

6.813 Homework 2: Heuristic Evaluation of **The Travel Book's** computer prototype  
by Chrisantha Perera  
prototype created by Sarah Cheng, Iliia Lebedev, and Jennifer Wong  
evaluated using Jakob Nielsen's 10 Usability Heuristics, ten general principles for UI design  
Total heuristic comments: 16

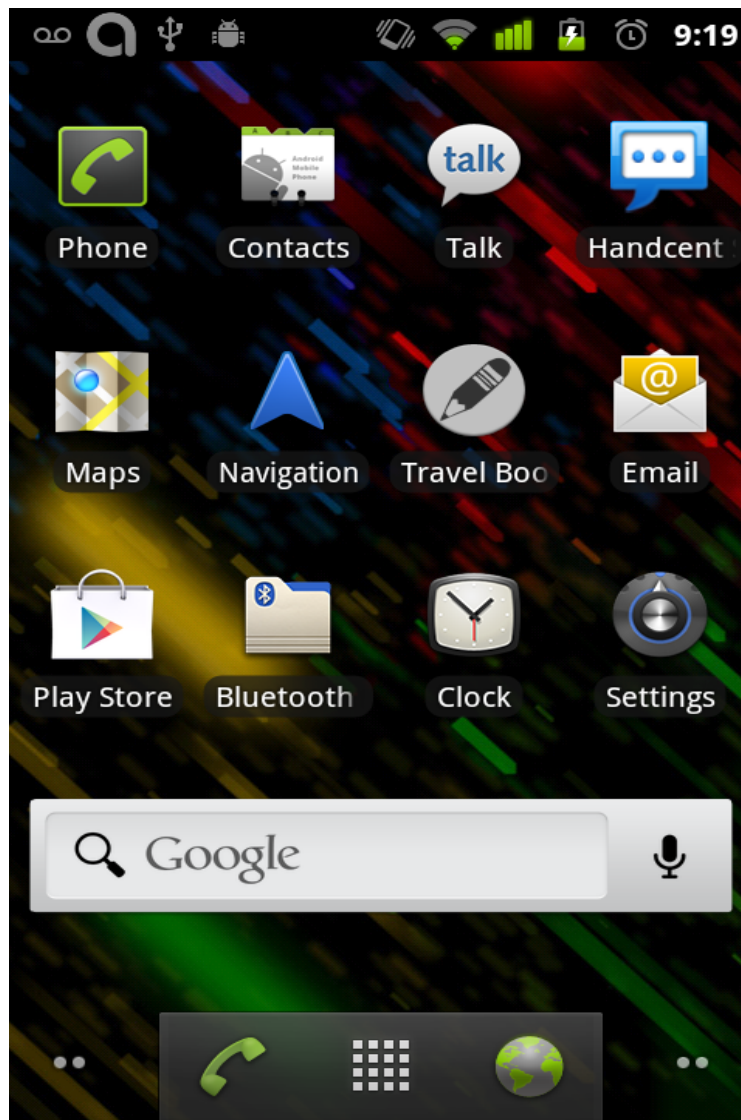
### **Usability Problems:**

**Problem 1:** The icon on my home screen for the app does not contain the app's full name. Many android users will want to place the application on their home screen as a shortcut.

**Heuristic violated:** Consistency and Standards - the name of the app should always appear the same.

**Severity:** Cosmetic. The app is identifiable (its name is unique, and the icon it uses is also different from the other apps I have). The name reads "Travel Boo" from the home screen. The problem also only comes up if you place the app on the home screen.

