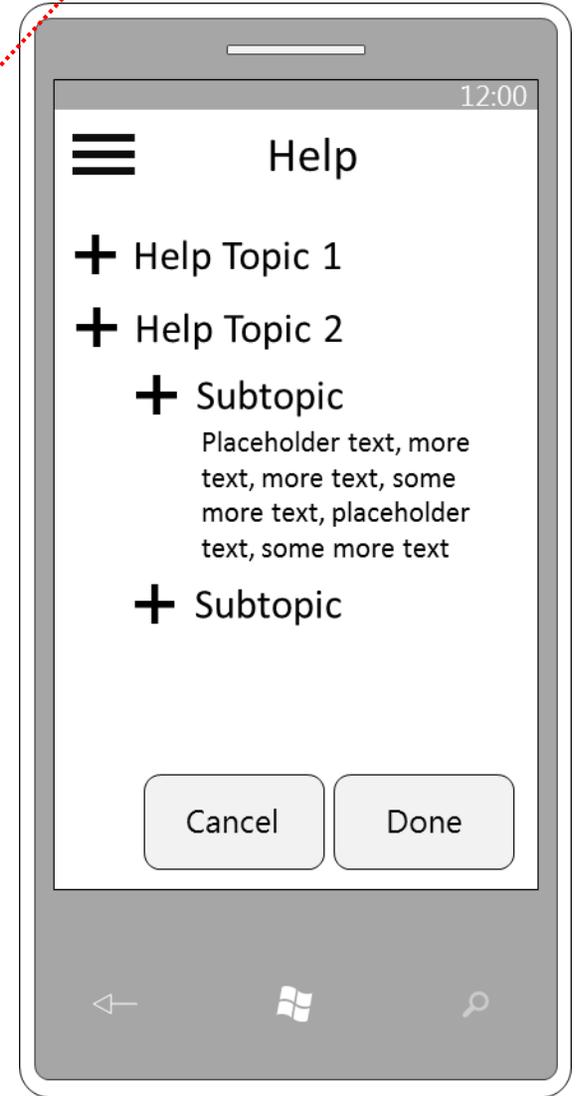
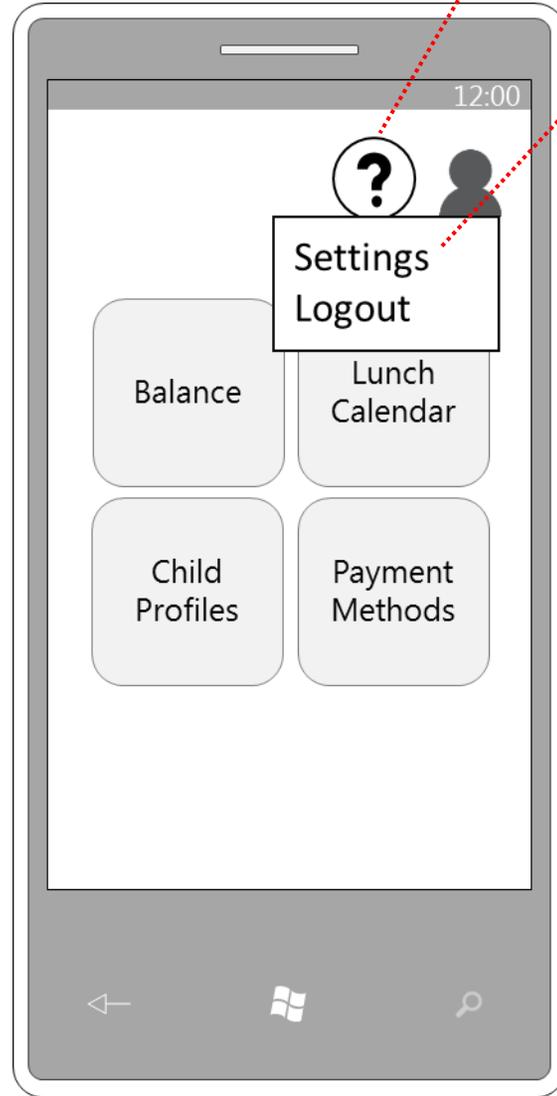
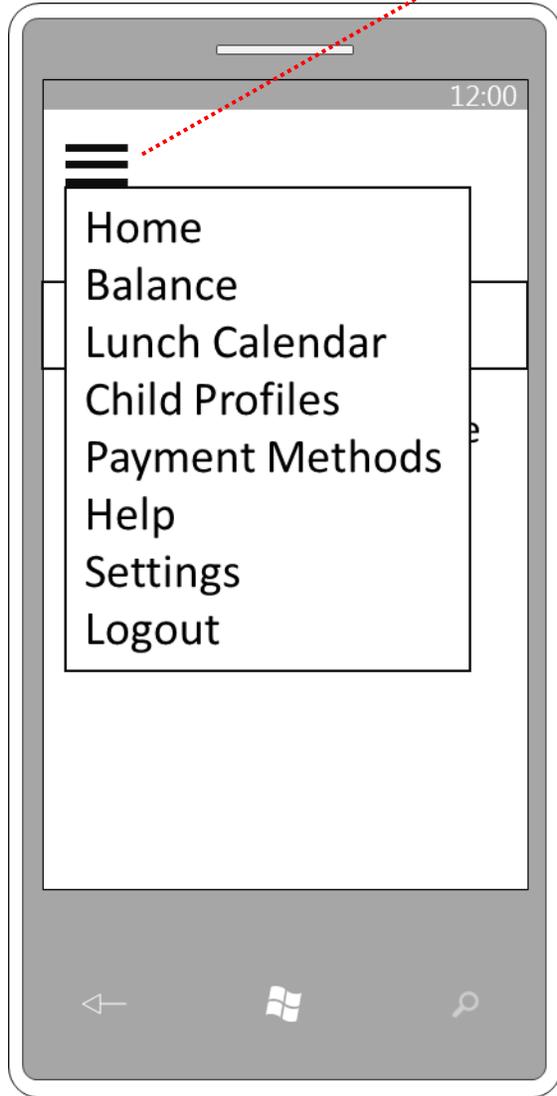
User can click the Edit icons to edit individual sections; the app will take the user to the corresponding pages.

