# HW2 – PackIt Heuristic Evaluation

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After experimenting, I've decided to divide this application into four main pages differentiated by functionality: Main Page, My Trip, Packing, and Trip Info. My comments and evaluations are thus grouped into sections by page. Each section begins with a screenshot(s) of the page in question and follows with some of my heuristics observations, which may have their own screenshots if necessary. All sections conclude with a summary of my interaction with the page.

P1: Main Page
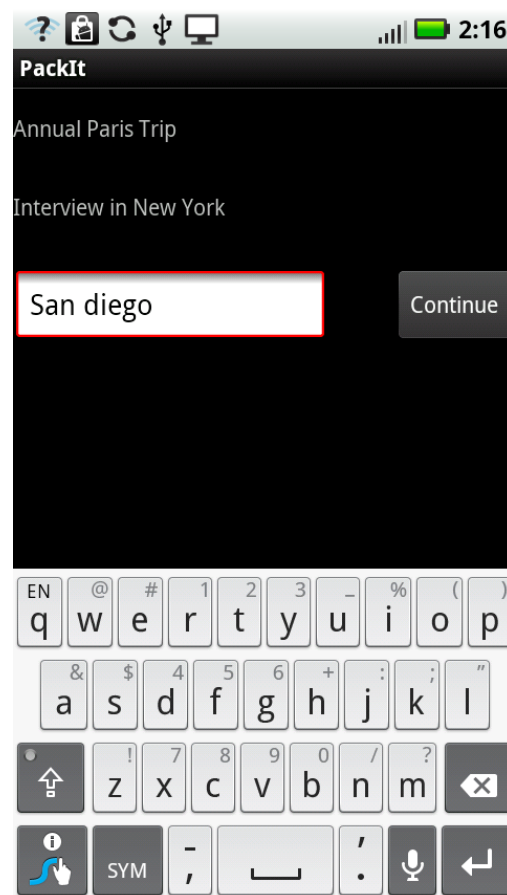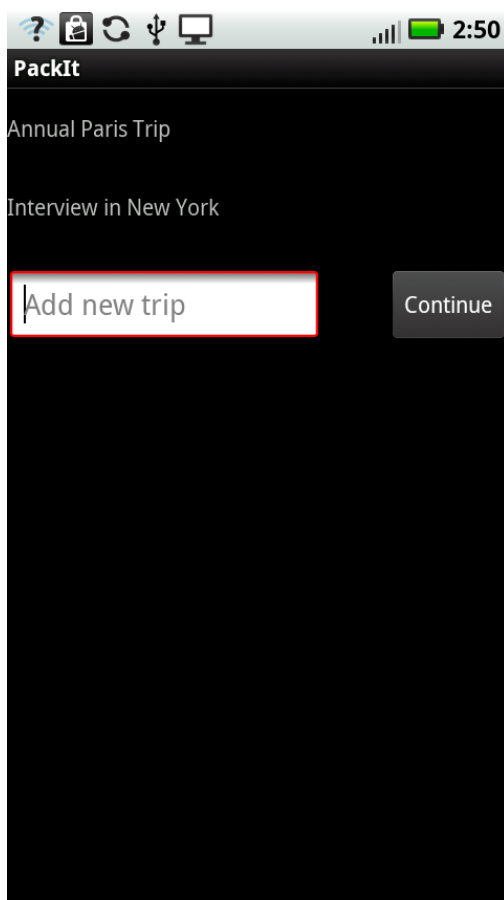
1. The title is small, does not grab the user's attention, and does not clearly indicate to the user the purpose of the app.

Heuristic Issues: Help and documentation, visibility, aesthetic design

Severity: Minor; might not be a severe issue on its own without other compounding factors.

Recommendation: Re-style the title to be more visible, and/or add a subtitle.

2. The lines below the title are unclear in function. Are they trips the "user" has previously entered or examples given by the application as to what the user should be entering in the text box?
Heuristics: Help and documentation, affordance
Severity: Major; they confuse the user into hallucinating, or ignoring, possible functions of the app.
Recommendation: Label the text, give them clickable feedback, or provide some other indication of their purpose.