**Suggested Solution:** Perhaps you could use "TravelBook" as the name on the home screen.

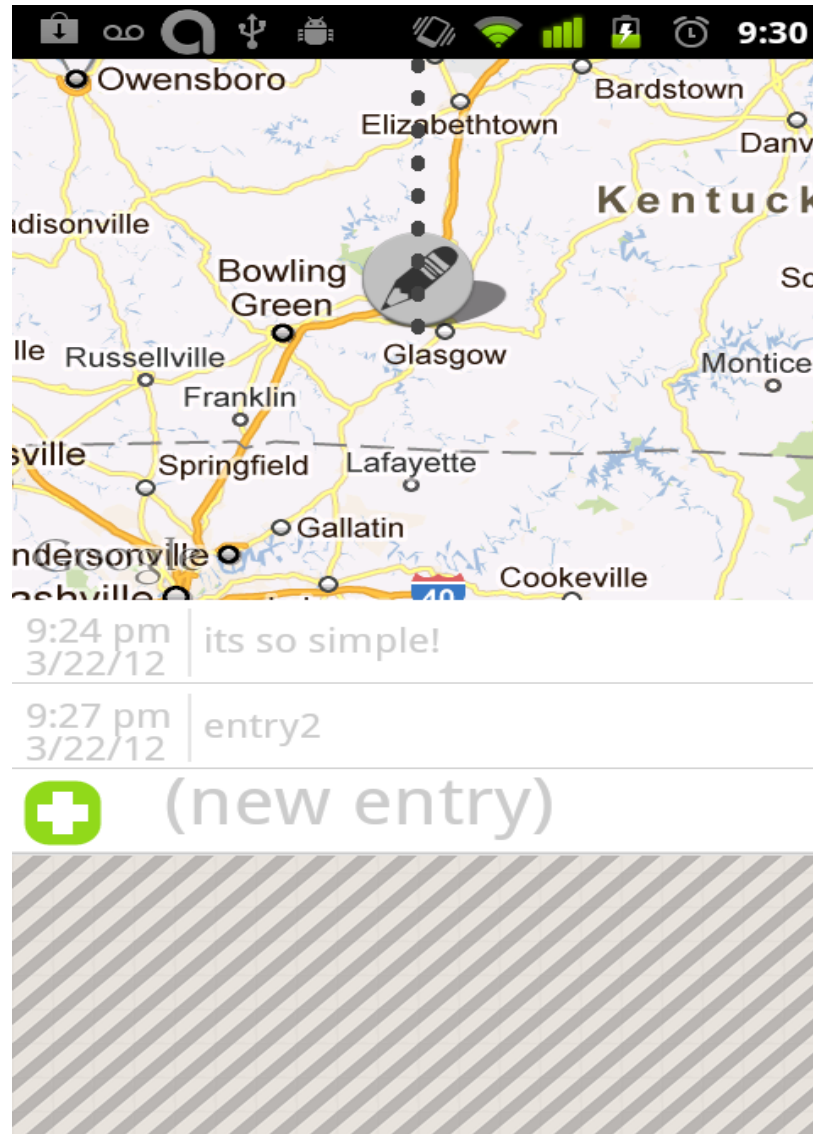


**Problem 2:** Map uses the same look as Google maps, but does not allow scrolling or zooming.  
Heuristics violated: Consistency and standards, match the real world.

**Severity:** Minor. The problem is persistent, and presents trouble when using the home screen. Thus, it shows up quite frequently. It only impacts the information displayed by the map: it is sometimes impossible to see on the map all of the locations captioned in the list. The problem was most noticeable because of the dotted line going off the screen. It does not impact the app's core function, sharing.

**Suggested Solution:** create or enable some simple zoom controls for the map. Or, make it so the map covers some limited number of recent events (so that the zoom level is manageable across long-distance trips) and make sure that the zoom level of the map shows all the events in the view screen.

**Screenshot of problem:**



**Problem 3:** Posting too many updates pushes the "+ (new entry)" button out of view, and it is difficult to know how many entries are below or above the fold.

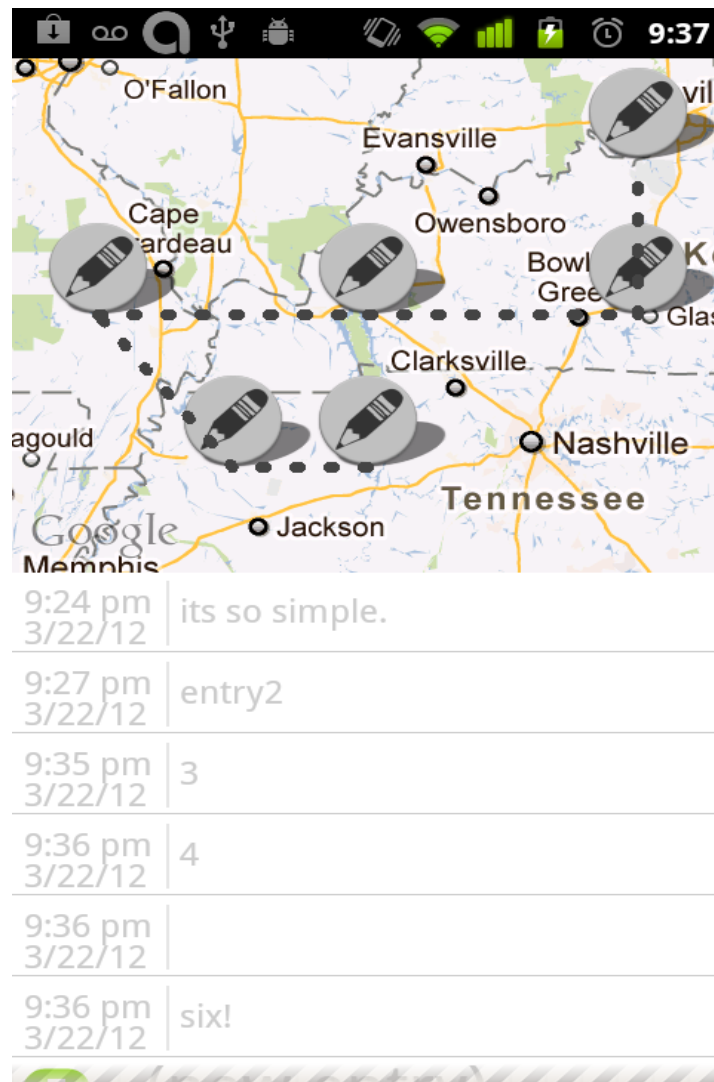
Heuristics violated: Visibility of system status, and efficiency.

