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CS 151, Sec 6
Instructor Gaikwad
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Final Project: Goal Tracker

INTRODUCTION

I was assigned to Group 11 to develop the final project for this course. My teammates ignored all the work I had done coming up with the project idea, writing all the backend classes, and creating a very detailed UML class diagram. They decided to redo the project themselves, and by the time they were done recreating the backend classes, there was nothing I could do to fix the nonsense they had put together. Consequently, I embarked on a marathon programming adventure, creating the project the way I had originally envisioned it. The final product is both user-friendly and highly functional.

I uploaded the source code to the team repository, which my teammates noticed and commented on with high praise. I explained to them that I was hopeful that the instructor would consider it, given how I was effectively shut out from working on the project with my teammates. I then assisted them in presenting the project they had made in class. Shortly after class, they *deleted all of my code from the repository, including my original UML Class Diagram* and re-submitted the project without any of my work included. This malicious act is documented in the repository history on GitHub. Given the fact that I cannot trust my teammates not to delete my code if I upload it again, I have placed my project in a repository under my own GitHub account at:

<https://github.com/plusplusminusminus/CS151-GoalTracker>

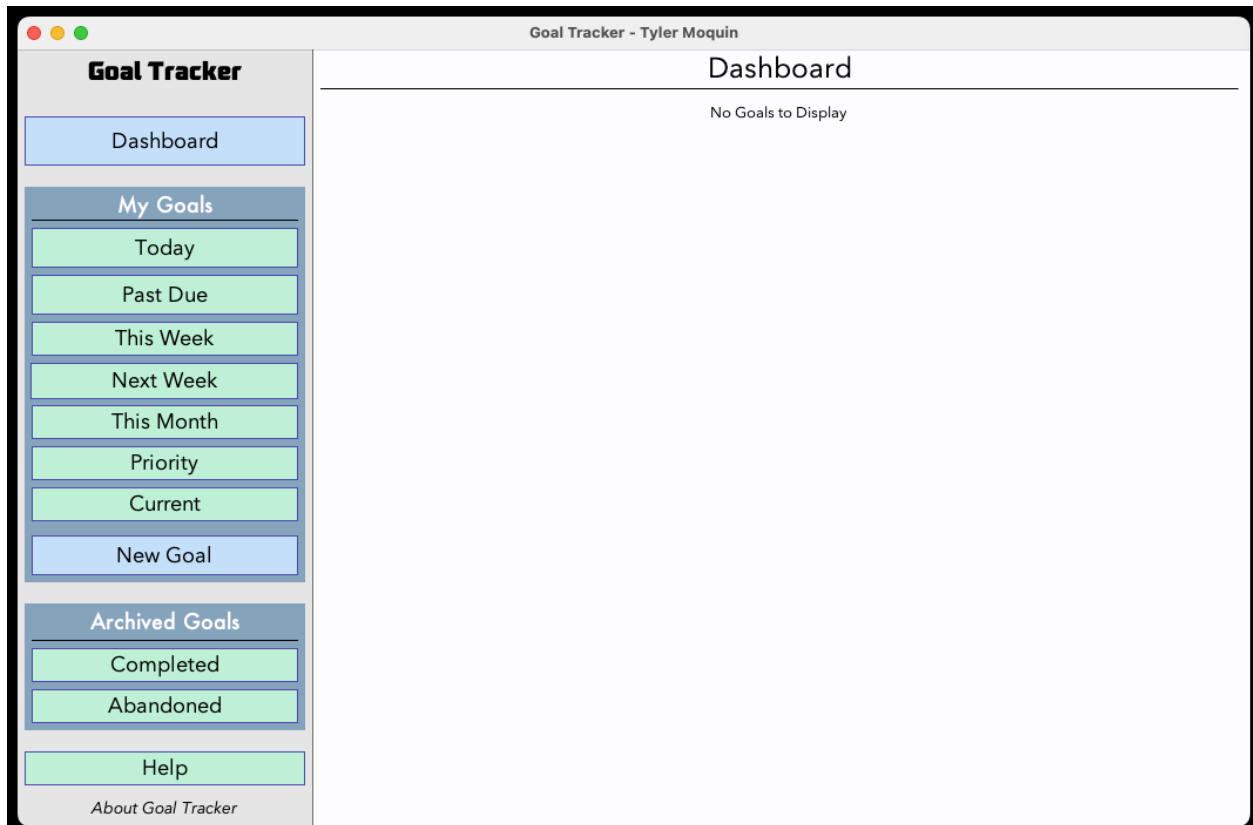
My project is in the *GoalTracker* folder. I also re-uploaded the work I had done for my team, which is located in the *priorwork*, *proposal*, and *notes* folders. The project is straightforward to build, since it was created as a Maven project. Once compiled, it is executed as:

```
$ java GoalTracker
```

Since I was precluded from presenting my application in class due to the malevolence of my teammates, below is a brief explanation of how the application is designed to be used.

GOAL TRACKER

Once the application is launched, the user is presented with a menu and a Dashboard view:



Since there are no goals in the system, the Dashboard is empty. Click on “New Goal” and create one:

The screenshot shows a web application titled "Goal Tracker - Tyler Moquin". The left sidebar contains a navigation menu with the following items: "Goal Tracker" (header), "Dashboard" (blue button), "My Goals" (blue header), "Today" (green button), "Past Due" (green button), "This Week" (green button), "Next Week" (green button), "This Month" (green button), "Priority" (green button), "Current" (green button), "New Goal" (blue button), "Archived Goals" (blue header), "Completed" (green button), "Abandoned" (green button), "Help" (green button), and "About Goal Tracker" (small text at the bottom). The main content area is titled "Create a New Goal" and contains the following form fields: "Description:" with the text "Register for Fall classes"; "Priority:" with a dropdown menu set to "High"; "Goal Type:" with a dropdown menu set to "Binary" and a hint "a goal that is done/not-done"; "Details of Your Binary Goal" (blue header); "Deadline:" with a text input "5/31/2023" and a hint "(optional) mm/dd/yyyy"; "Countdown?" with a dropdown menu set to "No" and a hint "count down days until deadline? (optional)"; "Notes:" with a text input "Register for CS classes before they're full." and a hint "(optional)"; and a "Create Goal" button at the bottom.