3. The content on the page does not make use of the available space. Furthermore, the input box and its "Continue" button are poorly aligned, and give no indication that hitting "Continue" leads the user to a new page entirely, as opposed to adding new dialogs in the blank space at the bottom of the page.
Heuristics: Aesthetic design (too minimal), consistency and standards (with other Android applications)
Severity: Minor; there are few enough elements on the page that this is not too confusing, but it is still jarring to the eye.
Recommendation: Put the Continue button at the bottom of the screen; buttons which lead to new pages should be located in a suitably "final" position.

4. Hitting "Continue" without typing in a trip does nothing. While this is the intended behavior, it gives the user no indication of what he or she should do to make "Continue" work.
Heuristics: Feedback
Severity: Minor; most users will be able to figure out they should type something in the input box.
Recommendation: Make the input box grab the user's attention somehow, whether by flashing or gaining focus.

5. There is no indication about what the app's purpose is. A user who didn't remember why he or she downloaded this app would have no way of finding out from this page.
Heuristics: Help and documentation, visibility, recognition not recall
Severity: Catastrophic; users who don't know why they are using the app will simply delete it.
Recommendation: Add instructions and labels, re-style or rename the title, but just add some way for the user to figure out the purpose of the application.

P1 Summary

As a main page, this page lacks learnability. While it is simple, it does not clearly express the function of the application, is confusing to the average user, and does not give adequate feedback about what actions the user can or should perform.

P2 – My Trip

1. Since the user already chose a title in the previous page, having to specify destination again seems redundant.

Heuristics: Efficiency (lack thereof), error prevention (what if the user was thinking of two different trips and accidentally typed in a different destination to this box?)

Severity: Minor; is mostly a matter of preference, but the security risk is possible.

Recommendation: Auto-populate the destination with the title, and let the user edit it.

2. The transportation buttons change style entirely when being clicked on, going from black buttons to a gray square if unselected, or blue if selected.

Heuristics: Aesthetic design, consistency

Severity: Minor; the blue color is okay for showing that that option has been selected, but it clashes wildly with the style of the rest of the page.

Recommendation: Change the buttons' highlight style in a way that keeps the original gray buttons.

3. Gender is represented by a sliding bar with no labels.

Heuristics: Affordance, feedback, error prevention (which side is male or female?), match the real world + natural mapping (this is an extremely unnatural way to think of gender, and social awareness of fluid

gender identity isn't really relevant here), consistency (with all other gender selection options the user may be familiar with)

Severity: Minor; gender isn't that important here, but it did make me do a double-take.

Recommendations: Gender doesn't seem to be relevant to this application; remove it entirely.

4. The Android keyboard that appears when "Destination" is focused can only be gotten rid of using the "Enter" key or clicking on one of the "Duration" boxes, not by clicking elsewhere on the screen or selecting one of the other entry methods.

Heuristics: User control + freedom (lack thereof), consistency + standards (clicking elsewhere usually gets rid of the keyboard in other Android apps), error prevention (the user may keep accidentally typing in the keyboard), feedback (the keyboard does not respond to other attempts to get rid of it)

Severity: Major; the keyboard blocks the bottom half of the page, preventing the user from submitting or going back.

Recommendations: Add some form of event handler to the page that would remove focus from the "Destination" input box, and thus hide the keyboard.

5. "Duration" is a misnomer for inputs that actually specify the start and end dates of the trip. It is also unclear which box should be used for the start date, and which for the end date.

Heuristics: Documentation (misleading), visibility (that the purpose of these inputs is to enter start and end dates is only marginally visible to the user), error prevention (if a user is used to reading right-to-left, he or she might conclude that the right side should be the start date)

Severity: Minor; most users will understand that start and end dates are required since the pop-up text entry is in the Date format, although the possible right-to-left issue still exists.

Recommendations: Re-label these inputs with clear names for their functions.

6. It is possible to continue to the next page without specifying any inputs at all, making it unclear what the point of this page, or the overall application, is.

Heuristics: Help and documentation (what should I care about?), visibility of system status (which inputs do I need to fill in?), recognition not recall (what am I doing here?),

Severity: Major; a user will generally fill out information they are asked to, but if this information is completely unnecessary, this page should be removed.

