CPSC 481 – Fall 2020

Team Project

Stage Four Heuristic Evaluation Report

Tut04

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Evaluators

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Reviewers

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Repository: https://github.com/isaguimet/CPSC481-TeamT

Portfolio: https://gbondad.github.io/481portfolio/index.html

Project Description

Progress calendar is essentially a calendar application with project management features that will be available in web platforms. The app tracks the progress of a project and visualizes it in a way that is both informative and transparent to the user. Like any other calendar app, a user will be able to add scheduled projects and tasks. However, it is in adding projects that this app shines. Users can automatically separate a project into manageable iterations that can easily be pinned to a date. Users can also see the tasks and projects left to do with its corresponding progress bar. Mainly, the user base will be people who want to keep track of their projects, this can range from students to project managers. Another unique aspect of the application is its "Rewards" feature. The user can achieve various kinds of rewards (e.g., completed 5 projects, spent 30 hours on a project, etc.). They can also connect with friends that are also users of the application and a leaderboard will be displayed to show how the user compares in their reward achievement to their friends. We expect this to be used in the everyday lives of our users, as a calendar and for helping them manage their work and stay motivated.

Updated User Tasks and Descriptions

Vertical

1). Add a new project:

User opens the web application and logs in. User clicks on a Create button located on the main page (note that this is the monthly view). Then a small window for filling in the details of a new project will show up. They will then fill in the information - title, description, # of iterations, tags, due date (mini-calendar is provided). Then they will click the Create button. Doing this will make another pop-up window, "Create Iterations," show up. Here, the user will enter information about the iterations. Finally, clicking on the Create button will add the project and iterations to the appropriate dates.

2). View their progress done on the project:

User opens the web application and logs in. User will click on the "Progress" tab on the navigation menu at the top of the screen. Displayed by a progress bar, user will see the progress made on each project. A "Project overview" table summarizes information such as hours spent, iterations left, etc. Users can also view their progress by the statistics section, where a line graph and a bar graph are presented displaying information such as hours spent on a project and workload left.

3). View rewards (and use the other features - Share, Connect, Rank):

User opens the web application and logs in. User will click on the "Rewards" tab on the navigation menu at the top of the screen. User will view rewards earned in two different modes (by projects and by completed/in-progress). User can also click on a specific reward icon to view details about the reward.

Then the user can click “Share” tab to share their progress on the rewards by the generated share link or to specific social media sites. Next, to add a friend, user will click on the “Connect” tab and either enter the email address of the person that they wish to add. Then the user will click on the “Rank” tab that will take them to a leaderboard page displaying their rank compared to their friends.

4). Edit/Delete a project:

User opens the web application and logs in. The user selects a project they wish to edit/delete. A pop-up window will show up displaying the details about the project. The user can click the option to either edit or delete the specific project. Choosing the edit option will take user to a window to edit any details about the existing project while the delete option will simply delete the selected project.

Horizontal

5). Complete their project:

User will click on the “Progress” tab on the navigation menu at the top of the screen. Then next to the progress bar for a particular project, they will click the “Complete” button. The project will now be shown under “Completed projects” and a star will be displayed next to the bar to indicate completion.

6). Log-in and Register to the application:

The user enters their username and password to log in to their saved profile. If the user does not have an account, they can register.

7). Filter events (projects, tasks, iterations) using tags：

Using the different tags on the event, the user will be able to filter the events that they want to see in the calendar. The user will click on the filter option and from a dropdown, click the tags of the event that they want to see.

8). Create tags for projects:

The user can create “tags” that represent distinct groups for their projects and tasks (e.g., school, work).

Heuristic Evaluation Process

We began the heuristic evaluation process by first dividing ourselves into 2 groups: evaluators and reviewers. Jiro and Alexis were the evaluators and Gabriel, and Isabella were the reviewers. Then Jiro and Alexis separately completed the Heuristic Evaluation Template within one day and shared the findings with the rest of the team. As evaluators, we strictly followed the template and reviewed our understandings for the rules by thinking about how each rule could be helpful in improving the UI design of our prototype. Then we went through one rule at a time, carefully observing the hi-fi prototype to first see if we could find the rules being applied in our application. Then we proceeded to look at the

prototype with a more critical view to spot any violation of the rules. Then, the reviewers reviewed the template separately and jotted down their findings that will be shared in the next slide. After that, they separately categorized each of the usability problems found into severity ratings and then decided which usability problems will be fixed on this stage 4.