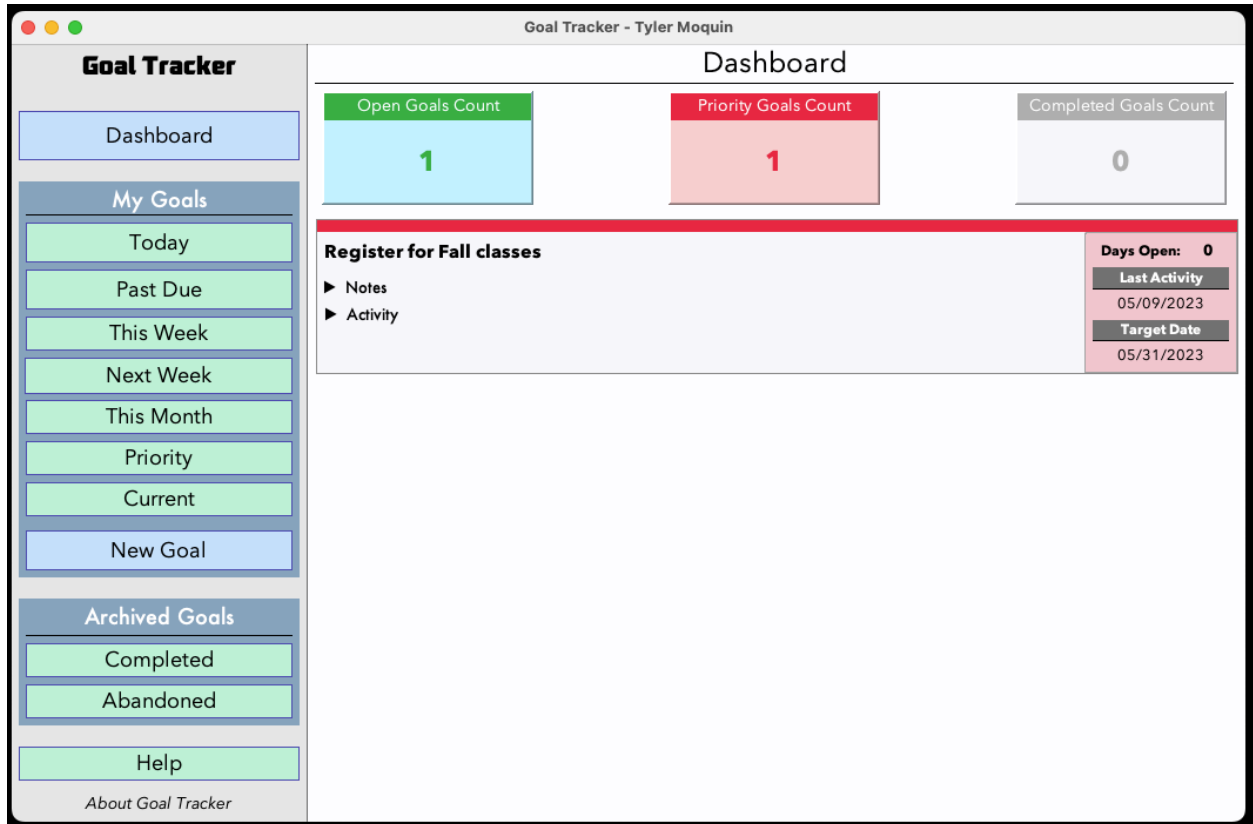
Goal Tracker currently supports four kinds of goals:

- **Accumulation Goals**, which are used to keep track of things one is saving up towards a target amount, for example saving money to reach a certain amount;
- **Binary Goals**, which are either done or not done; for example, a Binary goal might be to register for classes for the Fall semester;
- **Numeric Goals**, which are similar to accumulation goals but where your goal is to get to a certain value of something, rather than accruing; for example, setting a goal of reaching 150 pounds by the end of the year is a Numeric goal;
- **Task List Goals**, which allow the user to work on a set of sub-goals as a single goal. This is by far the most powerful type of goal currently supported by Goal Tracker. If you needed to study numerous chapters of a textbook, or you needed to do a set of homework problems, creating a Task List goal is the ideal way to go.

Each goal, and each subgoal, carries its own description and free-form notes as well as an optional deadline. The “Countdown” feature is intended to provide the user with feedback on the Dashboard for goals having that feature enabled, but in the current version this is not implemented.

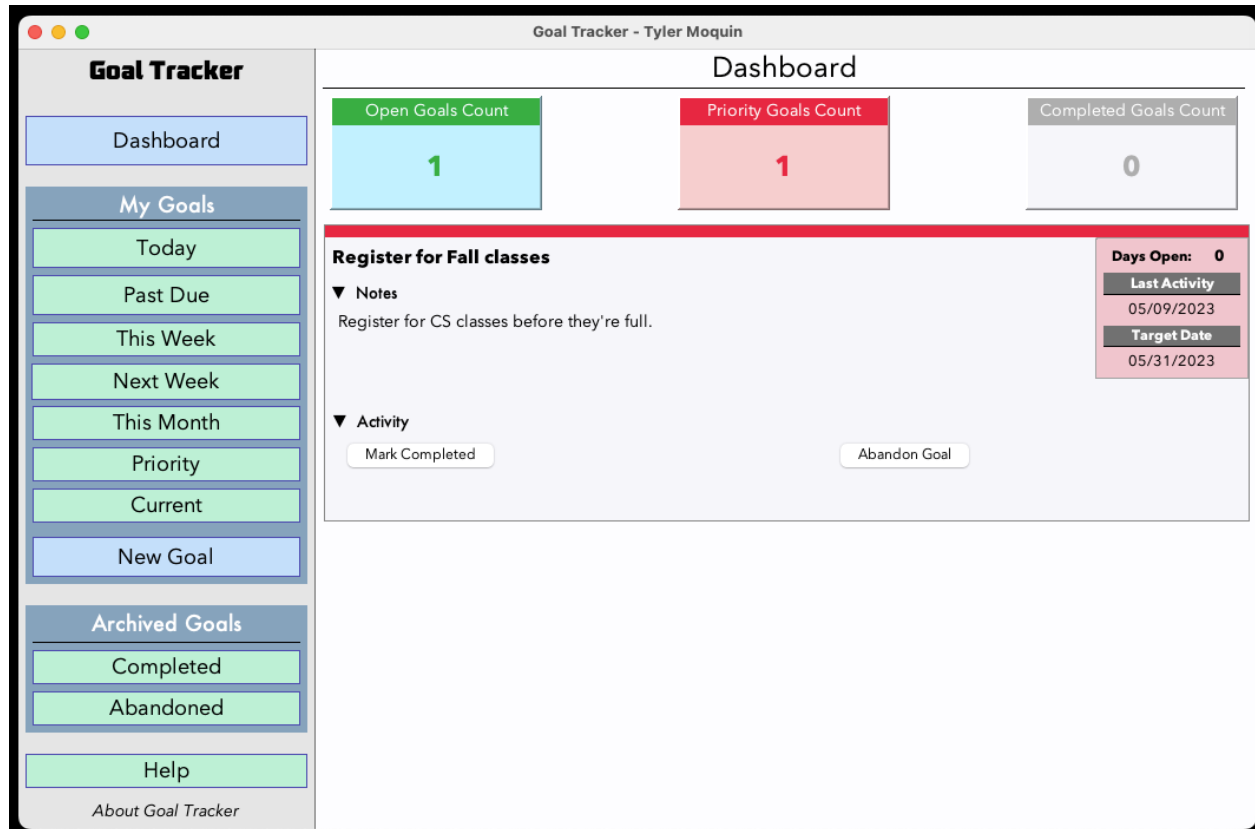
Goals can also be prioritized as High, Medium, or Low priority; High Priority goals have their own page accessible through the menu.

