Startup

When the application is initially launched, a splash screen (Figure 1) will temporarily appear. Its duration is dependent on the application's load time. If there is no active user session (i.e., no user is currently logged into Wau on the current device), the user will be sent to the 'Login' screen (Figure 2). If there is already an active user session, the user will be sent to the 'Main' screen.
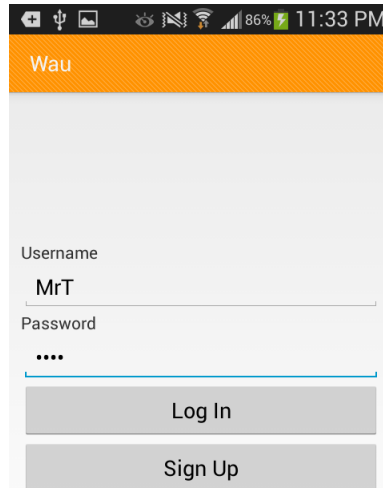

Figure 1: Wau's splash screen at startup

Login

On this screen, the user will enter in their login credentials. Selecting the <<back>> key at this point will exit the application. Selecting the 'Log In' button after entering in valid credentials will send the user to the 'Main' screen. An error message will pop up on the screen if the user is unable to log in for one of the following reasons:

- Invalid credentials (Figure 3)

- Failed internet connection

- Server error

If the user wishes to acquire login credentials, they can create a new account by selecting the 'Sign Up' button and completing the form on the 'Sign Up' screen.
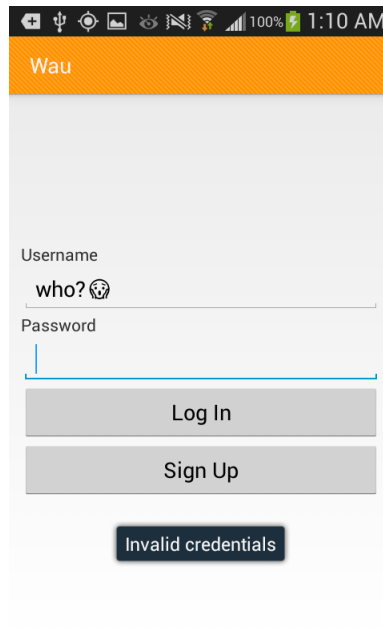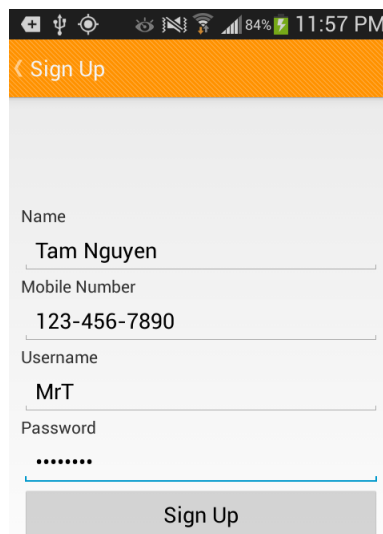
Figure 2: 'Login' screen

Figure 3: Error message for 'Invalid credentials'

Sign Up

On this screen, the user will be able to create a new account and acquire login credentials. Selecting the <<back>> key at this point will return the user to the 'Login' screen. Selecting the 'Sign Up' button will validate the fields and send the request to our backend service (Parse) for processing. An error message will pop up on the screen if the action fails:

- One or more fields are empty (Figure 5)

- Username already taken

- Failed internet connection

- Server error

Once the user successfully signs up, their credentials and information will be saved to the Parse database. The user will then be automatically redirected to the 'Main' screen.

Figure 4: 'Sign Up' screen with all fields filled out
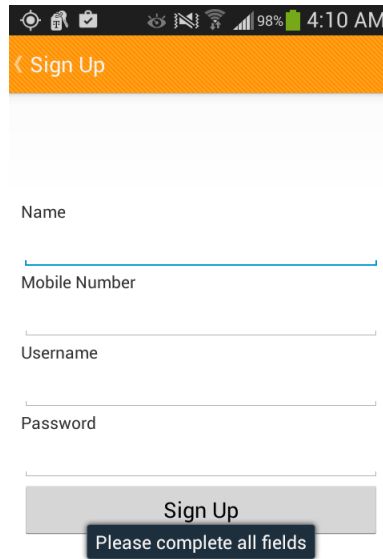
Main

Once on this screen, the user can access and use the main features of the application. Selecting the <<back>> key at this point will exit the application. This screen contains three tabs: Map, Friends, Nearby Photos.