**Severity:** Minor. When entries aren't visible and a user knows the entries exist, then the instinctive behavior for Android users will be to use finger scrolling to check for the missing entries. This scrolling works, and the entries become visible. The current implementation impacts efficiency because creating a new entry now requires a scroll and a button press.

**Suggested Solution:** Put in a small scroll bar to the right when the entries crowd out other entries.

Also, you should make the default view of the list such that the button for entering new entries is always visible, by either making the default position at the bottom of the list or reversing the display order so that the "new entry" button is at the top.

**Screenshot of problem:**



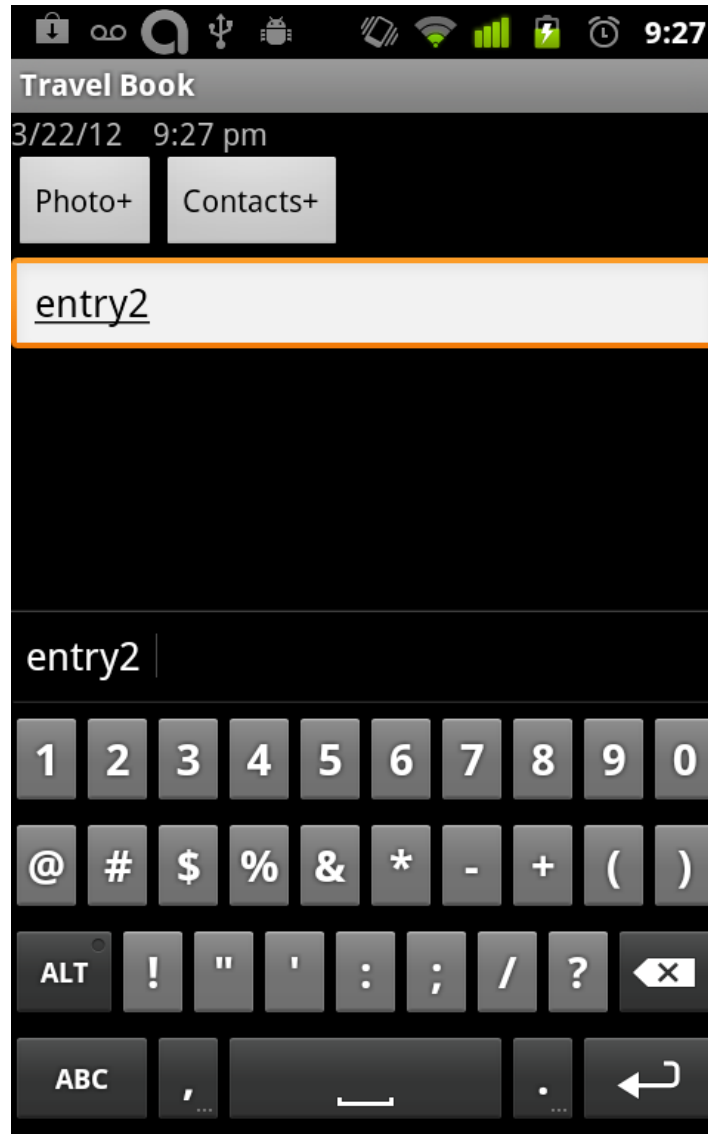
**Problem 4:** When entering text into the caption field for a post, there is no "Done" button or notable way to exit the on-screen keyboard. This results in a feel that the keyboard mode cannot be exited.

**Heuristic violated:** User control and freedom.

**Severity:** Minor. Though the user does not appear to control the display of the keyboard, all functions of the editing screen can still be accessed while the keyboard is displayed. In order to access the save function, I had to press the Android menu button (one of the standard buttons on every android system).

**Suggested Solution:** You could add a "Done" button, as is used in some other text-entry fields for Android applications. Handcent messaging comes to mind. Another addition to increase user control here would be a "Save" or "Publish" button on this screen.

**Screenshot:**



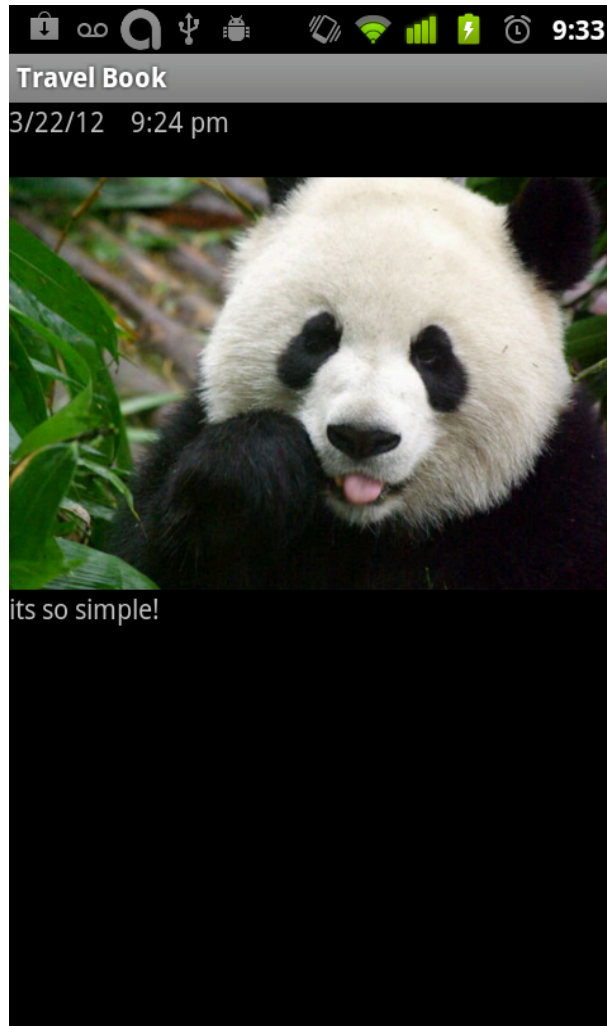
**Problem 5:** In several places for this application, there is available functionality that is not immediately evident to the user, and extra screen space in which some sort of indicator or button could be placed.