Once a goal has been created, it will appear on the Dashboard:

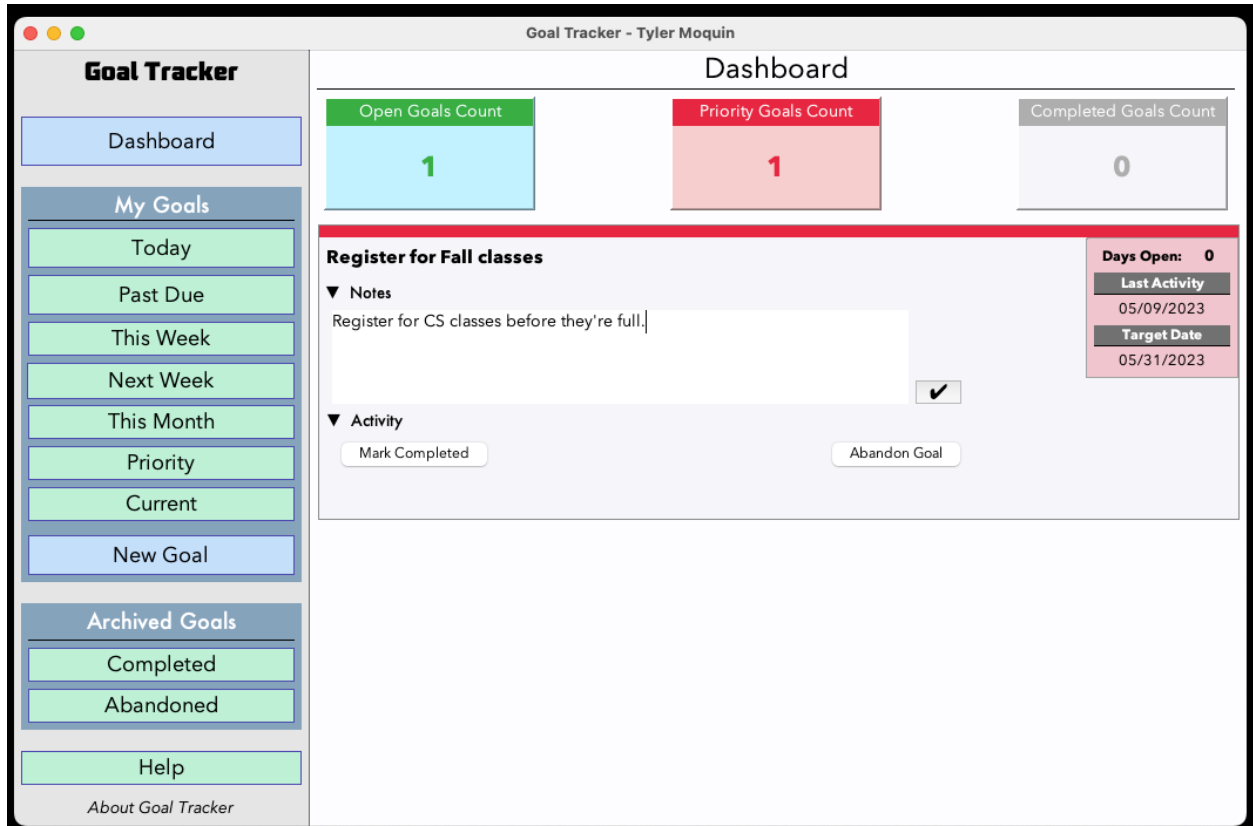


The Dashboard displays all current goals that have not yet been completed nor abandoned.

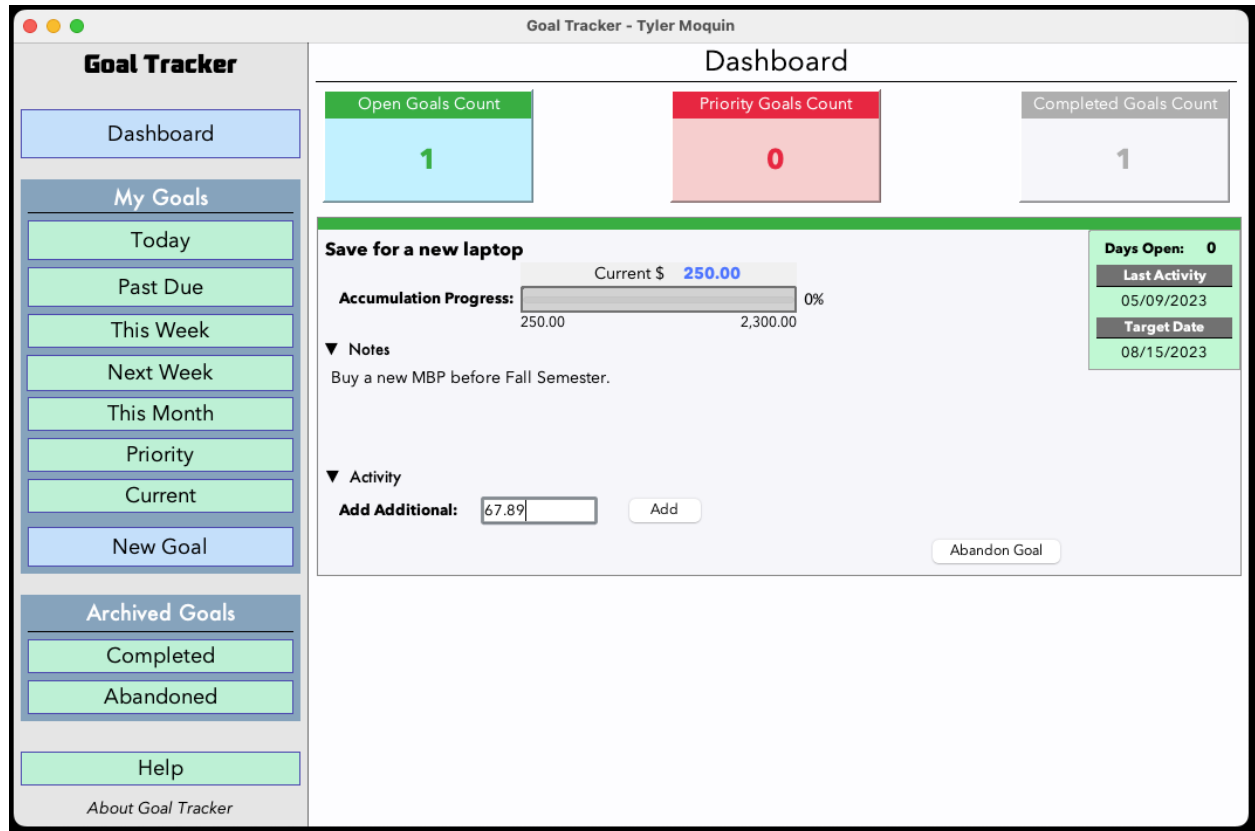
Goals may be edited or worked on from any page on which they appear without leaving the page.
For example:



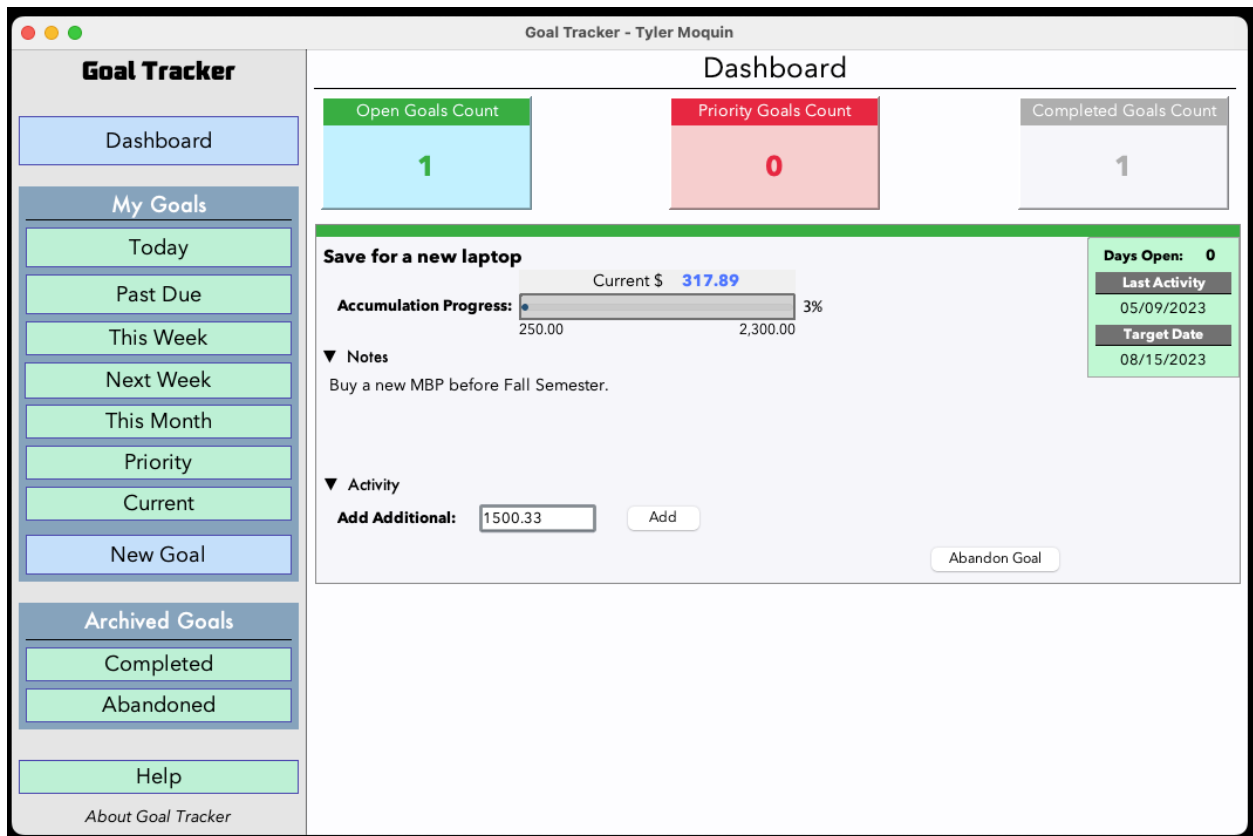
The application allows the user to edit the goal description and the notes associated with a goal simply by clicking on them; pressing Enter while editing the description will save the edits, as will clicking the checkmark button. In order to abandon editing in either the description or the notes field, press the Escape key:



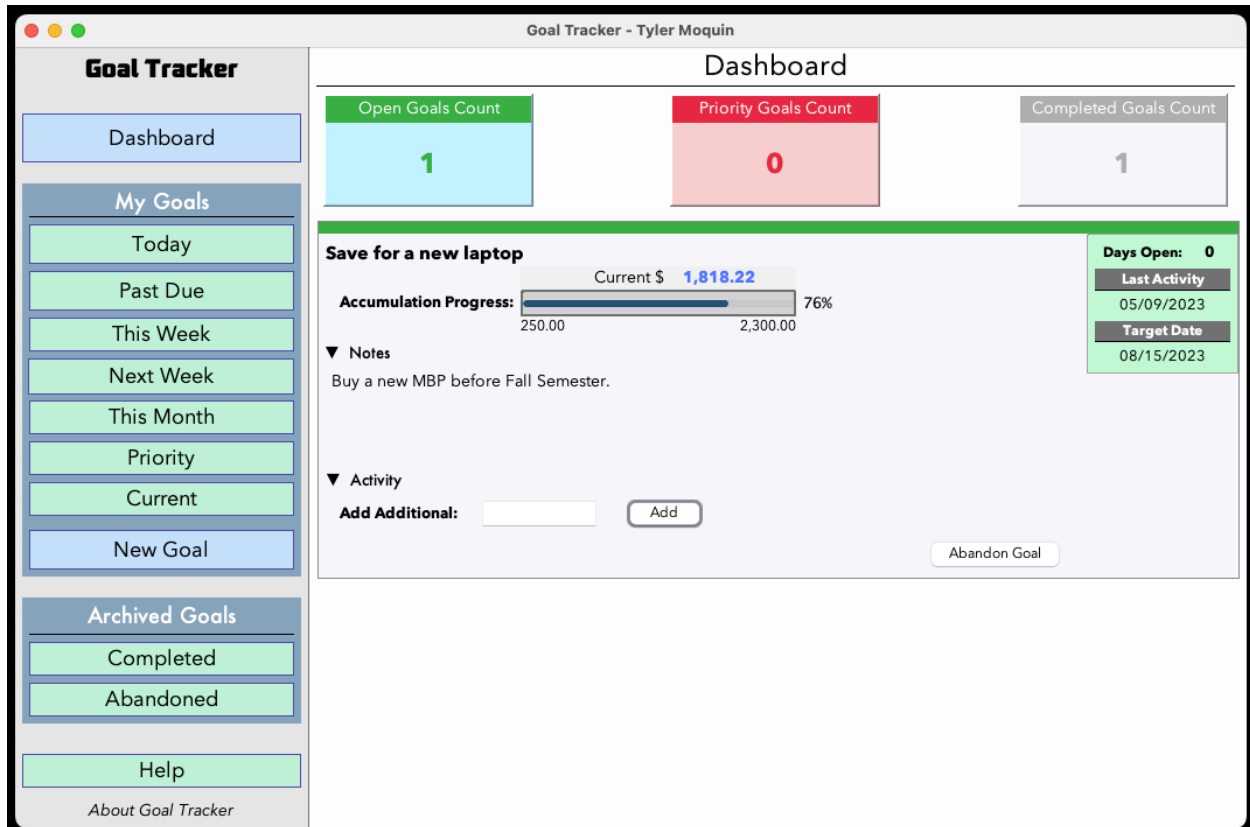
An Accumulation Goal provides the user with a progress bar as well as the ability to incrementally add or subtract amounts towards the target. Note that the application recognizes and correctly handles both increasing and decreasing goal amounts, and the progress bar will work accordingly:



Let's put away some more money for a new laptop:



Once the “Add” button is pressed, the additional amount will be added to the running total; enter a negative number to decrease the total. The progress bar will reflect the current amount that has accrued:



The application also keeps track of the date of last activity and the number of days that a goal has been open; this information is always presented, along with the “Target Date” (i.e., deadline) in the upper-right corner of the goal.