Map:

The middle tab, signified by the map icon. This tab is currently the default active tab when the user is redirected to the 'Main' screen. In this tab, the user is presented with a map, provided by Google, as well as the user's current location (Figure 6). The accuracy of this location depends on the accuracy of the device's location service. Every 30 seconds, the user's coordinates are updated in the Parse database (if the user exits the application and leaves it running in the background, then this time increases to 3 minutes).
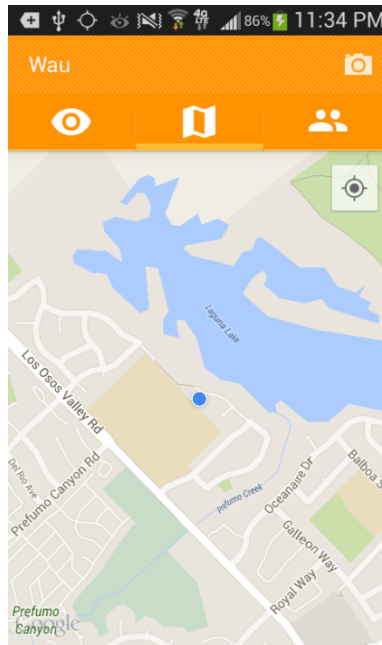
Figure 6: Map view containing user's location

This map can also contain markers (Figure 7), representing the coordinates of friends who have agreed to share their location. The location of these markers are updated at the same rate described earlier. Selecting a marker will display the name of the friend at that current location, and will also bring up options to use Google Navigation and Google Maps. These markers currently have a default time to live (TTL) of 5 minutes, after which the marker will be removed from the map.

Opening the 'Map' tab will zoom the map view such that it encompass the user's location, along with other markers, if present.
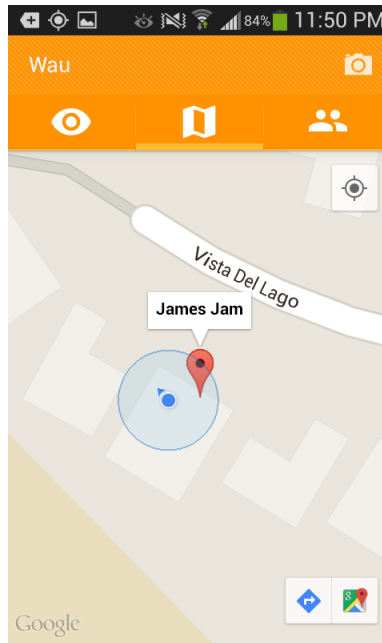
Figure 7: Map view with a friend marker selected

Friends:

The rightmost tab, signified by the people icon. This tab displays a list of all current friends. For a new user, this list will initially be empty (Figure 8). Friends can be added or removed in the 'Edit Friends' screen via the 'Menu'. Selecting a friend's name can do one of several things:

- Send a location request to the friend (e.g. 'Billy The Kid' in Figure 9).

    ○ The friend will be notified via a message under the sender's name in the 'Friends' tab.

- Accept a location request from the friend (e.g. 'Jody' in Figure 9).

    ○ Both users will begin sharing each other's locations for the duration of the default TTL (e.g. 'James Jam' in Figure 9).

    ○ This action is instantly reflected in the 'Map' tab.

- Cancel a pending location request or an existing agreement.

    ○ Both users will stop pulling the coordinates of one another if they are already sharing locations.

