## Team

Austin King ’18
Aron Szanto ‘18
Joseph Kahn ‘18


## Major Design Decisions

*Why Parse?* With limited development time available, it made sense to use a third-party backend provider, and Parse is a great option because it deals well with location.

*Why no push notifications?* Apple requires that developers pay for this functionality, which we aren’t ready to do until we have an app we are willing to place on the app store. Instead, we have added a column in the parse database to each user saying which users they have agreed to exchange contacts with to track these requests. By querying the database for these values, we are able to check if an exchange should or should not take place.

In general, we are aware of the downsides of storing most data in the Parse database (lookup times could become unnecessarily long), but felt prepared to do so for now as we see this project as more of a proof-of-concept than ready-for-market application. (Though hopefully it will be by our return to school in the spring!)

At the moment we are currently adding to the app the ability to track contacts you have added (name, surname, bio, and when and where you exchanged your details), but decided to leave this out of our first iteration, as we didn’t quite have enough time to iron out the bugs. We would incorporate by creating a dictionary for each added contact (in the database) which includes the unique users’ IDs, the time of the transfer, and the latitude and longitude. These values can be converted to actual locations and formatted time strings to be displayed in a history view. Later on we will be encoding these values in JSON and writing them to local memory, but this is still some time away. The code to convert latitude and longitude to place names, and to create time stamps has been written, but is not included in this product.

## General Functionality

- The code to interact with the address book is AddressBookController, and the code to process contact exchanges with the database is in AddContactHelper.
- The color gradient is found in Colors.swift.
- AppDelegate deals with necessary permissions and controls the constant updating of users’ locations.

## Understanding the code from start to finish

The first time you use the app, it will check whether or not it has been granted access to your address book and location via the code in AppDelegate, and prompt the user to adjust permissions if necessary. AppDelegate also begins the location manager and starts updating the user’s location in the database.

When the user opens the app, the LaunchViewController checks to see if any data is already stored in an NSUserDefaults object. If not, it presents the PromptViewController. At the PromptViewController the user is asked to enter the information that will be stored into NSUserDefaults. If the user attempts to select “submit” without filling all the text fields with appropriate data (all fields must be completed, and meet certain requirement) he or she will be prompted to make the necessary corrections. When the data is accepted, a new row is added to the Parse database, and the user is taken back to the main page.

Upon selecting the submit button the program then loads the LaunchViewController once again. The LaunchViewController holds the numo logo and two buttons to navigate the program.

### *Find New Contacts*

When the user selects the "Find New Contacts" button on the LaunchView they are redirected to the FindNewContactsView where a table view is used to display nearby users. Then function loadData populates the list of users based on their "findable" attribute, i.e., whether they too are looking for contacts, and locational proximity. If the current user has already added a contact, that previously added contact will not appear on the list. Obviously the user won't be on the list either.

If there are two users, A and B: If A clicks on user B before B clicks on A, A will be added to B's contact list when B adds A. In cases where A clicks on x-number-of-users before they click on A, when the view refreshes for A after the others have accepted A, A's contact list will be updated with the users that accepted A.

### *Edit User Information*

After registering, user information is stored in an NSUserDefaults objects. When looking at this screen, the details entered will be visible in the forms. This text does not function as simply a placeholder because we assume that users will want to edit their data, rather than re-write it from scratch.