**Heuristic violated:** User control and freedom, visibility of system status

**Severity:** Minor. The application's functionality is accessible from some avenues that the user would be somewhat likely to attempt after being initially stymied by the lack of options to go forward with the tasks. These actions include holding down a selection (to access a menu about a list item on the homepage) or pressing the Android menu button when on a page that has invisible options.

**Suggested Solution:** Add buttons where there are a consistent set of available options, particularly in spaces with lots of remaining screen real-estate.

**Screenshot:**



**Problem 6:** Some of the application's functionality is not clear. Providing straightforward documentation about all your app's hidden functions - you could start by adding something to the wiki about your app and work from there? - might be helpful to users, especially if you choose to keep the View pages without Edit, Delete, or Share buttons visible.

**Heuristic Violated:** Help and Documentation

**Severity:** Minor. While it took me a little bit of effort, I was eventually able to figure out how to access all the application's functions.

**Suggested Solution:** Add a small introduction, to either the wiki or on the first time the app is used, to explain hidden functions and buttons.

**Problem 7:** The function of the delete button is not protected in any way (by a confirmation box of any kind). It is also directly next to the Share button, leading to increased possibility of unrecoverable errors. A deletion cannot be undone in this prototype.

**Heuristic Violated:** Safety - Error prevention.

**Severity:** Minor. While this error is difficult to recover from, the average user can press buttons with reasonable accuracy. The buttons are reasonably sized, so errors are less likely than if the buttons were difficult in size.

**Suggested Solution:** It would be good to include some sort of deletion confirmation before immediately removing a deleted post as soon as "Delete" is selected. Also, you could put space between "Delete" and "Share," but that might be difficult.

**Problem 8:** The units of time used by this application do not appear to be organized, whereas they should be separable into large chunks. Therefore, this application is not able to divide trips by events or create sections during a trip. It is much harder to mimic the real world in this example; the design is forced to a choice between simplicity and faithful replication of real-world photo timelines. At the same time, you may want to consider adding this ability, perhaps in some of the unused space in the "View" panel.

**Heuristic Violated:** Matching the real world - people tend to view time and trips in large chunks (possibly days or weeks) and the application does not provide a good method for separating these chunks.

**Severity:** Minor. This may represent a design choice between the greater of two usability issues: simplicity and matching the real world.

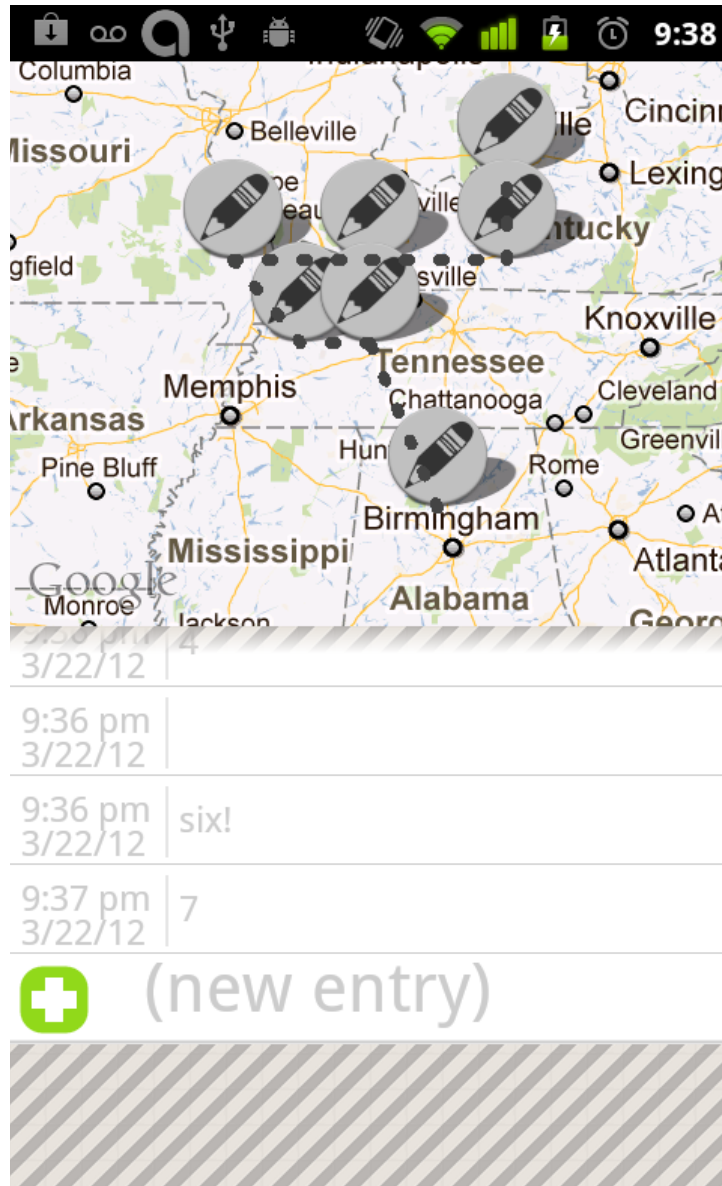
**Problem 9:** With a high density of locations to display on the map, the display becomes confusing. It is difficult to understand the relationship between the dotted lines and the passage of time. The path does not mimic the time-progression of the traveler's photographic journey effectively, because there isn't a way to tell what order the places were visited in from the home screen.