Recommendations: Either remove the page, or make some of the inputs "must-fill-in".

P2 Summary

While this page implies the user should be preparing for a trip, its "duration" and "gender" inputs are strangely structured, and the overall function of the page remains unclear because almost all information fields can be left blank when proceeding to the next page. It should be more visible to the user why they are inputting this information, and what it might be useful for.

P3 - Packing
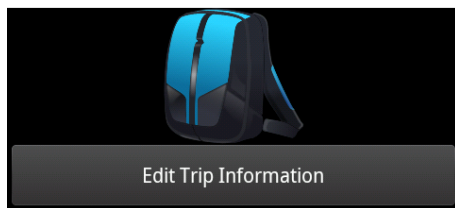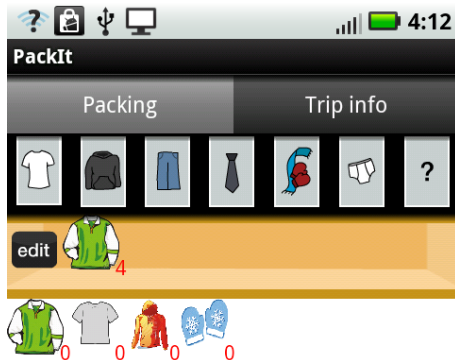
1. The icons and backpack picture do not seem to respond to clicking or any other form of interaction.
Heuristics: Feedback, affordance, visibility, user control, match the real world (the user might expect to be able to drag an item into the backpack, because that's how backpacks work.)
Severity: Catastrophic; for an application whose purpose is the manipulation and storage of information (about what to pack), not being able to clearly interact with this information is disastrous.
Recommendations: Even if drag is not implemented, at least give the icons some form of feedback in the form of highlighting, so that the user can see that his or her actions are having some effect.

2. The page mixes metaphors between a backpack and what seems to be either a storage cabinet or a closet, and confuses the user about which is actually being used.
Heuristics: Real-world matching (what is this page supposed to match?), consistency (the backpack image clashes with the page's actual layout), aesthetic design (the backpack is either extraneous or misleading)
Severity: Major; confusing the user about what sort of metaphor the page uses will lead to many user mistakes and assumptions.
Recommendations: Pick one or the other – either restyle the icons' display area to look more like a backpack inventory, or remove the backpack metaphor entirely.

3. The icons are too small.

Heuristics: Affordance (the user may be confused about whether the icons are meant to be interacted with), visibility (literally), error prevention (the user might very easily click a different icon than the one intended, or fail to select an icon)

Severity: Major; since item-interaction seems to be the primary function of this page, it should be made as easy and efficient as possible.

Recommendations: Make the icons larger, place them further apart, or separate them further somehow so that the user can actually interact with them more easily.

4. The function of each set of icons is impossible to determine. Which items are already in the user's backpack: the top row, the items in the white space (they all have 0s next to their name, so that can't be right), or the four shirts next to the "Edit" button?

Heuristics: Help and documentation (lacking), visibility (can't tell what items the user's already packed, or how to pack an item at all), error prevention (is the user moving items into or removing items from the backpack?), recognition not recall (lack of recognition in general)

Severity: Catastrophic; this is the main functionality offered by the application, and the page's layout and lack of information makes it inscrutable to the user.

Recommendations: I would propose fundamentally retooling the entire interface, but short of that, label everything more clearly.

Note: The following observations are ones I made assuming that the white space is the backpack, the icons in the black top row are basic items that the user might select from to fill the backpack, and the middle "cabinet space" with the "edit" key is… temporary storage of some sort?
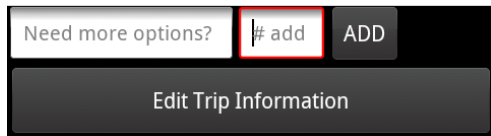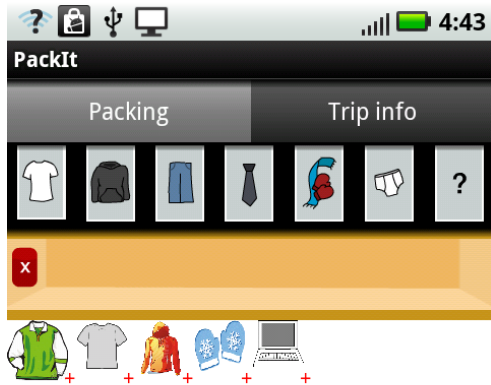
5. The "edit" button results in the above screen, but the only thing the user can interact with are the inputs at the bottom of the screen; clicking on the icons in the backpack with the "+" signs does nothing. Even if the "add item" functionality were not implemented for this prototype, some feedback from the app to let the user know that it is *possible* to edit items in the backpack would be very helpful.