Navigation & Other Options

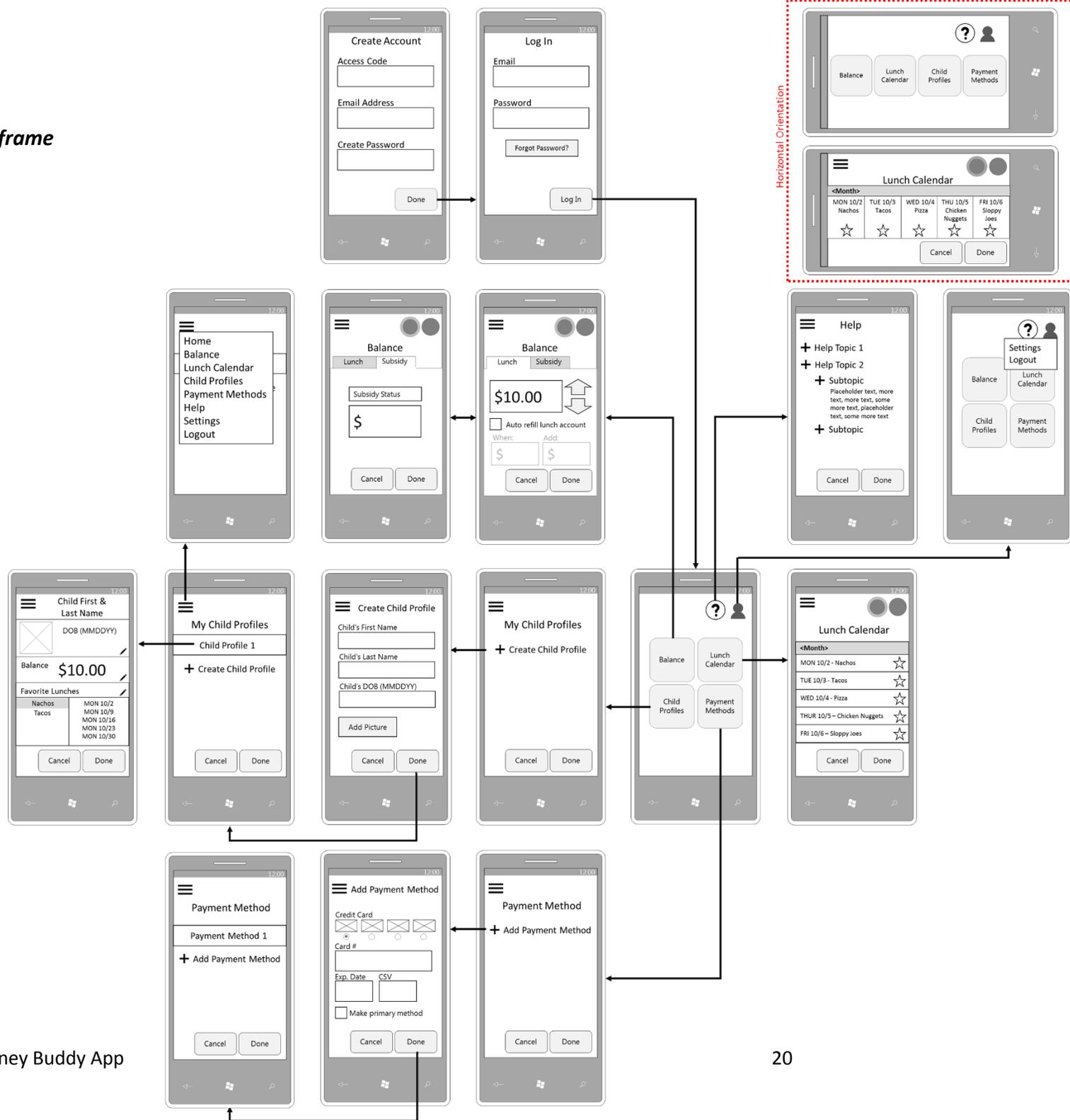
User can navigate app by using the hamburger menu, except if user is on home page; this menu allows user to access any part of the app at any given time.

