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H4 Individual Mini Design | Prototyping  
CS/PSYCH 6750  
Human Computer Interaction

## Prototyping Tool

For homework 4, I wanted to create a high fidelity prototype for the mobile app. I decided to create my template in Photoshop and Illustrator, and create a mobile site that simulates the interaction of an actual mobile application. I also recorded a video showing how the user would interact with the mobile site. Since I am already have high proficiency Photoshop and Illustrator, but only moderate with html and CSS, the only challenge for me was to implement the interaction for the mobile site. I spent a lot of time creating the interfaces for my mobile site and polishing the details so that the mobile site highly resembles an actual mobile app. From the types of button, tabs, and fonts, to the transitional animation, I wanted the interactor to feel like as if they are interacting with an actual mobile app as supposed to a website.

### **URL to video demo:**

<https://www.youtube.com/watch?v=bBo3sy6ZZp0&feature=youtu.be>

### **URL to mobile site:**

<http://classes.lmc.gatech.edu/lmc6313f14/studentProjects/bli336/Homework%204%20Mockup/>

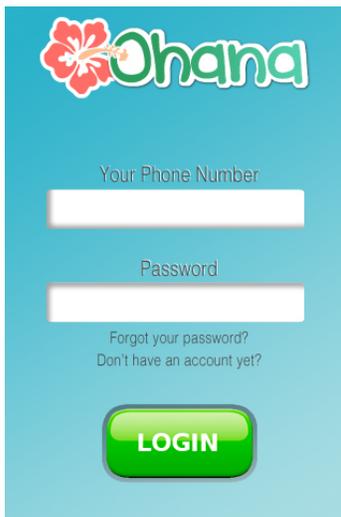
## Prototyping Process

In the precious assignment, the functionalities of the app mattered more than the implementation. In the prototyping process, however, I ran into a lot of small problems when I prototyped the actual implementation and interactions of the app.

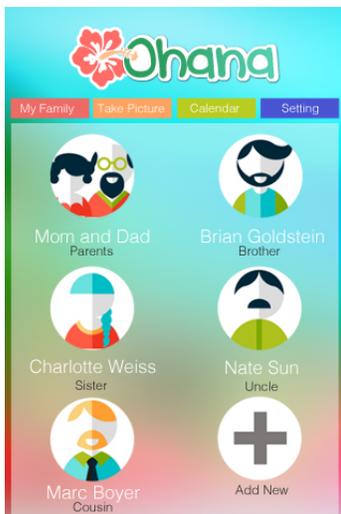
First of all, the pages have to look consistent. To ensure the uniformity, I need to set a color theme, and apply logo-icon principle to each page. To reinforce consistency, I named my app “Ohana”, which means “family” in Hawaiian language, but in a much wider sense, to include one’s closer relatives such as cousins, in-laws, etc. I chose a Hawaiian-theme color scheme for the app to highlight the sense of joy and family-oriented atmosphere. The logo will appear on the home screen as a full-size logo, and will be reduced to icon-size in subsequent pages.

In addition, the position of subtitle and buttons when the user clicks on them have to be coherent. The ways different features manifest themselves have to be logical, intuitive, and familiar enough to existing apps the users already know by heart. Because this app is designed for family usage, which means the design have to impose a small learning curve on users of all ages and technology knowledge levels.

## Home Screen >> Log In

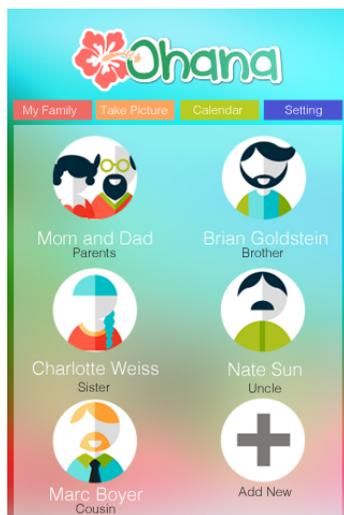


The app requires simple log in using the user's phone number, ensuring the authenticity of the user's identity in comparison to other log-in mechanism such as Facebook and email log-ins. Phone number is also better and safer for mobile users. It also takes into consideration of individuals who are not on social media or use emails frequently. The system is designed under the assumption that phone numbers are a better identifier for individuals than other forms of identifiers, since the user base ranges from teenagers to the elderly.



Once the user is signed-up/logged-in to the application, he can then start exploring the different functionalities and interfaces.

## Home Screen >> Add New Family

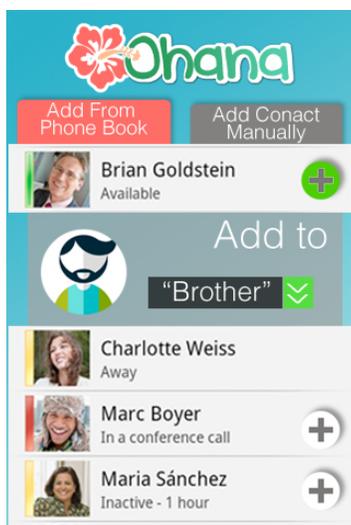


Similar to Google+, the prototype opens with the screen to the left, featuring the families you have already added into your larger family “circle”. For example, you have added your parents’ family, your uncle’s family, your sister’s family, your uncle’s family, and your cousin’s family in the illustrated user case scenario.