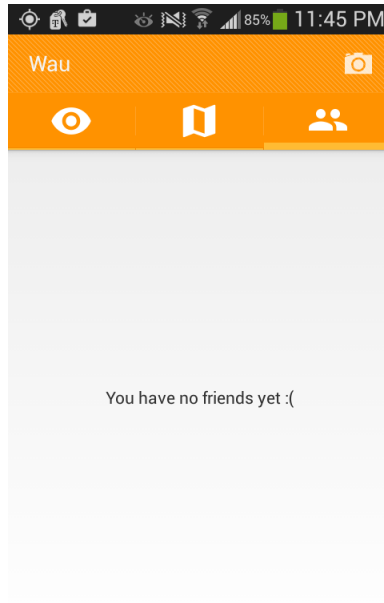   ○ This action is instantly reflected in the 'Map' tab.
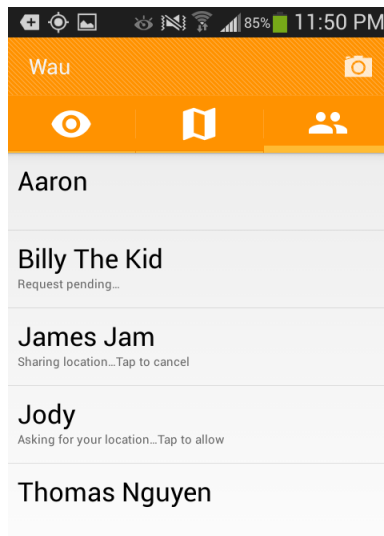
Figure 8: Empty friend list

Figure 9: Friend list with active location requests

Nearby Photos:

The leftmost tab, signified by the eye icon. This tab displays a grid view of all public photos (Figure 10) whose coordinates, at the time of upload, are within 0.005 miles (26.4 feet) to the user's current location. Photos can be uploaded via Wau's 'Camera' feature. Selecting a thumbnail will bring up a full screen view of the photo (Figure 11). Photos are sorted by descending upload date.
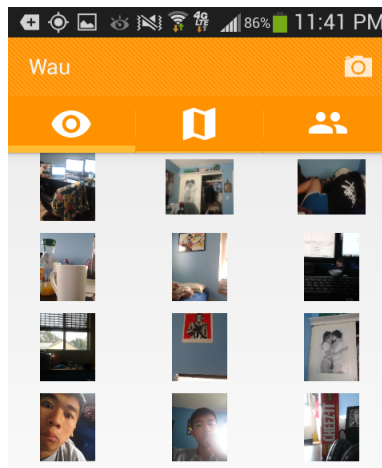

Figure 10: Grid view of nearby photos

Figure 11: Full screen view of a photo

Camera

This feature can be accessed via the camera icon located at the top, right-hand corner of the 'Main' screen. Upon selecting the icon, the user is prompted to select either 'Picture' or 'Video' (Figure 12). Selecting either will bring up the device's default camera application and set it to the appropriate mode (Figure 13). After taking the photo/video, the user will be prompted to either discard or save it (Figure 14). Discarding will bring the user back to camera application to take another photo/video. Saving will upload the media file to the Parse database, and store the compressed file along with the user's current coordinates, upload date, and file type ('photo' or 'video').
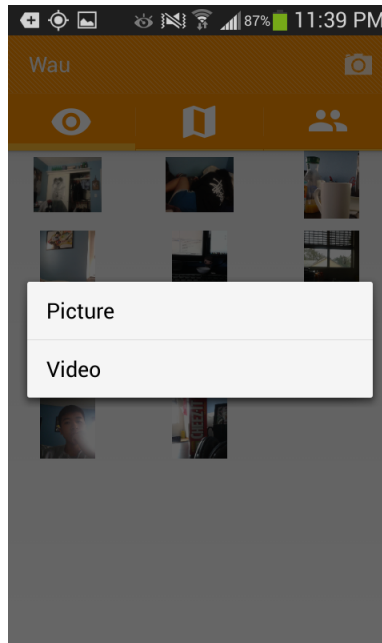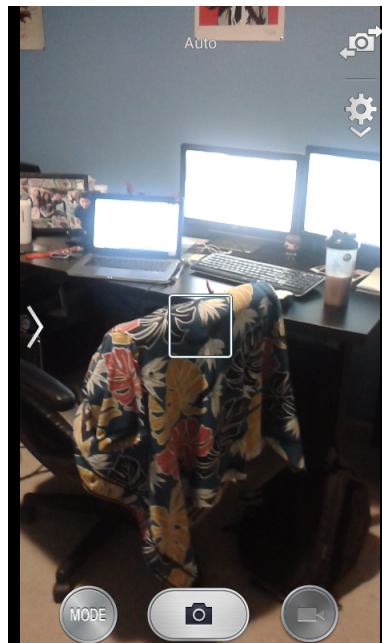
Figure 12: Options after selecting the camera icon
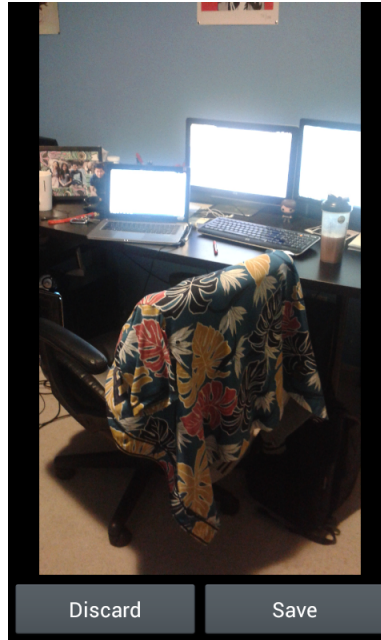