Opens Help page upon click.

User can change email address/password, close account, or change settings for favorites, which includes alerts for upcoming favorite lunches.

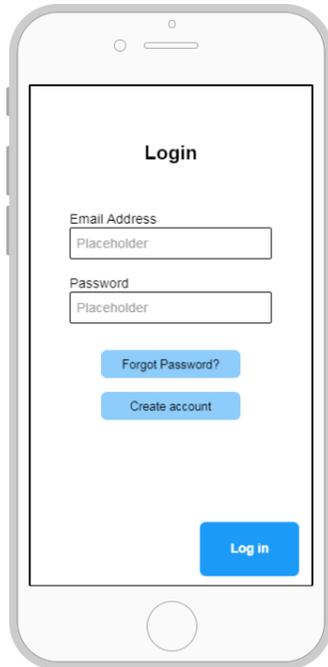


Full Wireframe



IV – Prototype

Login



A mobile phone screen displaying a login form. The title "Login" is centered at the top. Below it are two input fields: "Email Address" with a "Placeholder" and "Password" with a "Placeholder". There are three blue buttons: "Forgot Password?" and "Create account" are stacked vertically below the password field, and "Log in" is at the bottom right.

Forgot Password



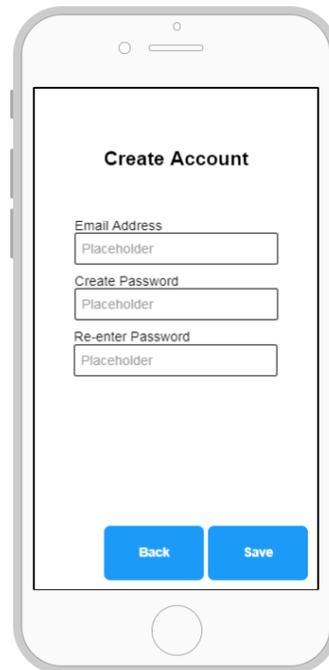
A mobile phone screen displaying a "Forgot Password" form. The title "Forgot Password" is centered at the top. Below it is a single input field for "Email Address" with a "Placeholder". At the bottom, there are two blue buttons: "Back" on the left and "Send me an email" on the right.

Create Account – Part 1



A mobile phone screen displaying the first part of a "Create Account" form. The title "Create Account" is centered at the top. Below it is a single input field for "Enter Access Code" with a "Placeholder". At the bottom, there are two blue buttons: "Back" on the left and "Next" on the right.

Create Account – Part 2

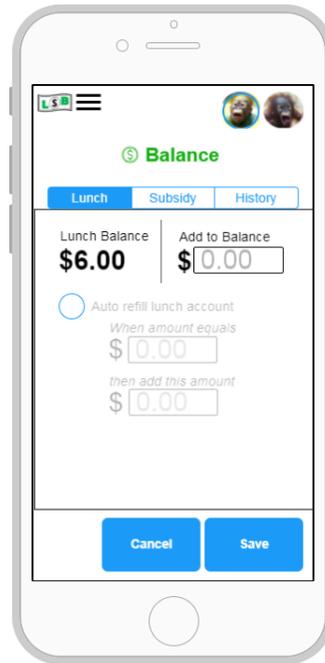


A mobile phone screen displaying the second part of a "Create Account" form. The title "Create Account" is centered at the top. Below it are three input fields: "Email Address" with a "Placeholder", "Create Password" with a "Placeholder", and "Re-enter Password" with a "Placeholder". At the bottom, there are two blue buttons: "Back" on the left and "Save" on the right.

