

Calendar Event and Task List Manager: Usability Test Report



Prepared by Team Thundercats

Shubhangi Rakhonde
David Schechter
Zayd Hammoudeh

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1. Summary

The usability test for Team Thundercats' Calendar Event and Task List Manager was performed on February 26, 2015. We received beneficial and meaningful feedback from both the tester and the broader class; this feedback motivated specific improvements to our design, which we have detailed in the subsequent sections. This report includes both the theoretical foundations for the modifications as well as before and after images.

2. Search Box Functionality

For a given webpage, some users are “search dominant” in that they navigate through the site by using a site’s search box while others are “link dominant” in that they browse through the site via links. Any modern website must accommodate both types of users well. One student noted that our original page did not include a search box as shown in figure 1.

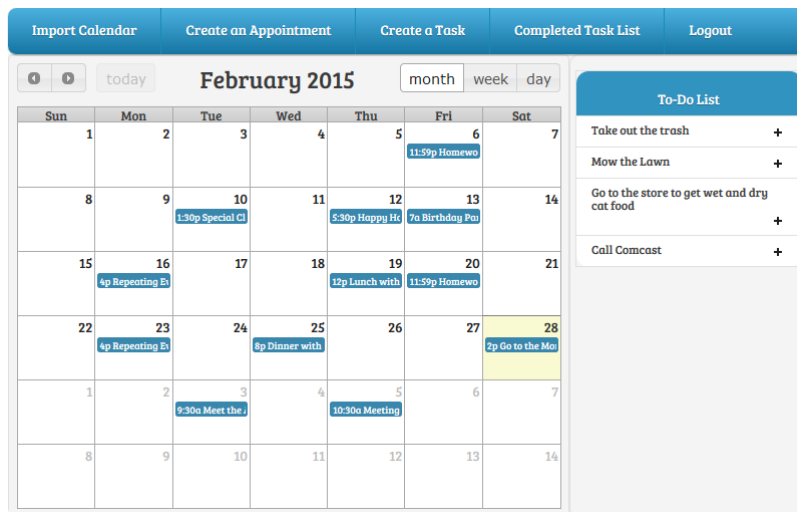


Figure 1 – Original Layout of the Main Page without Search Included

In our very early planning, we decided that a search feature would not be included in our prototype since we did not intend to support it in this demonstrative version. What is more, our planning considered primarily “link dominant” users. This decision was a mistake not only because “search dominant” users may find the site difficult to navigate but also because our site design lends itself, in its own nontraditional way, to the “Feature, Search, and Browse” design pattern. The “Feature” in our design is clearly the calendar since it is the largest item on the page; what is more, if a user has many scheduled events, appointments, and meetings, the calendar will be very information dense as well. In addition, the to-do list provides a type of browseable list. By including, the search box as shown in figure 2, we enable searching without in any way detracting from the site’s overall browseability. Rather, search functionality would enable a user to quickly locate all future appointments and incomplete to-do items based off specific keywords. For example, a user could search for “Homework” to find all outstanding homework related to-do tasks.

3. Calendar Appointment Color Coding

As described previously, the main “feature” of our website is the central calendar; it is the largest in terms of size and can be the densest in terms of information. When deciding on the color scheme for calendar appointments, our original focus was on ensuring consistency by making all of the calendar events the same color as shown in figure 3.

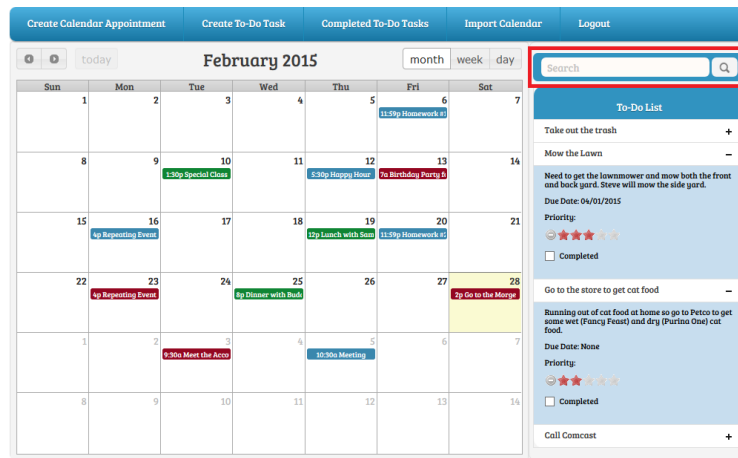


Figure 2 – Modified Layout of the Main Page with Search Included

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
1	2	3	4	5	6	7
8	9	10	11	12	13	14

