

6.813 GR2: Designs

Scenario

Justin, an MIT Senior has just about graduated from MIT. He wishes to set up a dinner for all his Mom, Dad and close friends Brian and David at a mid-price casual restaurant to celebrate the culmination of 4 years of hard work. He brings up his MealMates app on his iPhone. Justin scrolls through his contacts and selects his four guests to invite. He gives his event a Title, Date and Purpose, calling it “Last Supper” and writes “I’m gathering close friends and family to celebrate turning around my Brass Rat!” He then gives the time range that he’s able to commit to, which is from 12:00 p.m. to 5:00 p.m. Justin then selects his favorite restaurants and ranks them in order of how much he likes them. He confirms all of his choices, and then all of the invitations are sent out.

Brian receives a notification with Justin’s invitation and sees the title and purpose, along with the restaurant parameters. He selects the times that he is available that night and submits those back to Justin. Then he selects new restaurant parameters to add to those that Justin has picked. Brian enters his available times for that day: he is available from 1:00 p.m. to 4:00 p.m.

Justin’s Mom, Rebecca also receives the invitation. She is not sure whether she is able to make it, so she selects that she is “maybe attending”. She adds her own time constraints, which are from 1:00 p.m. to 2:30 p.m. tentatively, and then confirms.


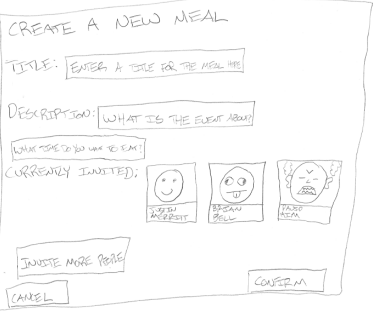
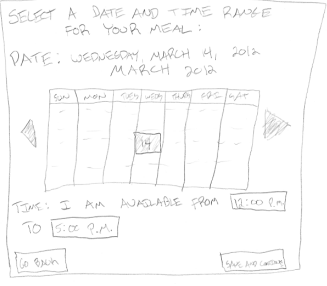
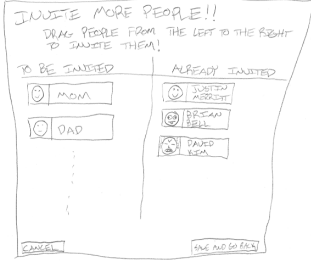
Justin’s dad Jeff receives the notification, but cannot make the preliminary time range, so he selects “not attending”.

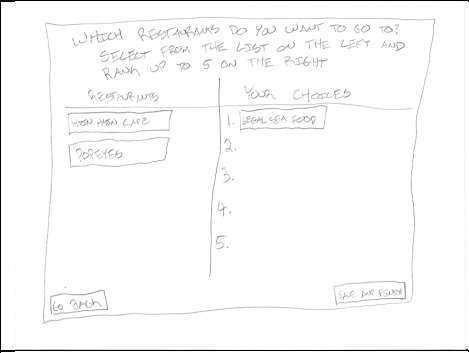
The MealMates application collects all of the user data on available times and restaurant preferences, and then selects a final time of 1:00 p.m. to 2:30 p.m. and a final restaurant location of Legal Seafoods. This final time and location are then broadcast to everyone who is “attending” and “maybe attending”.

The group finally enjoys a tasty and well-planned meal at Legal Seafoods. Yay!