Heuristic Evaluation Review / Findings / Decisions

From our Heuristic evaluation the reviewers were able to categorize the severity of the different problems in our prototype. The full evaluation findings are found in the appendix. These got distilled into 2 different categories, the features we were to change immediately and the features that we are going to fix after stage four. The following things that we changed in our high-fidelity prototype are:

- Make the design of the "Create" button project consistent in weekly and monthly view
- Add a confirmation message when creating projects/iterations
- Includes an "undo" button for the monthly and weekly view when creating a new event. As well as include an "undo" button when completing iterations in the progress view.
- Be able to click on name of user and display user information (drop-down menu for "John Doe")
- Remove blank spaces between UI elements

As can be seen above, most of the changes are vital to the user experience, revolving around aesthetic choices, consistency, visibility of system status and user control and freedom.

Reflection about the evaluation process

What went well for our group for the evaluation process was that the evaluators in our group were able to identify the usability problems in our application. Then, the reviewers were able to categorize the severity of the problems identified. At the end, we had an easier time deciding what to include for stage of the project and decided what we were going to include for the final iteration of this project. What went poorly as an evaluator was that it was difficult to find violation of the rules since we were observing our own prototype, so it was hard to look at our prototype with an impartial, critical point of view. Also, some of the rules we could not find in (they were not applicable) to our prototype (e.g., help users diagnose and recover from errors) and could not be evaluated. What went poorly as a reviewer was that sometimes it was hard to categorize a usability problem under the given ratings from not being a usability problem to being a usability catastrophe. If we were to do it again, we would make sure our evaluators of the application were people that are not in our team since it would be better to bring a different perspective to evaluate our application.

Appendix

Heuristic evaluation

- **Evaluators**: Jiro, Alexis
- **Reviewers**: Gabriel, Isabella

First evaluator: Jiro

10 Steps to Improve Usability, Utility, and Desirability by Implementing Nielsen and Molich's UI Design Guidelines

Rule of Thumb	**Is this rule being applied? How so?**	**Is this rule violated? How so?**	**How can this rule further improve usability, utility and desirability?**
1. Visibility of system status	Confirmations on actions are present in the prototype (connecting a friend would result in a "added friend" pop-up; completing a project displays a congratulatory prompt)	When creating an event or a project, it is unclear to the user that they first need to pick a date in order to make iterations.	It would inform the users of the current status of the app. Without this rule, the user would wonder if the app has done what the user wants to do, impacting the usability and desirability of the app.
2. Match between system and the real world	Yes, it is applied. Conventions like create buttons and monthly and daily views are reminiscent of current calendar applications.	Having a progress and a rewards view is unusual in a conventional calendar app, however its intentions are clear to the user.	This rule helps the user recognize the actions that they can make as they already know what to do.
3. User control and freedom	There are cancel buttons when creating projects and in options like connect to friends and sharing.	When creating a project, once a user has chosen an iteration, they cannot go back. It is also unclear how to undo a progress on a project in progress view. On rewards, there seems to be no clear way to go from rank to original rewards page.	With this rule, users will be able to cancel or go back unwanted actions.

4. Consistency and standards	Text fonts and sizes are consistent. There is a consistent color palette.	Create button in weekly, monthly, and progress are different. And the add button on progress does not work. There is also 2 ways in order to move from weekly and monthly in the monthly view. Monthly view also has varying designs on buttons.	This is important as to make a consistent user experience.
5. Error prevention	There doesn't seem to be any error Prevention in the app. However, cancel buttons are present so that the user will be able to go back to a state they want.	No error prevention present in the prototype.	Without this, errors would be prevalent greatly affect the user experience.
6. Recognition rather than recall	When creating an iteration, the iterations are shown in a small preview of the calendar, helping the user in creating a project.	There is little violation to this rule meaning conventions are being followed.	This would help the user in navigating the app as they rely on the conventions of similar apps.
7. Flexibility and efficiency of use	The normal functions of a calendar app are implemented but features like Progress view and Rewards view are catered for those who want to fully utilize the features of the app.	The progress view Despite being a main feature of the app, does not have an ability to customize the statistics that a user will be able to view. Limiting the user of options.	This makes the app cater to both basic users and power users.
8. Aesthetic and minimalist design	The design is minimalistic and only one instance of redundant functions.	Changing view in the monthly from weekly and monthly is redundant. There is no need for there to be 2 ways to change views.	A minimalist design improves the user experience as it does not confuse the user with unnecessary or redundant functions.
9. Help users recognize, diagnose and recover from errors	There are no error messages in the high-fi prototype.	--	It is important that the user will be able to act after an error has occurred so that they may continue to use the app.

10. Help and documentation	There is little help or documentation in the app.	When creating a project there is no guide to help the user to create iterations, making it unclear what the user should be doing. Text fields don't show what input is accepted (iterations should be an integer)	This allows the user to understand the functionalities of the app.