Figure 13: Device's default camera application

Menu

Menu items can be accessed at any time from the 'Main' screen by selecting the <<menu>> key/ button on the device or in the application (depending on device's version of Android). A menu will appear (Figure 15), allowing the user to perform one of two actions: Edit Friends, Logout.
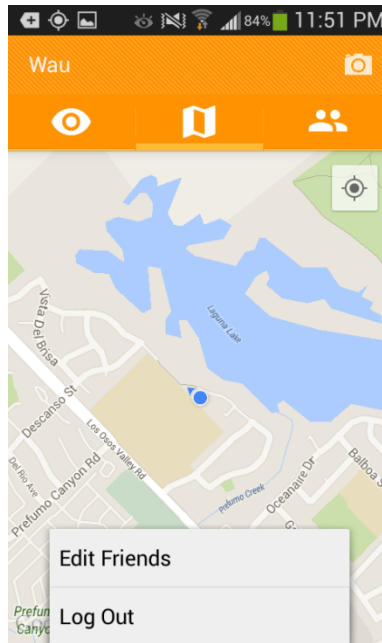
Figure 15: Menu items

Edit Friends:

Selecting this action will bring up an 'Edit Friends' screen (Figure 16), where the user can choose to add/remove friends. In its current implementation, this screen displays a list of names of all registered Wau users. Selecting a user's name can do one of two things:

- Add to 'Friends' (e.g. 'Aaron' in Figure 16).

  - This is signified by a green checkmark next to the user's name.

  - The added friend will be listed under the 'Friends' tab.

- Remove from 'Friends' (e.g. 'Al Tur' in Figure 16).

  - This is signified by an empty checkmark next to the user's name.

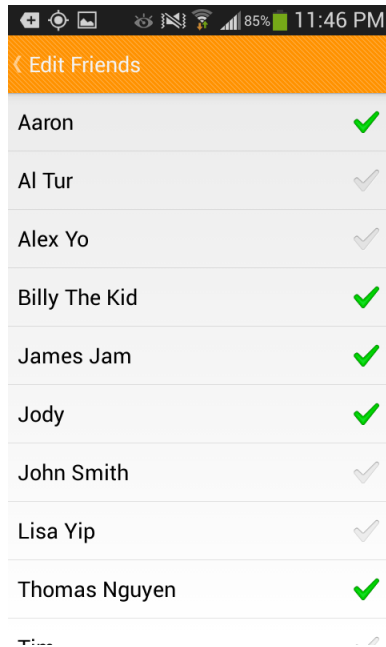 - The user will be removed from the 'Friends' tab list.

Figure 16: 'Edit Friends' screen

Logout:

Selecting this action will end the user's active session and redirect the user to the 'Login' screen.