**Heuristic Violated:** Matching the real world.

**Severity:** Major. The map becomes unusable after about 6 events are being displayed. After three were displayed, I could not be sure of the ordering of the three relative to the list of captions.

**Suggested Solution:** I'm not sure where you can go on this one. You could perhaps add some direction to the connecting lines. You could also number the nodes in the list, and also the pinpoints on the map. Thus it would be less difficult to map pins to caption list items.

**Screenshot:**



**Problem 10:** It is a little unclear what "Edit" refers to in both instances in which the word is used. Since the main item being considered is a picture, it is possible that one could construe "Edit" as being the option to change the picture.

**Heuristic Violated:** Consistency and standards: clarity.

**Severity:** Cosmetic. This problem is unlikely to significantly affect usability, because the user will see the resulting text box immediately upon selecting "edit". The

**Suggested Solution:** You could change the option's title to "Edit Caption" in each instance, or otherwise clarify the wording to indicate the object being edited.

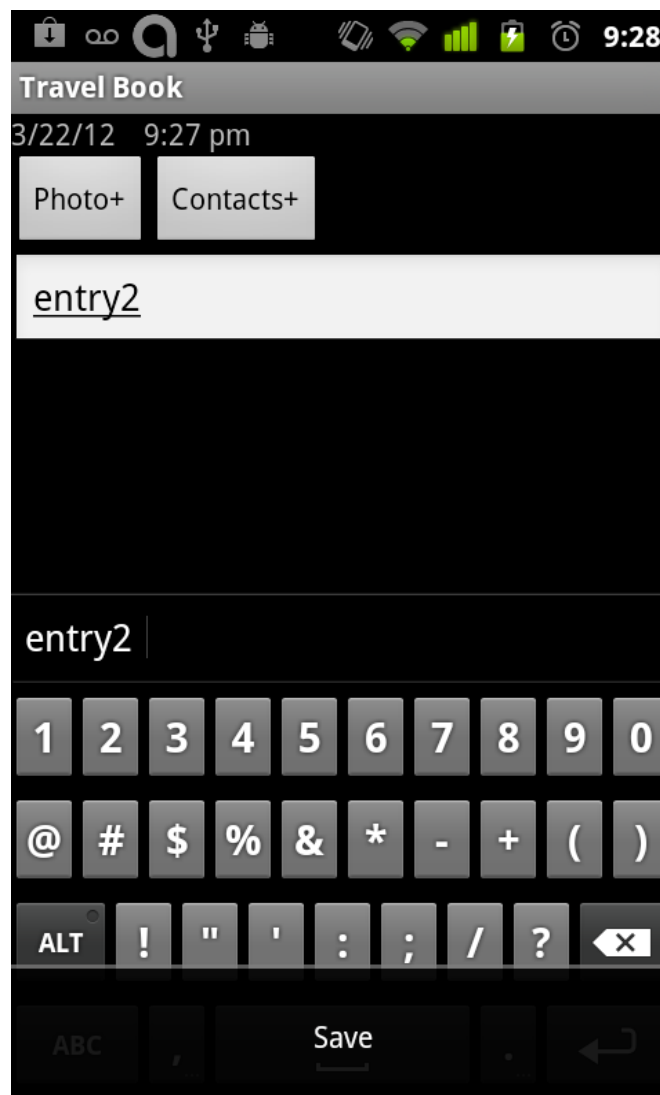
**Problem 11:** Pressing the menu key in "Edit" mode does not remove the onscreen keyboard, but brings up the "Save" option. This takes away from the flow of the program and makes the available "Save" option feel less final, since the keyboard can still be used to edit the text. It is also now possible that an error could be made where someone means to touch "Save" but ends up with an extra keypress instead. The expected behavior would be the keyboard disappearing when the menu comes up, as in other apps.

**Heuristic Violated:** Consistency and standards, safety

**Severity:** Cosmetic

**Suggested Solution:** remove the onscreen keyboard when the menu button is pressed. You can expect a user to be finished typing the caption by the time he or she presses this button.