Here we create a Numeric goal:

Goal Tracker

Goal Tracker - Tyler Moquin

Create a New Goal

Description:

Priority:

Goal Type: *add counts towards a goal total*

Details of Your Numeric Goal

Deadline: *(optional) mm/dd/yyyy*

Countdown?: *count down days until deadline? (optional)*

Unit of Measure: *what is being counted?*

Integer Value?: *whole numbers or decimals?*

Current Value: *what is the current value?*

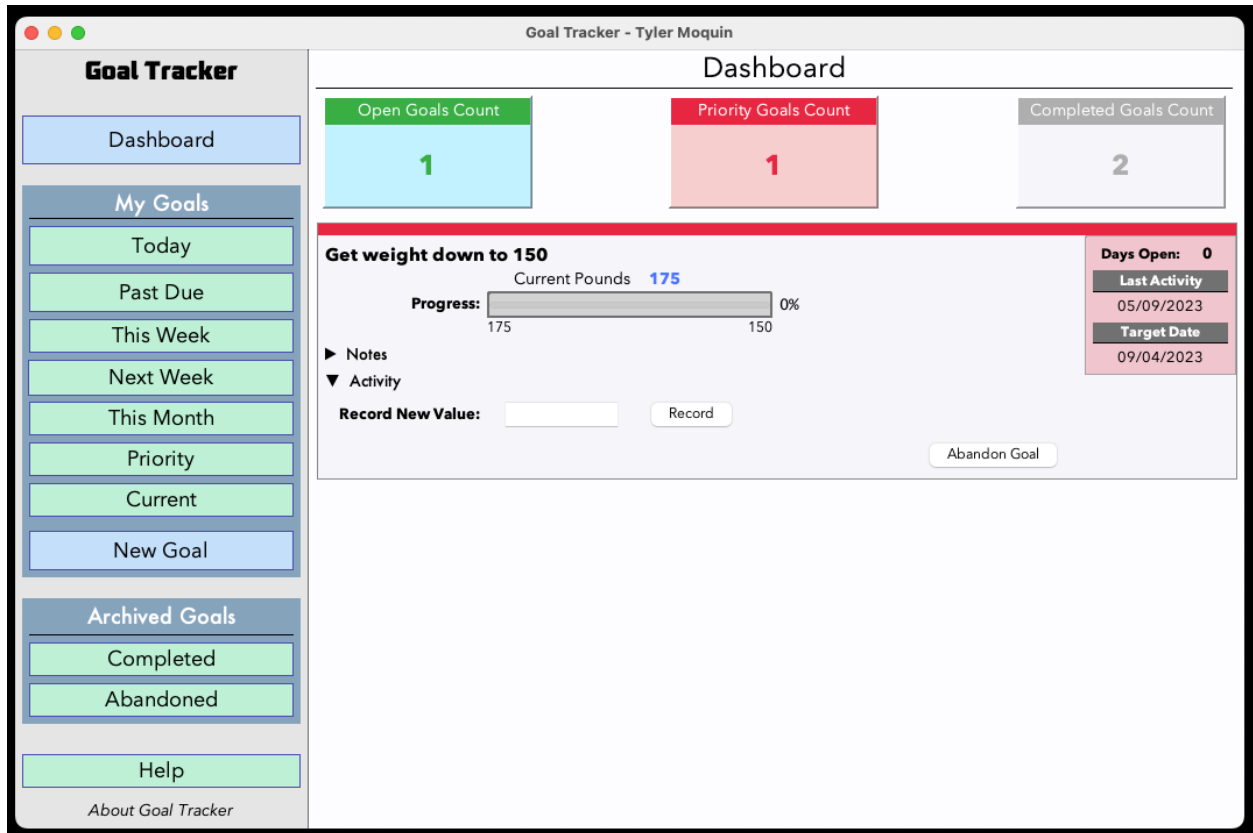
Target Value: *what value are you trying to reach?*

Notes: *(optional)*

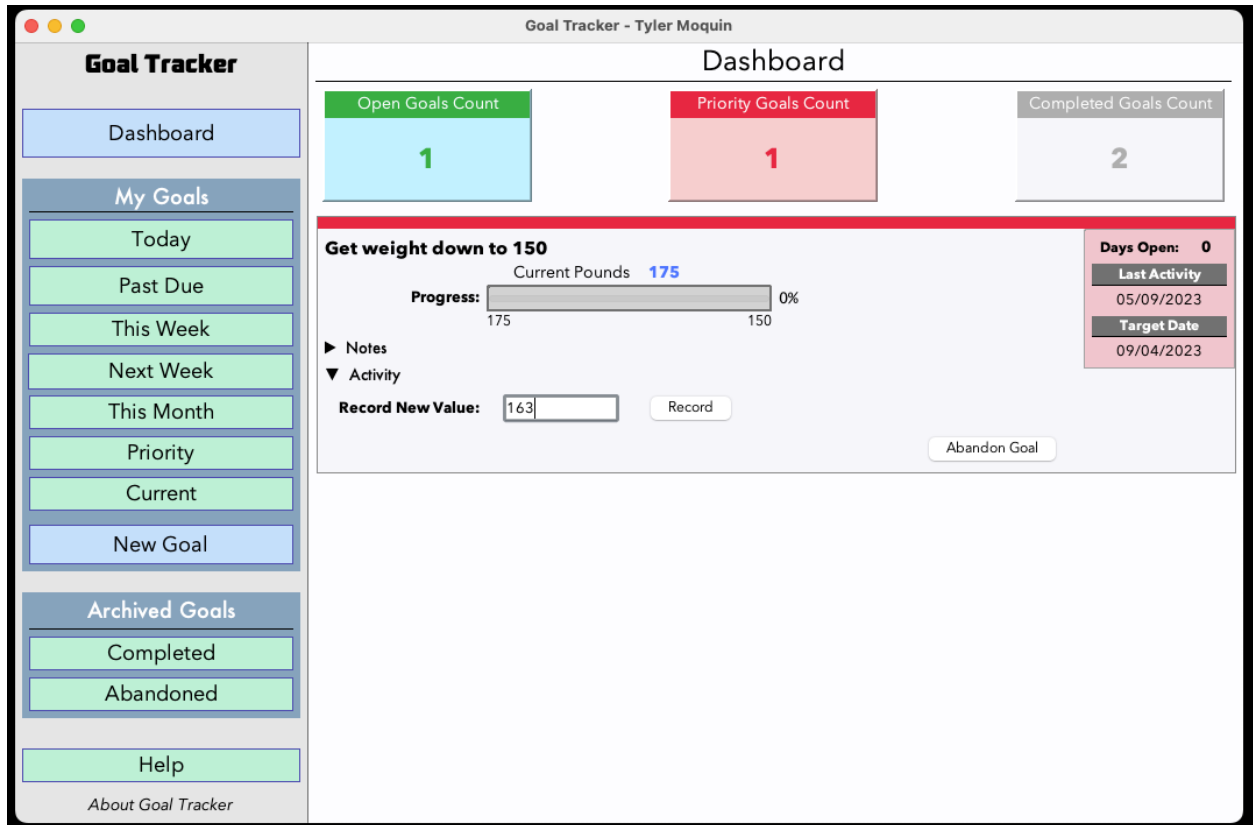
Goal Tracker Sidebar:

- Dashboard
- My Goals**
 - Today
 - Past Due
 - This Week
 - Next Week
 - This Month
 - Priority
 - Current
 - New Goal**
- Archived Goals**
 - Completed
 - Abandoned
- Help
- About Goal Tracker

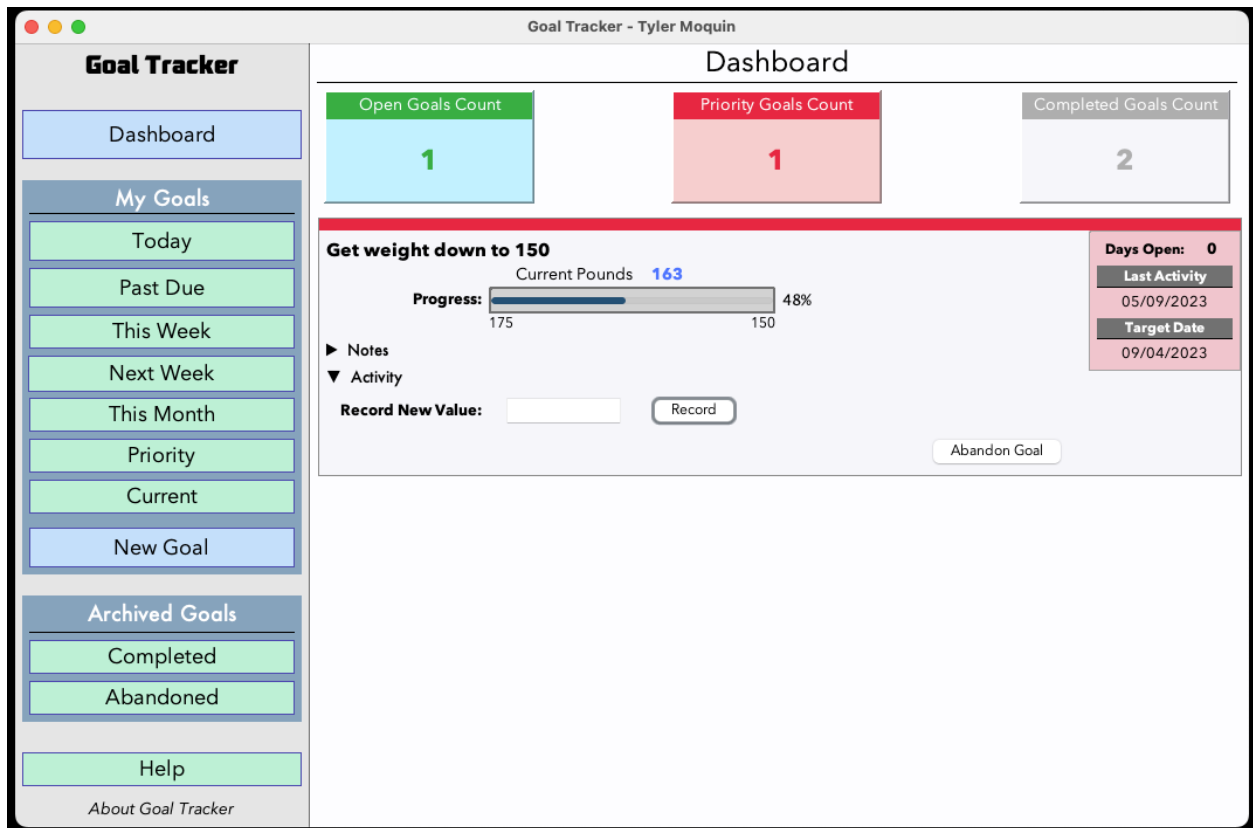
Once created, it will appear on the Dashboard as well as on all other applicable pages in the menu, depending on whether a deadline was specified and how close the deadline is to the current date:



Numeric goals differ from Accumulation goals in that one does not add to a running total; rather, one enters the current value of something as it happens to change. Keeping track of your weight and working towards a target weight goal is a good example:



The progress bar will automatically update when the new value is entered:



Task List goals are an extraordinarily useful feature of Goal Tracker. They allow one to group sub-goals into a single overarching goal and work on and keep track of progress on them as a single entity. You specify the list of tasks that need to be completed as part of a Task List goal by placing each on a line by itself; the application will automatically create subgoals for each task listed this way:

The screenshot shows the 'Goal Tracker' application window. The title bar reads 'Goal Tracker - Tyler Moquin'. The left sidebar contains a navigation menu with the following items: 'Dashboard' (blue), 'My Goals' (blue header), 'Today' (green), 'Past Due' (green), 'This Week' (green), 'Next Week' (green), 'This Month' (green), 'Priority' (green), 'Current' (green), 'New Goal' (blue), 'Archived Goals' (blue header), 'Completed' (green), 'Abandoned' (green), 'Help' (green), and 'About Goal Tracker' (small text at the bottom). The main content area is titled 'Create a New Goal'. It contains the following fields and options:

- Description:** A text input field containing 'Study for Stats Final'.
- Priority:** A dropdown menu with 'High' selected.
- Goal Type:** A dropdown menu with 'Task List' selected, followed by the text 'multiple done/not-done tasks'.
- Details of Your Task List Goal** (Section Header):
- Target Deadline:** A text input field containing '5/22/2023', with the text '(optional) mm-dd-yyyy' to its right.
- Countdown?:** A dropdown menu with 'Yes' selected, followed by the text 'count down days until deadline? (optional)'.
- Task Descriptor:** A text input field containing 'Chapter', with the text 'e.g., "Chapter" or "HW Problem"' to its right.
- Task List:** A text area with the label '(one per line)' in red. It contains the following text:
6.1
6.2
Ch 6 HW
7.3
7.4
7.5
7.6
Ch 7 HW
Practice Exams
- Notes:** A text area containing the text 'Study plan for Stats Final Exam.'
- Create Goal** (button)

Once created, a Task List goal will appear on the Dashboard and on all other appropriate pages in the menu. It will display all the sub-goals as “Tasks” in a collapsible view, where they can be edited directly:

The screenshot displays the 'Goal Tracker' application interface. The title bar reads 'Goal Tracker - Tyler Moquin'. The main window is titled 'Dashboard'.