Figure 3 – Original Calendar with Uniform Appointment Coloring

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
1	2	3	4	5	6	7
8	9	10	11	12	13	14

Figure 4 – Modified Calendar with Appointment Color Coding

When a user is examining a webpage, they typically do not “read” the text in the traditional sense. Rather, the user’s behavior is more akin to scanning where they are looking for specific keywords and triggers. One of the points of feedback we received during the usability test was that users should be able to configure the calendar so that appointments can individually have different colors. This recommendation aligns with the Gestalt principle of similarity where a user typically associates things that are visually similar (in this case similar through color). To that end, an example where color coding of appointments would be useful is when a user wants to visually differentiate professional and personal appointments by making the two categories of appointments different colors. Our modified calendar with appointment color coding is shown in figure 4; note the specific colors used would be selectable by the user from a predefined set based on that user’s preferences/needs.

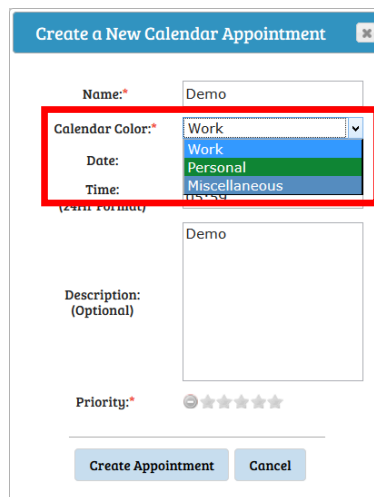
A screenshot of a web form titled "Create a New Calendar Appointment". The form includes fields for Name (filled with "Demo"), Date, Time (labeled "(24Hr Format)"), Description (Optional), and Priority (represented by five stars). A "Calendar Color:" dropdown menu is highlighted with a red rectangle; it is currently set to "Work" and shows a list of options: "Work" (blue), "Personal" (green), and "Miscellaneous" (purple). At the bottom are "Create Appointment" and "Cancel" buttons.

Figure 5 – Modified Create Calendar Appointment Form with Color Chooser

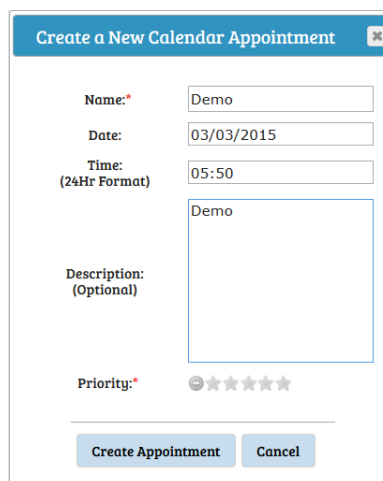
A screenshot of the original web form titled "Create a New Calendar Appointment". The form includes fields for Name (filled with "Demo"), Date (filled with "03/03/2015"), Time (filled with "05:50" and labeled "(24Hr Format)"), Description (Optional), and Priority (represented by five stars). There is no "Calendar Color:" dropdown menu. At the bottom are "Create Appointment" and "Cancel" buttons.

Figure 6 – Original Create Calendar Appointment Form without Color Chooser

We considered two primary methods that the user could use to set the color of an appointment in the calendar. The first is to add a field in the appointment creation form to select the appointment’s display color from a user defined list (e.g. green for personal, blue for miscellaneous, etc.). Figure 5 shows our modified form to create calendar appointment; this is contrasted with our original appointment creation form in figure 6, which did not have a color chooser dropdown menu.

A second approach to specify the color coding of an appointment would be for the user to click (either with the right or left mouse button) on an existing calendar appointment to change its color. This approach would be essentially the same as scheme shown in figure 5 and was not implemented a second time in the event description form due to its redundancy for demonstration purposes.