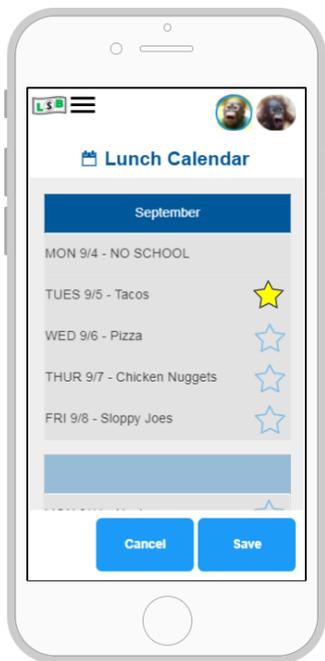
Home Page - Vertical



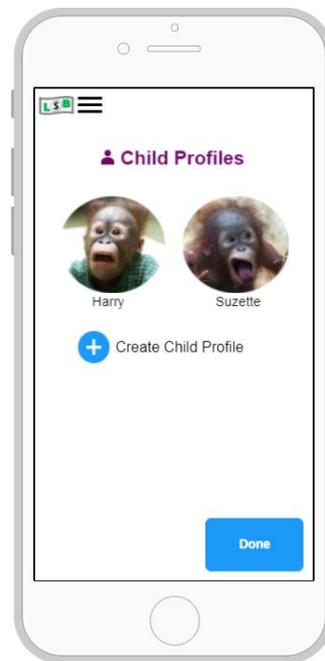
Balance



Lunch Calendar - Vertical



Child Profiles



Create Child Profile

Child's First Name
Placeholder

Child's Last Name
Placeholder

Child's DOB (MM/DD/YYYY)
Placeholder

Add Photo

Cancel Save

Individual Child Profile

Harry

Full Name: Harry Smith
Date of Birth: 12/25/2007
Age: 9

Balance
Subsidy: \$5.00 Auto Refill: On
Lunch: \$6.00 Notifications: On
\$11.00
View History

Upcoming Favorite Lunches

- Tacos
- Chicken Nuggets
- Sloppy Joes

Done

Edit Child Info

Child's First Name
Harry

Child's Last Name
Smith

Child's DOB (MM/DD/YYYY)
12/25/2007

Change Photo

Cancel Save

Payment Methods

Payment Methods

Master Card x9988

+ Add Payment Method

Done

Add Payment Method

Add Payment Method

Credit Card

VISA MasterCard American Express DISCOVER

Name on card:
Placeholder

Card Number:
Placeholder

Expiration Date Security Code
Placeholder Placeholder

Make primary payment method

Cancel Save

Edit Payment Method

Edit Payment Method

Credit Card

VISA MasterCard American Express DISCOVER

Name on card:
John Doe Smith

Card Number:
Placeholder

Expiration Date Security Code
12/17 345

Make primary payment method

Cancel Save

Help

Help

- Balance
- Lunch Calendar
- Child Profiles
- Payment Methods
- My Account

Done

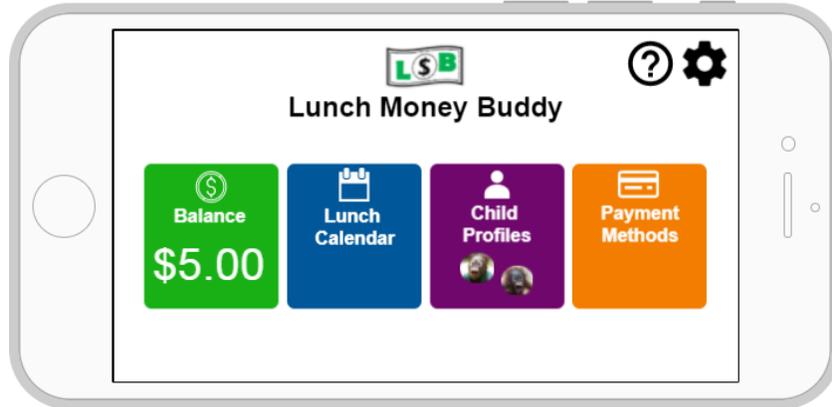
My Account

My Account

- Login Settings
- Favorites Settings
- Log Out
- Close Account

Cancel Save

Home Page - Horizontal



Lunch Calendar - Horizontal