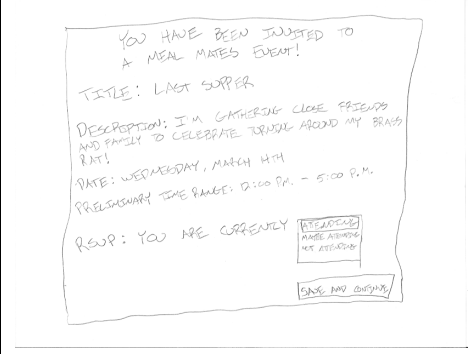
Designs

Design I and Analysis

Design	Analysis
<p>DESIGN 1</p> 	<p>Justin opens up his MealMates application and selects the "Create A New Meal" button. If he wanted to, he could select "View Upcoming Meals" to see which meals he has been invited to.</p>
<p>DESIGN 2</p> 	<p>Justin adds a title to his new meal idea by clicking in the Title text box, and adds a description to the event by clicking in the Description text box. He clicks the button, what time do you want to eat, which brings up the following window:</p>
<p>DESIGN 3</p> 	<p>He clicks on the calendar and selects the 14th of March. Then Justin picks his preliminary availability by clicking on the two time buttons. Once he is satisfied with his date and time, he selects save and continue, which brings him back to the "Create a New Meal" screen. He then clicks on the "Invite More People" button, which brings up the below screen.</p>
<p>DESIGN 4</p> 	<p>Justin drags who he wants to invite to his meal from the left side to the right side. When he is satisfied with who he has invited, he clicks "Save And Go Back" which brings him back to the "Create a New Meal" page. When he is satisfied with all of his choices on this page, he clicks confirm, which sends out notifications to everyone who has been invited. Meanwhile, while other people are responding to the notification, Justin gets a popup like the one below:</p>

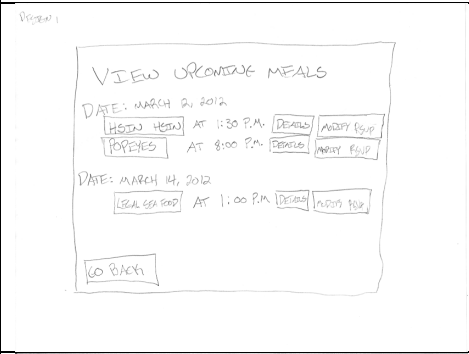


This popup lets Justin rank his restaurant preferences. He can rank up to five restaurant preferences by dragging restaurants over from the left side to the right side. When he is content with his choices, Justin selects the "Save and Finish" button. Meanwhile, everyone else has received a notification like the one below:

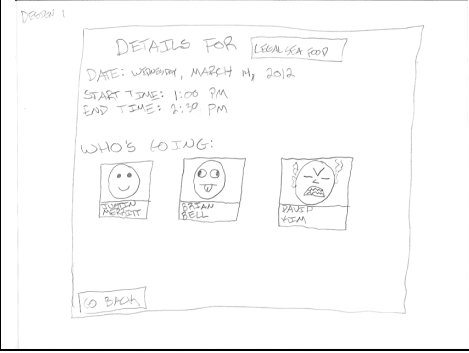


This popup lets everyone know the information about the event, and at the bottom gives them the chance to say whether they are "attending", "maybe attending", or "not attending". Then they can select "Save and Continue". This brings them to a menu screen just like the one Justin saw with the "Select a Time Range" screen, which gives them the opportunity to select times that work for them. Finally, they can rank restaurants using the exact same screen that Justin used to rank his restaurants.

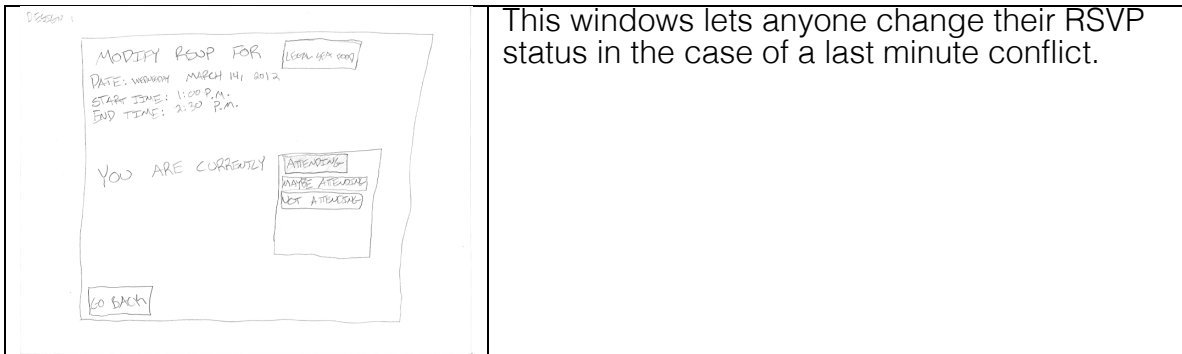
Once people have selected their RSVP status, their available timeslots, and their restaurant preferences, the MealMates Application assigns a final time and location for the meal. If anyone wants to view the meal information, they can select "View Upcoming Meals" from the Main Menu, which brings up the following window:



This window gives information on all upcoming meals that have been planned through MealMates. By selecting "Details", you can view all of the pertinent information for that event, as shown below:



With this window, anyone can view the date and time of the event, which restaurant the event is located at, and who will be attending the event. If you select "Go Back" and then select "Modify RSVP" at the prior window, you will see a window like the one below:



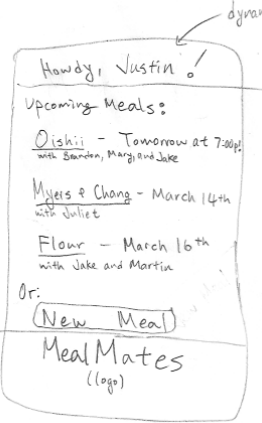

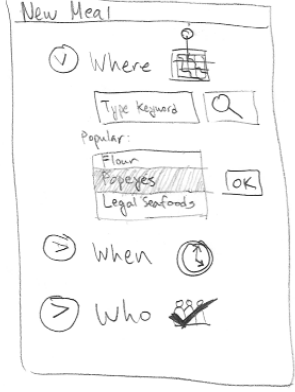
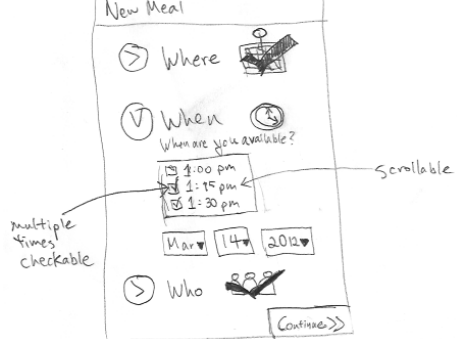
Strengths of Design I

- Learnability
 - This user interface is very traditional. The navigation will be instantly familiar to most people.
 - The ability to drag friends around and drag restaurants is very tactile, which gives a good sense of feedback and reinforcement to many of the specific tasks.
- Efficiency
 - Creating a new meal is very
 - The ability to drag friends around and drag restaurants is very tactile, which gives a good sense of feedback and reinforcement to many of the specific tasks.
- Safety
 - While creating a new meal event, it is very easy to fix mistakes by just clicking on the area where there is a mistake and fixing the errors.
 - If you do enter an incorrect “RSVP” you are able to remedy that situation by going to the “View Upcoming Meals” window and hitting the button “Modify RSVP”.

Weaknesses of Design I

- Learnability
 - There are some inconsistencies in the design. Namely, some objects that are draggable in some windows may look draggable in other windows, but aren't
 - Many facets of the design are implicit, and exist without the user knowing. It is not easy to tell, for example, that you can get information about a restaurant, like it's location and popularity, by clicking on the restaurant name.
- Efficiency
 - Having to manually drag every friend over from one side of the page to the other is a slow, tedious process, especially if you want to invite 20+ people to a meal.
- Safety
 - Once an invitation has been sent out, there is no way to modify or cancel it. Thus, any mistakes that are made in the “Create A New Meal” window will remain and will confuse everybody invited.