4. Menu Item Naming and Ordering

Concerning the menu bar at the top of the main page, we received two primary pieces of feedback from the tester as well as the class as a whole. First, the tester found the original menu bar button text (shown in figure 7) to be unclear. For instance, from just reading the menu text, she was unsure of the exact function performed by the “Create a Task” button. To better align the application’s functionality with the mental models of users, we renamed some of the menu bar items as shown in figure 8. The specific changes were:

1. “Create an Appointment” was changed to “Create Calendar Appointment” as the tester was unable to quickly distinguish between to-do list tasks and calendar appointments. This new version clearly states that the button is related to the calendar.
2. “Create a Task” was modified to “Create To-Do Task”. This new version more explicitly links the task to the to-do list.
3. “Completed Task List” was changed to “Completed To-Do Tasks” to again more explicitly associate this item with the to-do list.



Figure 7 – Original Main Page Menu Bar

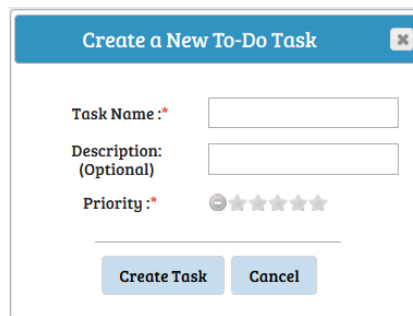


Figure 8 – Modified Main Page Menu Bar

A second point of feedback from the class was to improve the information architecture of the page by ordering items in the menu bar according to the likelihood that the user will use that feature. A student specifically mentioned that he would rarely, if ever, import calendars from a third party site so putting that item first in the menu bar may not be ideal. In our original planning, we had not paid sufficient attention to the optimal ordering of the menu bar causing us to overlook this detail. We decided to adopt the student’s feedback and place “Import Calendar” second to last in the list immediately before “Logout” as shown in figure 8.

5. To-Do Item Due Date

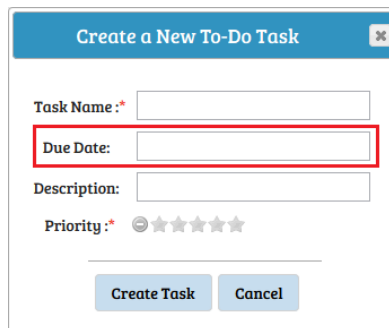
Our application combines calendar appointments (which we describe as synchronous events) with to-do items (which we describe as asynchronous tasks that are not associated with a specific time). The intent behind the to-do list was that the user could complete the task at his/her convenience. As such, in the original form to create a to-do task as shown in figure 9, we did not include a feature for the user to specify a “Due” (or to borrow a legal term a “Drop Dead”) date, which would serve as the absolute latest the task could be done.



The image shows a 'Create a New To-Do Task' form. It has a blue header with the title and a close button. The form contains three input fields: 'Task Name' (required, indicated by a red asterisk), 'Description' (optional), and 'Priority' (required, indicated by a red asterisk). The priority is represented by a row of five stars, with the first star selected. At the bottom, there are two buttons: 'Create Task' and 'Cancel'.

Figure 9 – Original To-Do Task Creation Form

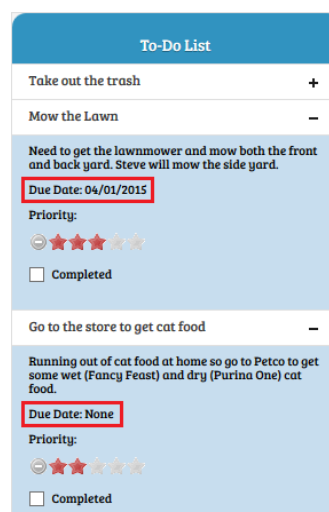
The usability tester mentioned that she would like to have “due dates” for tasks. For example, if a task was to “File Income Tax”, the “due date” would need to be April 15. To accommodate this feature, we added a “Due Date” field to the task creation form as shown in figure 10. This field is optional (as denoted by no red adjacent star) since not all tasks necessarily have a due date.