**Screenshot:**





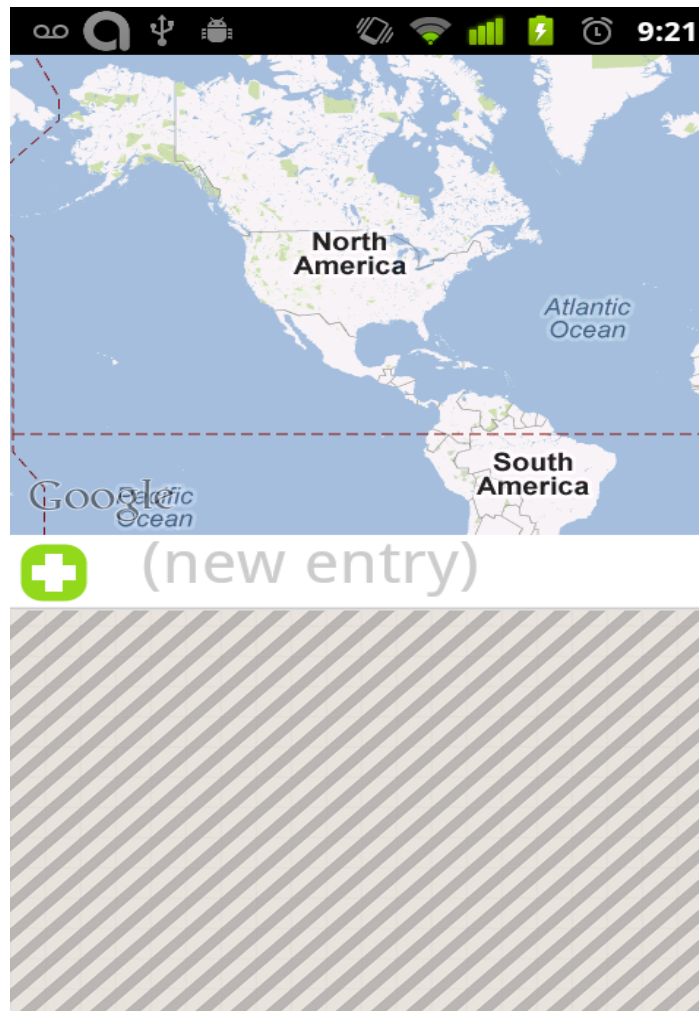
## Usability Highlights:

**Highlight 1:** Home screen, with + button, is very simple - containing only date information and caption for each entry. It is possible to envision interfaces with more information, such as time or location name, or possibly icons to denote options such as deletion, but these would muddy the idea of the interface: adding short records of events to a timeline. The "+" button by itself would be difficult to understand, but the "new entry" text in grey puts the user in mind of a journal and is very helpful in clarifying what exactly should be done with that plus sign: it adds a new entry in a travel journal.

**Heuristics employed:** Aesthetic and Minimalist Design

**Severity:** Good.

**Screenshot:**

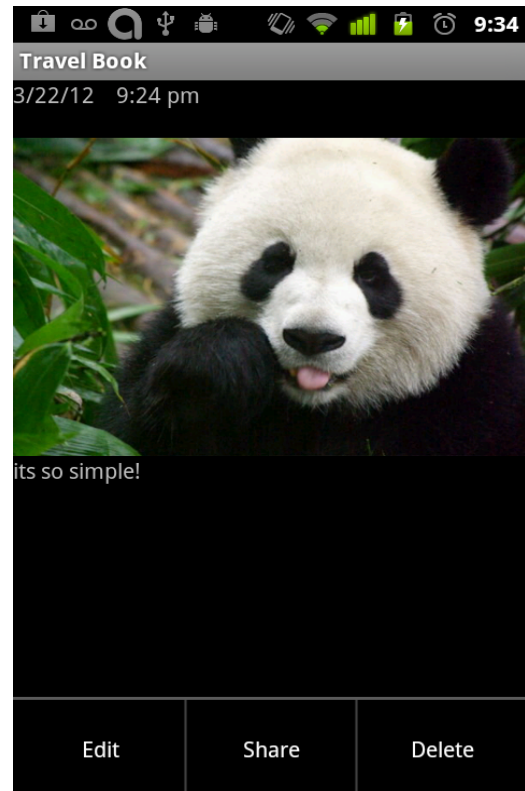
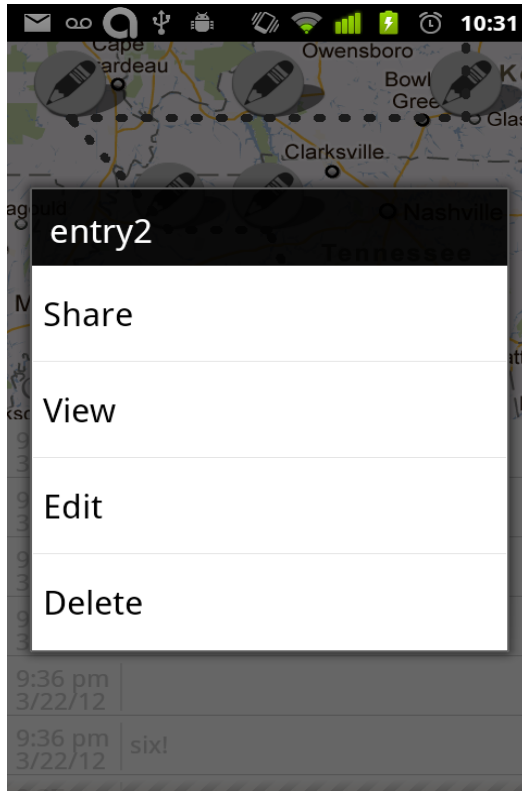