The user can choose to add a new “family” by clicking on the “Add New” button, which will first lead to the interface below for the user to create a new family, and then the contact page for the user to add individuals to a family directly from their phone contact.



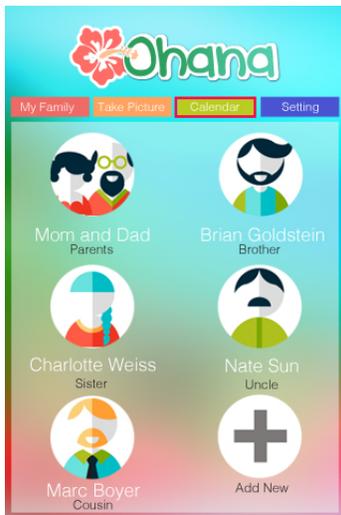
Once the user is in the “Add New Family” interface, he is greeted by the interface to the left, which is very similar to iPhone’s “Add New Contact” function. From here on, the user can input information such as the profile picture of that family. The user can also add a nickname for the family. After the family is created, he then can add individual members to the family. In addition, the user can add addresses, emails, phone numbers to the family. The profile picture, address, phone number, and email are not required from the user. However, if the user wants to create a new family in the app, he has to give that family a name or nickname.



When the user clicks on “add member(s)”, he is given the choice to add member(s) from his phone book, or add new contacts manually. The process is similar to functions in most mobile phone. The app will pull up all the contacts from the user’s mobile phone book, and give the user the option to click on an individual’s name to add him/her to a family. For example, in the illustrated example, the user clicks on “Brian Goldstein”, the “+” button next to his name will turn green. The user then can select which specific family he wishes to add Brian to, which is “Brother” in this case scenario. The user can also select multiple individuals if he wishes to add them to the same family.

# Home Screen >> Calendar >> Plan Event

1



On the home screen, the user can click on “Calendar” button, which will lead him to the interface to the right. The clicking interaction is indicated by the red border for the purpose of this demonstration.

2



Once the user lands in the “Calendar” interface, he can view/filter the events of that month by clicking on the colored dots. For example, in this user case scenario, the user clicks on “Family Reunion”, the green dot will be turn grey, and the green dot on Nov 27th will disappear accordingly. The user can reactivate “Family Reunion” events by tapping on the greyed-out green dot again.

3



If the user wants to add an new event to a particular date, he can click/tap on the blank area of that date. The clicking/tapping interaction is suggested by the white square in the illustration above. This action will lead him to the interface to the right.

4



A pop-up hover window displays more details of events going on on Nov 27th, which is Thanksgiving Holiday, indicated by an orange dot. The user also has planned a family reunion event on this day. In the pop-up window, the user can see family members who have already confirmed the invitation. The user can invite more families by clicking on the “Invite” button as shown in the illustration.

## Home Screen >> Family Interface >> Moments



These illustrations show the interaction flow when the user clicks on a family from the main interface. For example, the user clicks on "Brian Goldstein" (brother" in this case. He then lands at the interface shown in the second illustration. The user then clicks on "Moments" to see the photos and videos shared by Brian's family. The interaction animation is indicated by the second and third illustrations. The user then ends up on the interface shown in the fourth illustration, where he can browse through the photos/videos shared by his brother Brian and Brian's family.

The photos/videos are stored in the app's cloud. Ohana supports interactions similar to other conventional photo apps (Instagram, Facebook, etc). User can perform interactions including "like", "comment", and "save to phone".