Left Sidebar:

- Goal Tracker** (header)
- Dashboard** (selected)
- My Goals** (header)
 - Today
 - Past Due
 - This Week
 - Next Week
 - This Month
 - Priority
 - Current
 - New Goal
- Archived Goals** (header)
 - Completed
 - Abandoned
- Help**
- About Goal Tracker*

Dashboard Content:

- Open Goals Count:** 1
- Priority Goals Count:** 1
- Completed Goals Count:** 3
- Study for Stats Final** (Goal Title)
 - Chapter Progress:** Tasks Completed: 0 / 15 (0%)
 - Notes:** (collapsible section)
 - Tasks:** (collapsible section)
 - Not Done 5.1 Notes
 - Not Done 5.2 Notes
 - Not Done 5.3 Notes
 - Not Done 5.4 Notes
 - Not Done Ch 5 HW Notes
 - Not Done 6.1 Notes
 - Not Done 6.2 Notes
 - Not Done Ch 6 HW Notes
 - Not Done 7.3 Notes
 - Not Done 7.4 Notes
 - Not Done 7.5 Notes
 - Not Done 7.6 Notes
 - Not Done Ch 7 HW Notes
 - Not Done Practice Exams Notes
 - Not Done Review Notes Notes
 - Activity:** (collapsible section)
- Days Open:** 0
- Last Activity:** 05/09/2023
- Target Date:** 05/22/2023

Task List goals allow one to change the status of sub-goals (i.e., tasks) using a simple popup menu located to the left of each task. One can also edit the description and expand and edit the notes for each task individually as well as for the Task List goal itself:

The screenshot displays the 'Goal Tracker - Tyler Moquin' application. The interface is divided into several sections:

- Dashboard:** Located at the top right, it features three goal count boxes: 'Open Goals Count' (1), 'Priority Goals Count' (1), and 'Completed Goals Count' (3).
- Goal Tracker Sidebar:** On the left, it includes a 'Goal Tracker' header, a 'Dashboard' button, and two main categories: 'My Goals' (with buttons for Today, Past Due, This Week, Next Week, This Month, Priority, Current, and New Goal) and 'Archived Goals' (with buttons for Completed and Abandoned). A 'Help' button and 'About Goal Tracker' link are at the bottom.
- Task List:** The main content area shows a goal titled 'Study for Stats Final'. It includes a 'Chapter Progress' bar (0% completed) and a 'Tasks' list. The first task, '5.1', is expanded, showing a note: 'This section seems easy. Try doing some of the harder problems in the back of the textbook.' Below this is a list of other tasks, including '5.2', '5.3', '5.4', 'Ch 5 HW', '6.1', '6.2', 'Ch 6 HW', '7.3', '7.4', '7.5', '7.6', 'Ch 7 HW', 'Practice Exams', and 'Review Notes'. Each task has a status dropdown (all set to 'Not Done') and a 'Notes' link.
- Activity Panel:** On the right side of the task list, it shows 'Days Open: 0', 'Last Activity: 05/09/2023', and 'Target Date: 05/22/2023'.

When a task has been completed, simply select “Done” from the popup menu beside it; the application will automatically update your progress and will also provide highlighting to the task to make it easier to discern what still needs to be done:

The screenshot displays the 'Goal Tracker - Tyler Moquin' application. The interface is divided into three main sections: a sidebar, a dashboard, and a task detail view.

Sidebar (Left):

- Goal Tracker** (Header)
- Dashboard** (Button)
- My Goals** (Section Header)
 - Today
 - Past Due
 - This Week
 - Next Week
 - This Month
 - Priority
 - Current
 - New Goal
- Archived Goals** (Section Header)
 - Completed
 - Abandoned
- Help** (Button)
- About Goal Tracker* (Link)

Dashboard (Top Right):

- Open Goals Count:** 1
- Priority Goals Count:** 1
- Completed Goals Count:** 3

Task Detail View (Bottom Right):

Study for Stats Final

Tasks Completed: 5 / 15 (33%)

Chapter Progress: 33%

Notes:

Tasks:

Status	Task	Notes
Done	5.1	This section seems easy. Try doing some of the harder problems in the back of the textbook.
Not Done	5.2	
Not Done	5.3	
Done	5.4	
Not Done	Ch 5 HW	
Done	6.1	
Done	6.2	
Done	Ch 6 HW	
Not Done	7.3	
Not Done	7.4	
Not Done	7.5	
Not Done	7.6	
Not Done	Ch 7 HW	
Not Done	Practice Exams	
Not Done	Review Notes	

Activity:

Days Open: 0

Last Activity: 05/09/2023

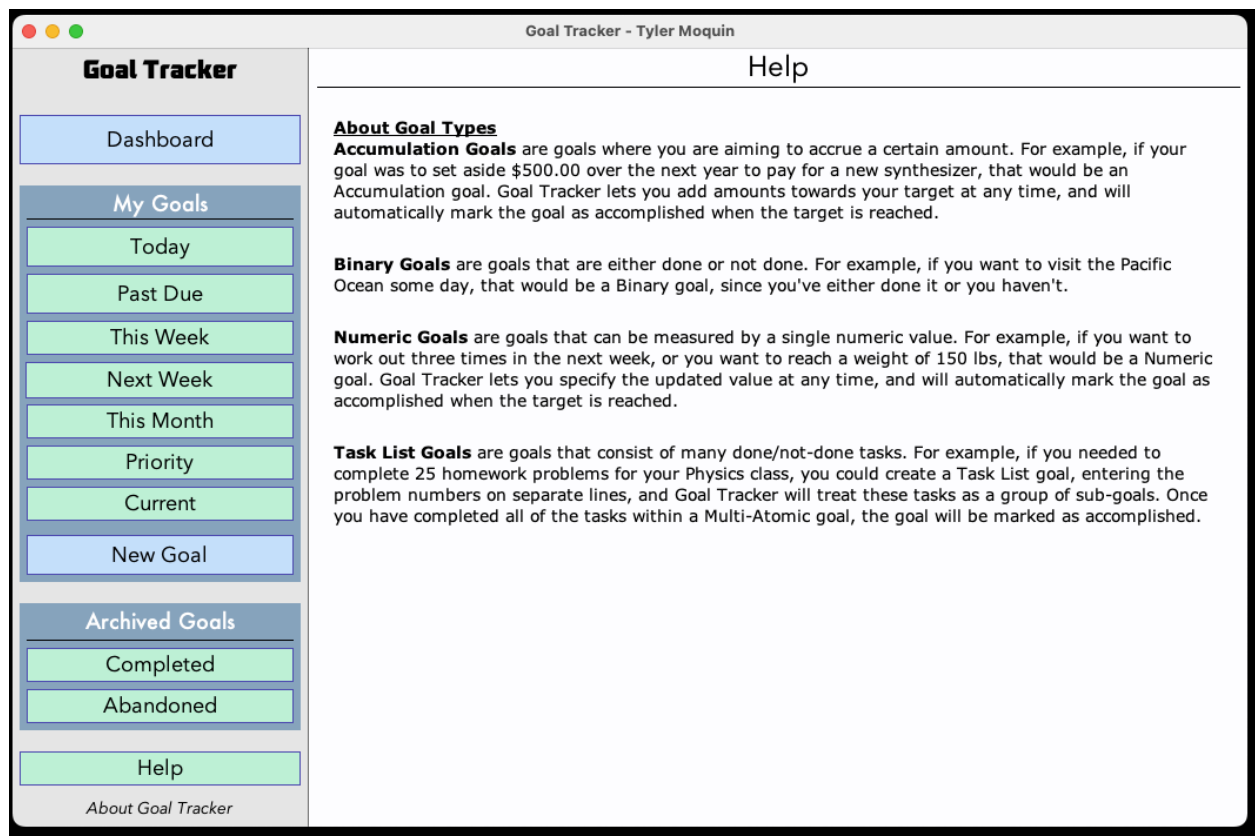
Target Date: 05/22/2023

The application also allows any goal to be “abandoned”; this will move the goal to the Abandoned page in the “Archived Goals” section of the menu:

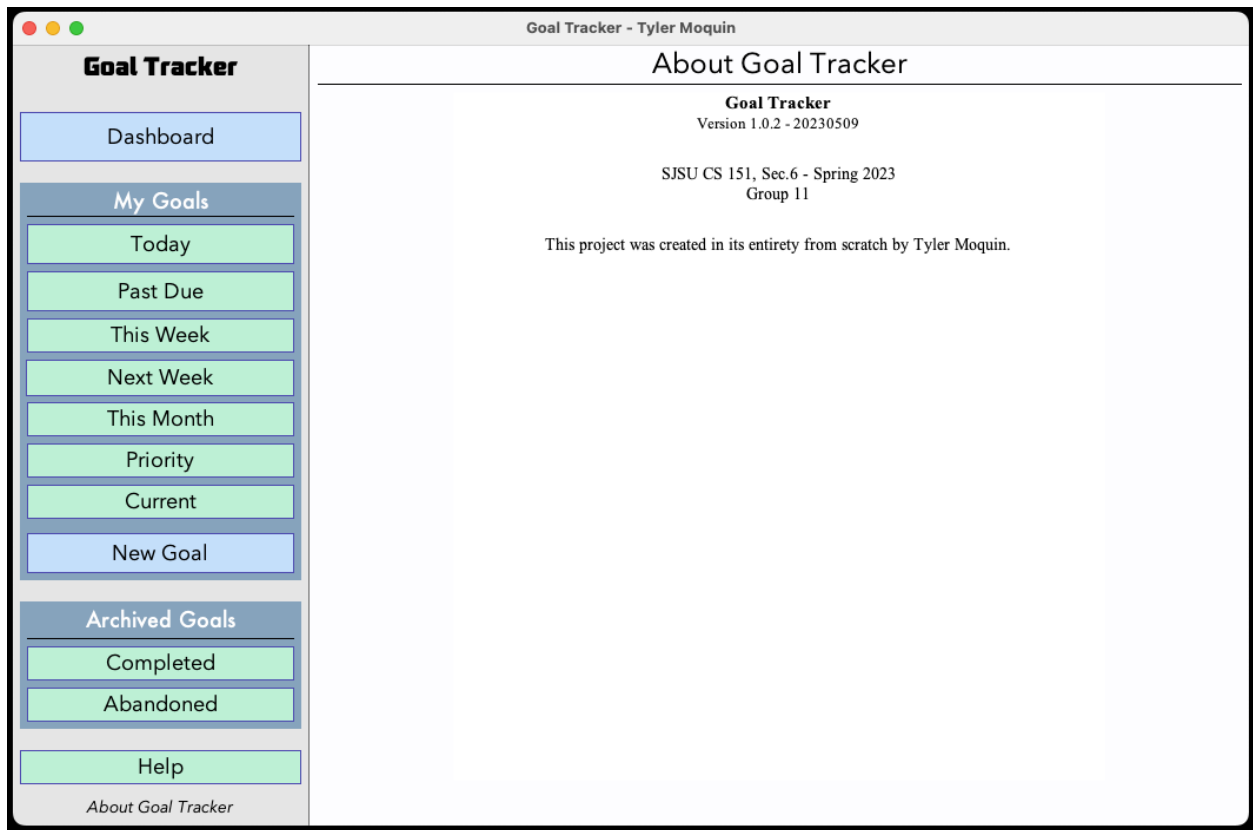
The screenshot shows the 'Goal Tracker - Tyler Moquin' application window. The sidebar on the left contains the following navigation items: Dashboard, My Goals (Today, Past Due, This Week, Next Week, This Month, Priority, Current, New Goal), Archived Goals (Completed, Abandoned), and Help. The main content area is titled 'Abandoned' and displays two goal cards. The first goal, 'Get weight down to 150', shows 'Current Pounds 144' and a progress bar at 124% (from 175 to 150). The second goal, 'Save for a new laptop', shows 'Current \$ 1,151.22' and an 'Accumulation Progress' bar at 43% (from 250.00 to 2,300.00). Both goal cards include a 'Notes' section, an 'Activity' section, and a 'Closed' status indicator (0 for both). The 'Save for a new laptop' card also features an 'Add Additional' input field and an 'Add' button. At the bottom right of the card is an 'Abandon Goal' button. The footer of the sidebar includes 'About Goal Tracker'.

Any goal that has been abandoned may be reinstated as an active goal, provided that it has not already been completed.

Here's the built-in Help page:



And here is the About page:



IDEAS FOR FUTURE DEVELOPMENT

While the application is already extremely useful, I want to enhance it to provide more goal types; to that end, I have already written the classes and the input form classes for several other types of goals. I also intend to enhance the Dashboard to provide the user with more information about goals having an imminent deadline, and perhaps provide some charts or graphs to allow the user to see how quickly they are progressing towards reaching their goals.

FINAL THOUGHTS

I sincerely hope you find my application to be well-designed and useful. I also hope that justice finds a way to prevail in this situation, since, as evidenced by the deletion of all of my code without notice, without permission, and for no reason other than to try to injure me, I did not deserve to be treated this way, at all.

it was an extraordinarily challenging experience putting this together on an extremely tight deadline. Had I been somehow able to predict the malicious and utterly unethical behavior of my teammates, I would have had an order of magnitude more time to devote to making this application something of production quality.