**Highlight 2:** In the app's current iteration, errors in caption text are easy to fix via two different methods. Editing captions is accomplished by holding down a finger press on the current caption in the list on the home screen to bring up a menu with an "Edit" option included, or selecting the list item and going to the menu from that item's page (using the Android menu button) and selecting the menu button for "Edit". Errors in captions are pretty easy to spot, since the captions show up on the main homepage as list items immediately.

**Heuristic employed:** Error prevention, diagnosis, and recovery.

**Severity:** Good.

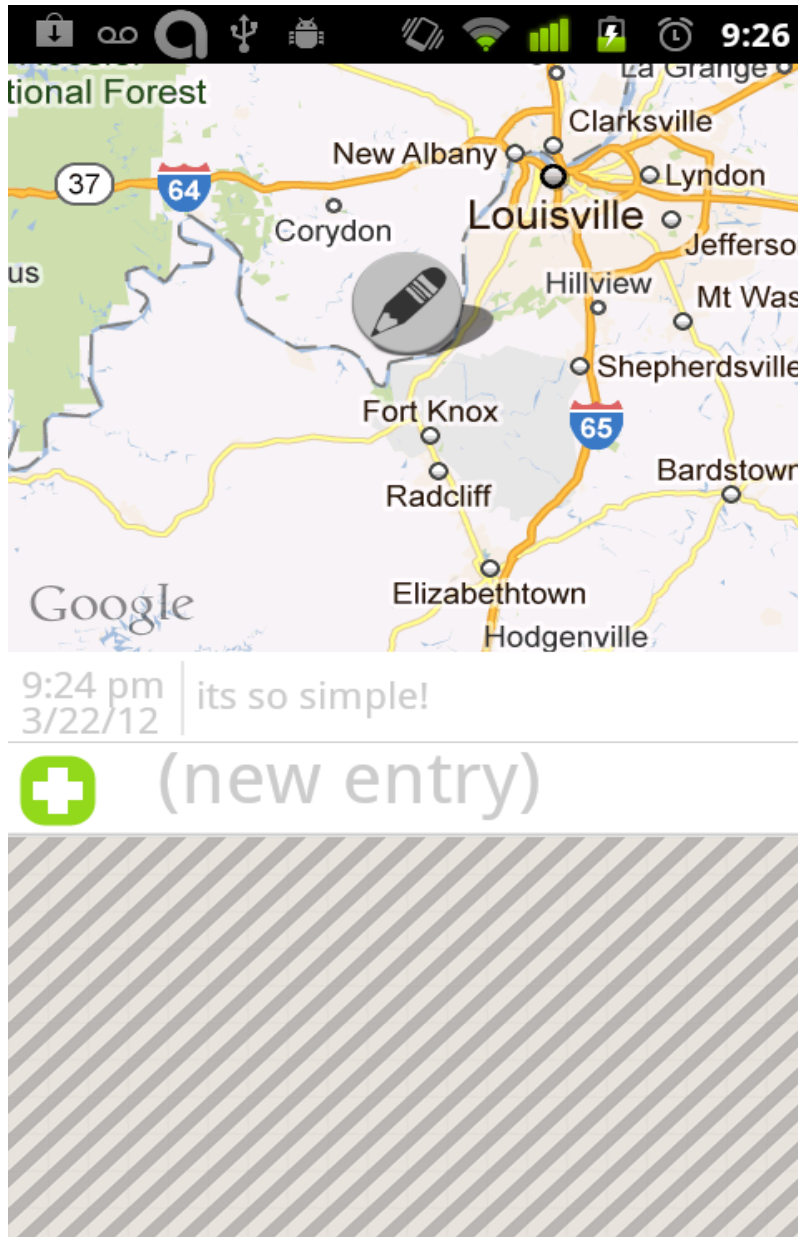
**Screenshots:**



**Highlight 3:** The map markers appear to cast a shadow on the map, making them look like actual pins.  
**Heuristic Employed:** Match the real world. The metaphor here is pushpins in a map or markers placed upon a map, and the shadow-casting helps to make this metaphor feel more real.

**Severity:** Good.

**Screenshot:**



**Highlight 4:** This application's menus and buttons are consistent with many Android applications. Such consistency is achieved in part by working with default Android tools for development. The application also achieves external consistency with Google maps.