Design II and Analysis

Design	Analysis
	<p>Justin, when opening MealMates, is first directed to the main menu. Here, Justin selects "New Meal"</p>
	<p>Now, Justin selects whom he'd like to invite to the meal by adding people by tapping "Add". He types names, which filter a list of contacts from a predetermined list of contacts (from Facebook, the phone's contact lists, or both, or from elsewhere).</p> <p>Justin then selects the "Where" expandable menu, which expands to the next screen.</p>
	<p>Justin then selects from a list of popular destinations "Legal Seafoods", a conveniently popular destination in his area.</p> <p>He proceeds to select the "When" expandable menu.</p>
	<p>He then selects checkboxes denoting the regions of time he is available for a meal, as well as what day.</p> <p>Justin taps the newly arrived "Continue >>" button.</p>

	<p>Justin now arrives at a buffer screen, which summarizes his selections for a meal. Should the details be incorrect, he can go back to the expandable menus screen by tapping the “<<No” button.</p> <p>He confirms all the details are correct, and taps the “Yes>>” button.</p>
	<p>The confirmation screen now appears, detailing the invitation for the event he just created.</p>
	<p>Justin is now returned to the main menu. He selects his first upcoming meal, at Oishii.</p>
	<p>Justin updates his RSVP for the invitation to the Oishii meal, at which point the screen shows a confirmation of his new selection.</p>

Strengths of Design II

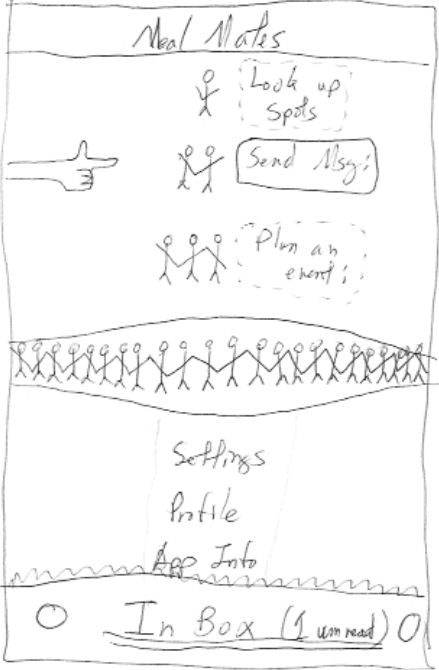
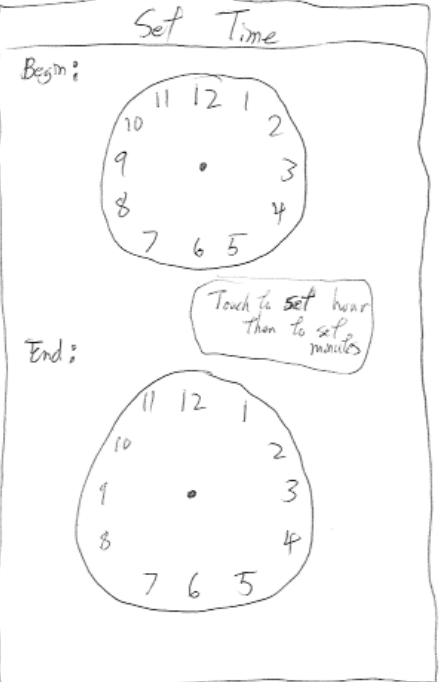
- Learnability

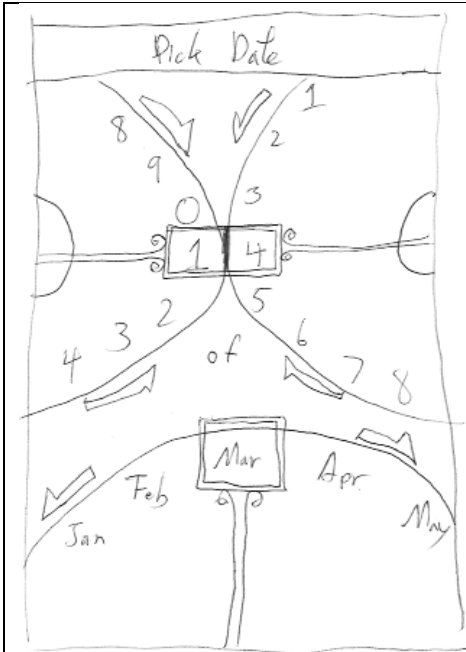
- Relatively few screens to traverse – makes for an easily memorized mental model of the task
- The splash screen with the expandable menus has easy to understand keywords (“When”, “Where”, and “Who”) for users to easily discern the functions of the different expandable menus
- Efficiency
 - Main menu immediately presents user with upcoming meals, for easy information access to past uses of the application
 - Changing RSVP is as simple as changing the status of your attendance – the app takes care of the rest by sending the result to all participants
- Safety
 - Expandable menus make it easy for a non-linear organization of the task at hand, and allow for changes to various aspects more easily than a linear traversal through menus
 - There is a good amount of feedback and a confirmation screen, alerting the user to all choices made prior to sending out his/her invitation