Heuristics: Affordance (user can't be certain of how the edit button works), feedback (lack thereof), visibility (user can't see how interactions affect the displayed model)

Severity: Major; making it impossible for the user to tell that they're interacting with items can result in all sorts of mistaken assumptions about the functionality of the application.

Recommendations: More feedback is vital even if the app doesn't have all relevant functionality.
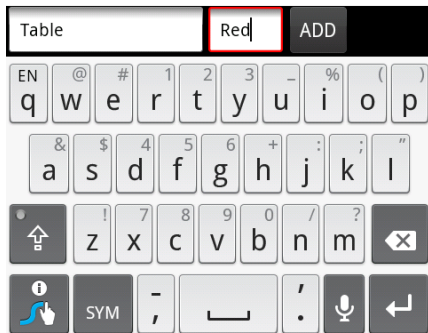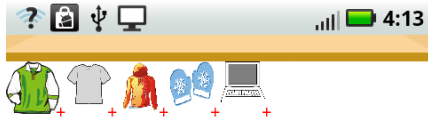
6. The "# of" input is not limited to numerical inputs, allowing me to specify that I should have "Red" tables.

Heuristics: Affordance (does this do what I think it does?), consistency (numerical input box should be limited to numbers), error prevention (text in a numeric field = ???)

Severity: Minor; as far as I can tell this doesn't affect the app – but this might only be because it hasn't been implemented enough for numbers to matter.

Recommendations: Limit this box to numeric inputs.

7. There is no way to "save" the trip's packed materials; the only button at the bottom of the page is "Edit Trip Information", which takes the user back.

Heuristics: User control, visibility (how is the user supposed to save?)

Severity: Catastrophic if fundamentally not implemented.

P3 Summary

This page was unfortunately inscrutable. I couldn't figure out what the icons represented or how I would interact with the page, both because the page's layout was unclear and because the page did not visibly respond to anything. Even if the app did not need to be completely implemented, some basic implementation of the functions this page has would have gone a long way to making it easier to understand. As such, this app seems to lack its fundamental interactions, and I can't adequately evaluate it as a result.

1. "Trip Info" is misleading when the main purpose of this button seems to be offering FAQs for packing. The only thing specifically relevant to the current trip is the weather display, and it is not the first screen that appears when clicking on "Trip Info", so users might not see it.
Heuristics: Help and documentation (mislabeled), affordance (misleads user), efficiency (users clicking here for the weather will be annoyed that they have to go through generic packing tips)
Severity: Major; users expecting specific information about their trip, like they entered on page 2, will be confused to find that this button does something entirely different.
Recommendations: Either put weather as the first tab opened, or separate specific trip info from generic tips and reminders about packing.

2. The "packing tips" page reads like instructions for packing the backpack on the previous page. (This user seriously thought, for a few minutes, that the reason she couldn't interact with the backpack was because it wasn't being packed with the lightest items on bottom.)
Heuristics: Help and documentation (mistaken documentation), error prevention
Severity: Cosmetic; some changes in how the instructions are presented, or what it's labeled as, should be able to fix this.

3. The blue serif text is inconsistent with every other instance of text that's appeared in the app, and the clipart is jarring because it does not match the style of the rest of the application.
Heuristics: Aesthetic design, consistency + standards
Severity: Cosmetic; but it does make the user interact more slowly with these pages.

Recommendations: Maintain a consistent font for the entire application.

P4 Summary

While these pages are simple, the description of "Trip Info" misleads users about their function (to provide generic packing information). Furthermore, they are inconsistent both in design and in relation to information the user previously input on page 2, which the user might reasonably expect to see on a page labeled "Trip Info".