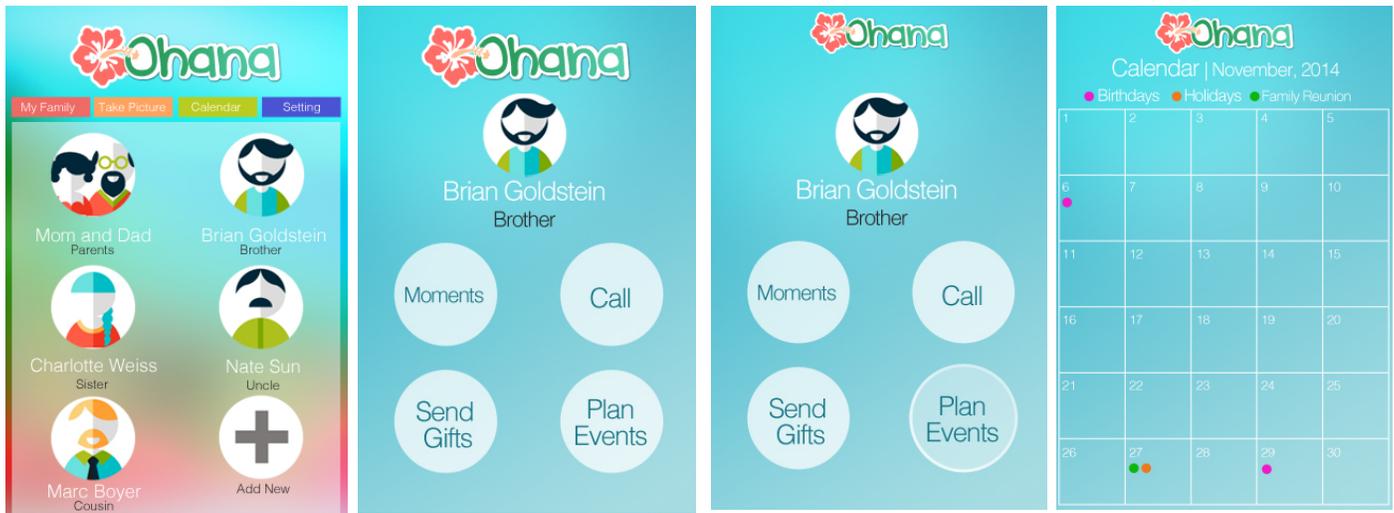
## Home Screen >> Family Interface >> Call



The user can also voice call or video call a family to chat with a family. However, at the current stage, it is not clear how the user will distinguish which member from that family to call if the user has stored several phone numbers under that family, as indicated in the “Home Screen >> Add New Family” illustration. We do not want the user to accidentally dial his sister-in-law when he just wants to talk to his brother Brian.

One feasible solution to this problem is to assign a “prime” contact for that family. In this case, Brian Goldstein is the prime contact for his entire family. The system is designed in such a way with the assumption that not every member of a family will dedicate the same amount of efforts to update the app. For instance, Brian’s wife might not feel as compelled to share her photos with her in-laws as much as Brian wants to share his life with his direct family. Therefore, assigning a prime contact for a family on behalf of other members will encourage more focused usage.

## Home Screen >> Family Interface >> Plan Events



The "Plan Events" function is similar to "Calendar" function on the home screen. The only difference between the two is that "Calendar" shows events shared by all families, whereas "Plan Events" only shows events shared by the family the user has clicked through from. In this case, the user access the "Plan Events" interface through his brother Brian Goldstein's interface. Although the user is taken to the same calendar interface, this time the calendar only displays Brian's events (i.e. his wife's birthday), and events his family will participate (i.e. thanksgiving family reunion). Other functionalities (filtering, clicking, event invitation) are the same as shown previously in the "Calendar" interface.

## Home Screen >> Family Interface >> Send Gifts



The “Send Gifts” has not been fully implemented yet. Ideally, the user can click on ‘Send Gifts’ button and will be taken to an interface that incorporate Amazon API with gift suggestions and wishlists. The user can incorporate his own gift wishlists to share with his families, and view his families’ gift wishlists for gift shopping.

# Usability Principles

## **Learnability**

New users should be able to begin effective interaction and achieve maximal performance. Since the mobile app is designed to have interactions resembling usual interactions of a smartphone, it should be relatively predictable, synthesizable, and consistent. For example, the app's voice/video call function uses Voice Call and Facetime functions that are already embedded in existing smartphones.

## **Customizability**

The app adopts customizability principle by allowing users to “customize” their own family circles. Each person's app interface will look different as they all have distinct family members, who share different photos, events, etc.

## **Task Conformance**

The system allows the users to perform tasks wish to perform in terms of family interaction, such as calling, gift sending, sharing family albums, etc. The system is also simple enough so that the users can easily understand how to do the tasks. Users can define new tasks by adding new photos, sending gifts, adding new gift wishlists, etc.

# Concerns, Future Improvement

Throughout the prototyping process, I ran into some micro-level problems that I did not anticipate in the design stage. For example, when the user add a new family, it is not sure if the app should allow the user to add the profile picture for that family, or let the family to add its own profile picture. In terms of adding addresses, the app needs to further distinguish the family's home address from work addresses. What if family members have different work addresses? Should the gift be sent to the home address or work address? In the next stage, there should be more detailed filtering and labeling in the app.

In terms of video call and voice call function, it is not quite clear which number the app will dial. As of now, the system assigns a “prime contact” for each family. Therefore, when the user calls a family, the app is dialing that prime contact's phone number.

If I had more experience with prototyping using After Effects or other animation, I could visualize the transition between each interface more interactively. Although I tried to illustrate as many intermediate steps between interfaces as possible, it would be more intuitive and straightforward if I could use animation to visualize that process. However, this constraint can be easily overcome in a real implementation when the design is made into an actual mobile app.