Weaknesses of Design II

- Learnability
 - Main menu presents new user with much information, which could overwhelm the user
- Efficiency
 - Creating a new meal is not any more streamlined the more the user creates meals – the user must follow the same process
- Safety
 - As soon as the confirmation screen is accepted, the invitation is immediately sent to all participants in the meal – this first action is irreversible.
 - If a user frequently changes his/her RSVP status, there is a concurrency issue and the user’s status is unknowable with certainty to the other users

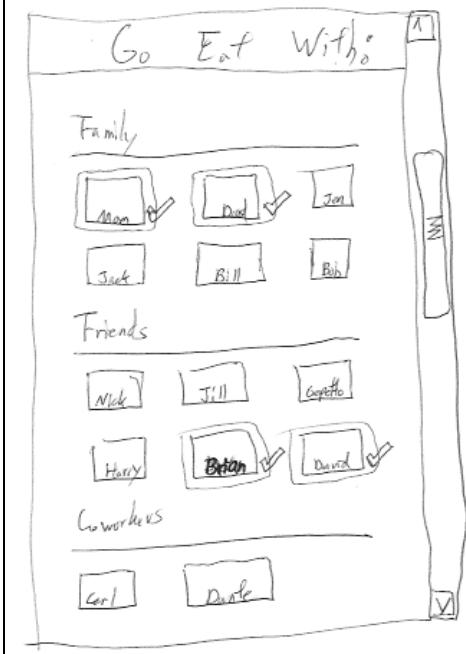
Design III and Analysis

Design	Analysis
	<p>Justin goes to the homepage to navigate to either his Inbox, View Restaurants, or Create and Event. In this screenshot Send Msg is highlighted because he was sending a message the last time he logged in so he has a half written draft. He presses the "Plan an Event" button to begin planning the grad bash.</p>
	<p>Here Justin selects the time for his event by pressing twice on each clock. Tapping 5 on the top clock populates the clock with two hands set to 5pm and "focuses" on the minute hand. Pressing the top clock again allows a specific minute to be chosen. A quick tap anywhere in the margins deselects the minute hand and any other hand may be touched or dragged.</p> <p>At any point he can do the same thing on the bottom clock. Only one of the four clock hands on this screen may be selected at once.</p> <p>Swiping the top bar left or right (touching it makes left and right hand arrows appear on either side of the text) allows forward progress to selecting the date or backward progress to the homepage.</p>

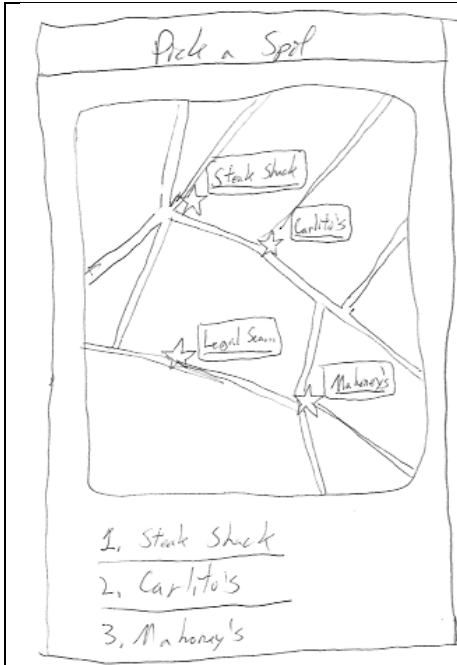


This page relies on three wheels which are affordances for turning. Justin drags the three wheels until the proper day and month is within the selector boxes.