Second evaluator: Alexis

10 Steps to Improve Usability, Utility, and Desirability by Implementing Nielsen and Molich's UI Design Guidelines

Rule of Thumb	**Is this rule being applied? How so?**	**Is this rule violated? How so?**	**How can this rule further improve usability, utility and desirability?**
1. Visibility of system status	Confirmation messages for "Connect with Friends" and share/copy link.	No confirmation message that the project/iteration(s) were created.	It would keep users informed about the tasks they are doing on the app.
2. Match between system and the real world	The icons at the main navigation bar follow typical conventions.	No particular design aspect violating this rule could be found.	Ensuring that the UI elements use familiar concepts to the user will make it easier for the user to learn the application.
3. User control and freedom	There are "cancel" options when creating a project or sharing a rewards page.	1) The "monthly" button does not work under the progress view. 2) "Undo" option on the confirmation page immediately after creating a project/iteration may be helpful. 3) In progress, no feature to undo a selection of a progress bar.	User control and freedom will allow user to easily and quickly fix any mistakes they may have made while using the application.

4. Consistency and standards	The overall UI design seem consistent across the different views.	1) The words “event” and “project” used interchangeably is confusing – e.g., you click on “create event” to create a project. It also says “Event Due Date” when a project is being created. 2) In rewards, when you copy a link, the confirmation message shows up under the Connect button instead. 3) In rewards, the rightmost box says “Awards” instead of “Rewards”. 4) Expectation when clicking on “John Doe” is a drop-down menu displaying the user information. 5) Clicking on a project to view details about the project + option to edit/delete project.	This will reduce the chances of the users having to guess/be confused about different features across the app.
5. Error prevention	No error prevention features found.	With the features implemented in the hi-fi prototype, error prevention methods do not seem necessary.	Error prevention features reduce the chances of a user potentially making a mistake in the first place.
6. Recognition rather than recall	Selection of dates from the calendar on the pop-up window when selecting iterations.	No violation of this rule seems to be found.	Recognition rather than recall rule will put less pressure on the user to remember all the steps/options.
7. Flexibility and efficiency of use	Users can select a date on the monthly view rather than the “create an event” button.	When creating a project, a user cannot create a new tag in the pop-up window.	Accelerators will ensure that users can use the app more efficiently as they become more experienced with it.
8. Aesthetic and minimalist design	Consistent color scheme and design layout is	Too much blank spaces between the UI elements	Aesthetic and minimalist design boosts the overall

	present. No irrelevant information can be seen.	(especially the white space in profile for the rewards page).	experience of the user on the app.
9. Help users recognize, diagnose and recover from errors	Implementation of error messages is not found.	In rewards, error message when invalid email address is entered may be necessary.	Clear and easy error messages will a solution allow user to fix the problem quicker with less trouble.
10. Help and documentation	No help or documentation is provided.	An explanation on the concept of the rewards page (and possibly the progress page as well) may be necessary.	Documentation supports user in learning/understanding different functionalities of the application.

Reviewer's Heuristic Evaluation Findings

Below is how we are classifying the prototype problems severity as it was discussed in the heuristic evaluation lecture.

Examples of Severity Ratings

Rate	Description
0	Doesn't seem to be a usability problem
1	cosmetic problem
2	minor usability problem
3	major usability problem; important to fix
4	usability catastrophe; must fix

First reviewer: Isabella

First, I reviewed each of the rules that the evaluators (Jiro and Alexis) did. Then for each rule, I jotted down my findings. After that, I categorized each usability problem I found into the appropriate severity rating.

1. **Visibility of system status**
    - This rule was found to be violated.
    - We need to add the current status of the system i.e., "has added event into calendar", "has created iterations" when user creates events

2. **Match between system and the real world**
    - This rule was found to be satisfied. Users can create calendar dates similarly like they would do for any other website app and navigating through the website app via the navigation bar is a common concept to many users.
3. **User Control and Freedom**
    - This rule was found to be violated.
    - Must add undo and redo buttons for creating iterations for events, progress view (undo progress), rewards page (go back from rank to original rewards page)
    - This is important
4. **Consistency and Standards**
    - For the most part this rule is being violated and the following are violations of this rule
        i. make 'create buttons' for weekly, monthly and progress view consistent
        ii. Decide if we're using "event" and "project" as 2 different things or pick one and stick with it for the rest of the application
        iii. Be able to click on name of user and display user information
        iv. Be able to click on a project in calendar and view details about it + edit / delete it.
        v. Rewards vs awards in rewards view -> be consistent
5. **Error Prevention**
    - This rule was found to be violated for one evaluator. We found that there is no error prevention in the app. However, cancel buttons are present so that the user will be able to go back to a state they want.
    - This rule was found to be satisfied for the other evaluator. This is because with the features implemented in the hi-fi prototype, error prevention methods do not seem necessary.
6. **Recognition rather than recall**
    - This rule was found to be satisfied by our application
7. **Flexibility and efficiency of use**
    - This rule was found to be violated. The user should be able to do the following things:
        i. User should be able to customize the statistics that they want to see for their progress view
        ii. User should be able to create new tags when creating an event
8. **Aesthetic and minimalist design**
    - For the most part, this rule has been satisfied except for a few minor cosmetic things to add such as:
        i. remove being able to change view weekly to monthly. Reason: redundant to have 2 ways to change views
        ii. Remove blank spaces between UI elements
9. **Help users recognize, diagnose and recover from errors**
    - This rule was found to be violated. The following should be included:

i. Error message when entering an invalid email address

10. Help and documentation

- This rule has been violated since there are no help guides at all in the high-fidelity prototype. This can be solved by:
    i. adding a guide to help users create an event with iterations. This can go under "need help?" button for monthly and weekly views. Add better acceptable input text to text fields
    ii. In-app guide to help explain rewards and progress view

Below I categorized each of the usability problems found into categories of severity.

Severity 0 - Doesn't seem to be a usability problem

- Rewards vs awards in rewards view -> be consistent
- In-app guide to help explain rewards and progress view
- Adding a guide to help users create an event with iterations. This can go under "need help?" button for monthly and weekly views.

Severity 1 – cosmetic problem

- Decide if we're using "event" and "project" as 2 different meanings or pick one and stick with it for the rest of the application
- Remove blank spaces between UI elements
- Error message when entering an invalid email address
- Add better acceptable input text to text fields

Severity 2 – minor usability problem

- Add the status / confirmation message i.e., "has added event into calendar", "has created iterations" when user creates events
- make 'create' buttons for weekly, monthly and progress view consistent
- Be able to click on name of user and display user information
- user should be able to customize the statistics that they want to see for their progress view
- User should be able to create new tags when creating an event

Severity 3 - major usability problem; important to fix

- Fix rewards page (go back from rank to original rewards page)

Severity 4 - usability catastrophe; must fix

- Be able to click on a project in calendar and view details about it + edit / delete it .
- Must add undo and redo buttons for creating iterations for events and undo buttons for progress view (for progress bar)

Second reviewer: Gabriel

Based on the findings from the evaluators, I wrote down my thoughts and then classified the severity of each usability problem.

1. **Visibility of system status**
    - Add a confirmation pop up when an event has been created
2. **Match between system and the real world**
    - The system uses conventions that are found in many current calendar applications. It uses icons that clearly reflect what they represent.
3. **User Control and Freedom**
    - We need to ensure that users have a way to cancel/undo any action they make.
4. **Consistency and Standards**
    - Make the create buttons in weekly and monthly view the same
5. **Error Prevention**
    - There is no error prevention in the application. Should add error handling.
6. **Recognition rather than recall**
    - The rule does not seem to be violated by the application.
7. **Flexibility and efficiency of use**
    - Have a way to create new tags when creating an event
8. **Aesthetic and minimalist design**
    - Remove the button to change from weekly to monthly, since you can already do so through the navigation bar. Other than that, the system has a simple and easy to use layout.
9. **Help users recognize, diagnose and recover from errors**
    - There should be error messages that indicate what the problem is and what needs to be fixed.
10. **Help and documentation**
    - Add a help section somewhere in the application in the future.
    - Have a quick tutorial on creating an event for first time users.

Severity 0 - Doesn't seem to be a usability problem

- Help link to explain app
- Instruction support page

Severity 1 – cosmetic problem

- Remove blank spaces

Severity 2 – minor usability problem

- Add error prevention
- Add confirmation message when creating projects/iterations
- Add options to customize statistics in progress view
- Make text fields more help full

Severity 3 - major usability problem; important to fix

- Make create project button look the same in weekly and monthly view

Severity 4 - usability catastrophe; must fix

- Make project clickable to view/edit/delete

After discussing our findings, Gabriel and Isabella decided that we should fix the following problems:

- Make 'create project' button the same in weekly and monthly
- Add confirmation message when creating projects/iterations
- Includes an "undo" button when creating projects / iterations
- Include undo in progress view when completing progress in progress bar
- Rewards page - be able to go back from rank to original rewards page
- Be able to click on name of user and display user information (drop-down menu for "John Doe")
- Remove blank spaces between UI elements
- Be consistent with the words we use in the rewards view (delete all instances of 'awards')