The image shows the modified 'Create a New To-Do Task' form. It now includes a 'Due Date' field, which is highlighted with a red border. The 'Task Name' field is still required (red asterisk), and the 'Description' field is optional. The 'Priority' field is still required (red asterisk) and shows five stars. The 'Create Task' and 'Cancel' buttons remain at the bottom.

Figure 10 – Modified To-Do Task Creation Form

With the addition of the to-do task “Due Date”, the inlay list used to display all open to-do tasks also needed to be updated to include a field for this information. The updated “Due Date” field in the to-do list is shown in figure 11. The original to-do list was identical to this figure with exception of the new “Due Date” field.



The image shows a 'To-Do List' interface. It has a blue header with the title. The list contains three tasks. The first task is 'Take out the trash' with a plus icon. The second task is 'Mow the Lawn' with a minus icon. The third task is 'Need to get the lawnmower and mow both the front and back yard. Steve will mow the side yard.' This task has a 'Due Date: 04/01/2015' field, which is highlighted with a red border. Below the due date is a 'Priority' field with five stars, and a 'Completed' checkbox. The fourth task is 'Go to the store to get cat food' with a minus icon. This task has a 'Due Date: None' field, which is also highlighted with a red border. Below the due date is a 'Priority' field with five stars, and a 'Completed' checkbox.

Figure 11 – Modified To-Do List with Added Due Date Field

6. Skipping the Setting of a To-Do Item's Completion Time

In our mental model for the to-do list, we had expected that a user would want to specify a task completion time in the vast majority of cases. As such, when we designed the menu for completing a task, we did not prominently display the feature to bypass specifying a task completion time.

Figure 12 is the site's original menu for specifying a task's completion time; for a user to bypass this menu, they would need to click the "X" in the top right corner. Admittedly, this process is not optimally intuitive.

During the usability test, the user showed little interest in specifying a task completion time to the point of being somewhat confused by the process. In her mental model, this feature did not provide much utility, and she quickly wanted to bypass the associated menu. To address her feedback, we added the "Skip" button to the task completion form as shown in figure 13 to more prominently feature the ability to skip the step of specifying a task completion time. With the introduction of this new button, we judged that the "Finish" button's text should be modified since "Finish" would not make logical sense when juxtaposed with "Skip". As such, the "Finish" button's text was modified to "Set Completion Time", which we believe more completely describes its functionality.

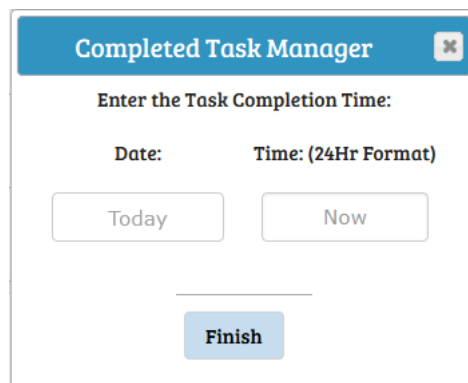
The image shows a web form titled "Completed Task Manager" with a close button (X) in the top right corner. Below the title is the instruction "Enter the Task Completion Time:". There are two input fields: "Date:" with a button labeled "Today" and "Time: (24Hr Format)" with a button labeled "Now". At the bottom, there is a single button labeled "Finish".

Figure 12 – Original Form for Specifying a To-Do Item's Completion Time

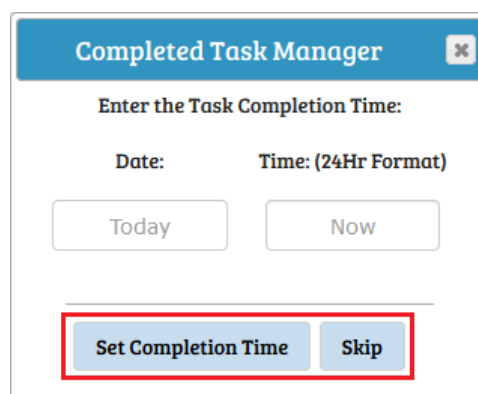
The image shows the same web form as Figure 12, but with modifications. The "Finish" button has been replaced by two buttons: "Set Completion Time" and "Skip". These two buttons are enclosed in a red rectangular box, highlighting the new options for the user.

Figure 13 – Modified Form for Specifying a To-Do Item's Completion Time