**Heuristic Employed:** Consistency and Standards, Recognition not Recall.

**Severity:** Good.

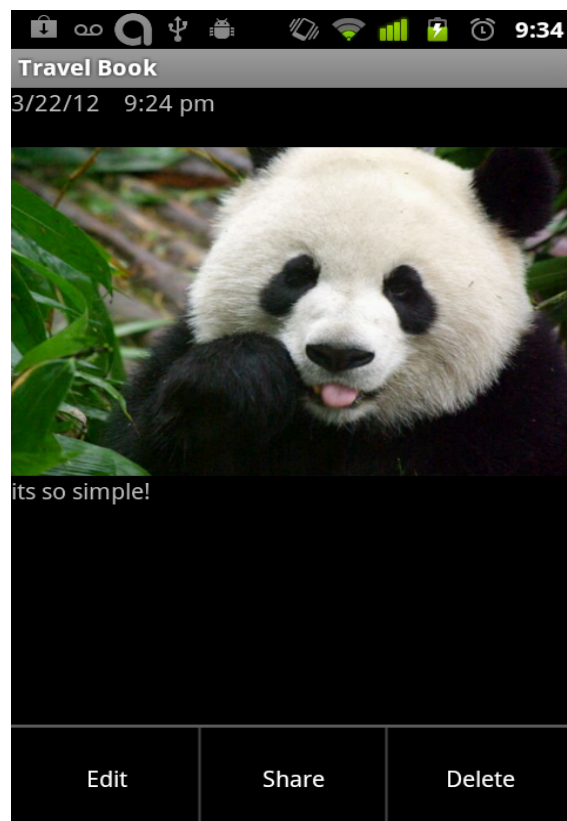
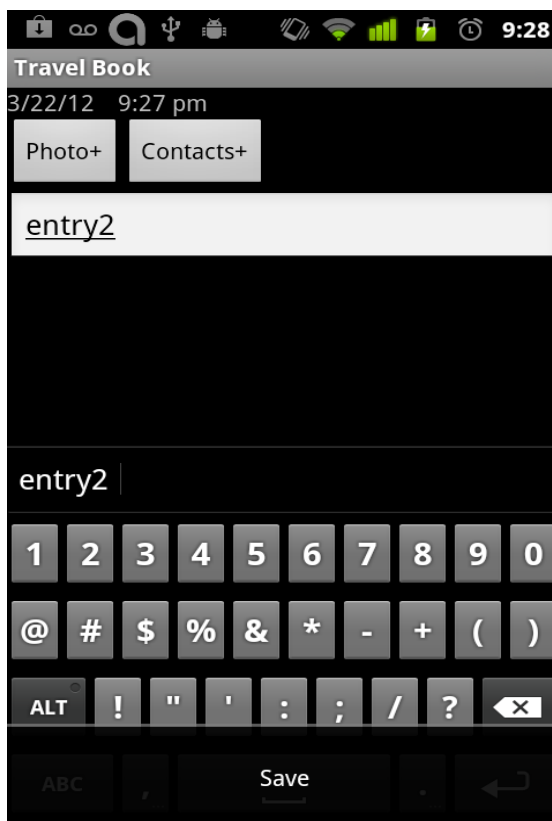
**Highlight 5:** I really liked the consistency between the "View" and "Edit" pages - each shows a black background and the date and time in the same place as the other, and displays extra options in the same location upon the pressing of the Android "Menu" key. These pages look very similar and feel very similar in their use of the menu key. The menu options make important functions, such as Saving, Sharing, Editing captions, and Deleting, available to the user.

**Heuristics Employed:** Consistency and standards, User Control and Freedom

**Severity:** Good.

**Suggestion:** One thing that might be possible to further bring out the self-similarity of your app would be to think about what kind of menu should come up if you hit the Android "Menu" key on the home page of the application. Right now, it doesn't do anything, but the other two pages do have menu options that should come up. It could be a very useful place to make more functionality readily available, and having menu options here would be consistent with the rest of the application. Another way to improve the consistency and feedback would be to display the picture on the "Edit" page to make it easier to caption and make the connection between caption and picture more readily obvious.

**Screenshots:** (note that here, the text "entry2" is a caption (left), as is "its so simple!" (right)).



**Other comments and Suggestions:**

I really enjoyed testing your app. It has a very simple, clean design and look to it. Aside from a few disconcerting pieces and implementation details, it was very impressive that your design could do so much with only two significant screens. Other than the backend, the part of your design that needs the most work is probably the map, in my opinion. The dotted lines are somewhat difficult to follow, and numbering the places that are shown might be a good way to differentiate different items in the list.

There are a few quirks in your app that should be fixed. One noticeable oddity is that every event I log appears to have happened a month before I logged it, according to your system. Another bug I noticed was that if I click the "menu" key when in "Edit" mode, I get another "Save" button added - so I can end up with up to six "save" options that should function identically. These aren't usability or design issues so much as things you can fix with a few edits to your code.

Instead of "Contacts+" and "Photo+" on the Edit page, I would normally expect to see "+ Contacts" and "+ Photo". This could be made consistent with your "+ (new entry)" button on the home page by making the buttons look similar or even exactly the same except for the text they contain.

**Android System notes:**

I used a Nexus S (made by Samsung) with service by AT&T

I am currently running Android 2.3.4

For screenshots, I used the default Android development debugging tool, DDMS