Swiping the top bar left or right (touching it makes left and right hand arrows appear on either side of the text) allows forward progress to selecting the guests or backward progress to the Set Time page.

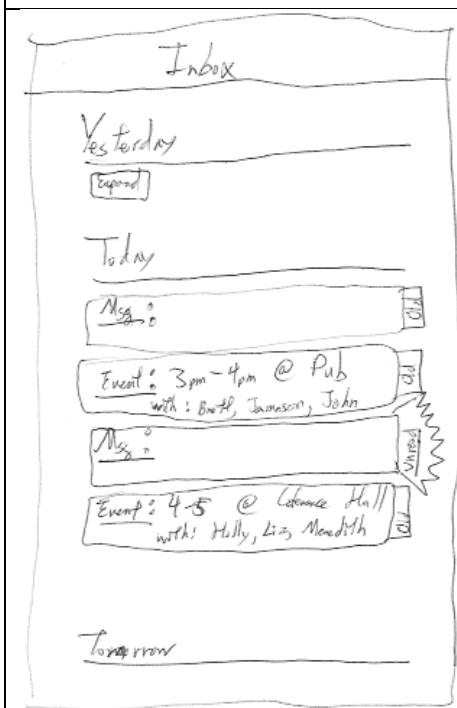


Here Justin selects his Mom, Dad and other guests. He has prearranged his contacts into circles to allow him to quickly browse subgroups instead of an entire page full of tiny icons to find the right people. Touching a picture/name checks it, and touching it again unchecks that friend. When the top bar is swiped, (following model on the previous pages) all the checked friends are added to the event.



After picking the correct guests, Justin is able to select places from a draggable map which is defaulted to his location. This map supports multi touch for zooming in and out, and restaurants in the database are populated based on their popularity at higher zoom levels, but are all filled in at lower zoom levels. Tapping a star selects a restaurant.

Swiping the top bar allows forward/backward progress as before, But now Justin is done with planning his event. Swiping right to left takes Justin to the Mealmates homepage.



This is the Inbox page, which Justin accesses from the MealMates homepage. Here he can view messages from within the application about conflicts people have, or preferences people have selected for events which he is admin. In addition, he can view his events here. messages are ordered based on when they are received, but events are ordered based on the day on which they take place and time at which they take place. This allows the page to serve as both a schedule of the day and a current inbox. Here Justin can message and deal with his friends conflicts.

Strengths of Design II

- Learnability
 - This user interface has many elements with external consistency and clear affordance. The “checking” action in selecting friends is very traditional. The wheel affordances in the dates selects and the clocks in the time selection aid the learnability of the interface. The selection of restaurants by zooming in and out of a map is very externally consistent and natural as well.
- Efficiency
 - Creating a new meal is very straightforward and is done in a logical linear order
- Safety
 - The system makes it very clear to the user what they are selecting for the friends, location, date and time, helping to prevent user error.
 - While creating a new meal event, it is very easy to fix mistakes by just clicking on the area where there is a mistake and fixing the errors on the same page. You have good feedback on the page.

Weaknesses of Design II

- Learnability
 - Navigation through the app is a bit harder to learn, but also reduces clutter and promotes direct manipulation of a scrolling page/by page process.
- Efficiency
 - Creating a new meal takes many pages.
- Safety
 - The wheel dragging system must be tuned carefully to prevent the user from skipping past the date they wish to pick
 - Once an invitation has been sent out, there is no way to modify or cancel it. Thus, any mistakes that are made in the “Create A New Meal” window will remain and will confuse everybody invited.