



Functional Overview

My project will be a website that enables users to track data about their happiness every day (essentially a digital journal entry, but with numbers too). The website will create a Google Sheet for each user that signs up (through Google Sign-In), and the user's entries are stored there via the Google Sheets API. Users will also be able to add friends and view their friends' public entries through a feed, and also view analytics graphs that give them a sense of their happiness history. My intended users are anyone who seeks an organized way to reflect on their well-being, but it will be catered towards those who have experience on social media because of the friends and feed features.

Design Overview (low fidelity prototype pictures below)

These numbers correspond with the numbers on the pages of the prototype.

1. After the user signs in with their Google account, their name and email address (and possibly some other data) are retrieved and used to create a new entry in a database table tracking users. A new Google Sheet is also created in the user's Google Drive, according to a premade template made to work with this website.
2. This is the main dashboard that the user can get back to from any logged-in page by clicking the logo in the upper-left corner. They can submit their daily entry, go to their linked Google Sheet by clicking a hyperlink, interact with friends, and observe analytics. Once the user submits their daily entry, the spreadsheet is updated via the Google Sheets API, and that section turns into the section shown on page 6, so they cannot submit another entry for the same day. The "friends" and "analytics" sections are previews that can be clicked on and link to pages 3 and 4, respectively.
3. On this page, the user can add friends, accept friend requests, or view their friends list via the left section, which has tabs to encompass all three functions. A person is only added to the user's friends list if one of them makes a request and the other accepts the request. The user can also view their feed, which contains entries from their friends, but only those that they have chosen to make public via the checkbox on page 2.

4. This analytics page allows the user to view a graph of their data and a combined graph of all their friends' data.
5. This is a simple profile page that allows the user to upload a profile picture and also delete their account, which removes them from all database tables and deletes the spreadsheet from their Google Drive.
6. See the description of page 2.

Happiness Tracker - Logo

[static green bar]

Track. Analyze.]
Reflect.] → black

Awareness leads to happiness.
Optimize with our research-based design.] → gray

Sign in with Google

Background
Image

①

Happiness Tracker ← Logo

[Static green bar]

drop
down
menu

Name ▼
About
My Profile
Log Out

Daily Entry For [Date]

Happiness sliders
Productivity
1 20
Sleep Time (last night)
Wake-up Time (today)

Comment (optional)
↑
placeholder in textarea

☒ Make public to friends

Submit

2

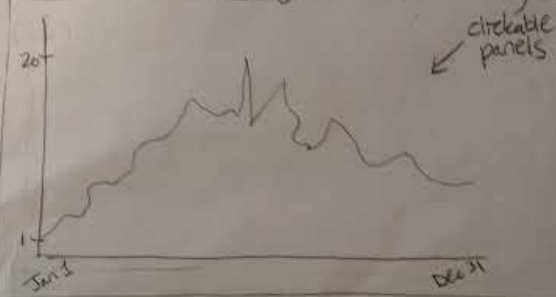
Your Spreadsheet

Link to spreadsheet in Google Sheets

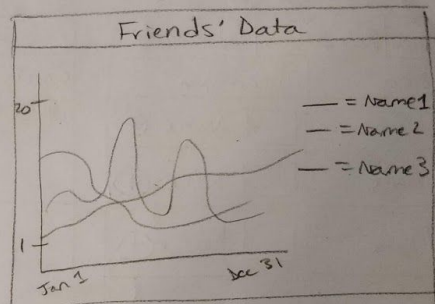
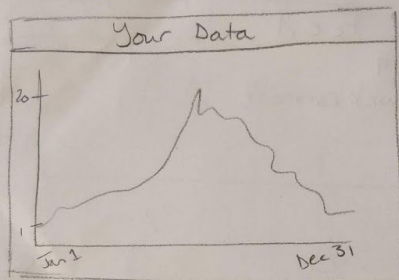
Friends

Profile Pic Name
☐ Name
☐ Name
Preview of first 3 friends

Analytics



Happiness Tracker ← Logo button that takes you to home screen [static green bar]

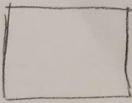


4

Happiness Tracker ← logo button linking to home page [static green bar]

My Profile

Name



Upload

button to upload profile picture

Delete Account

↑

asks if you're sure, then takes you to sign up/in page and removes you from system

5

Daily Entry For [Date]

Nice Job!

Inspirational
Quote

after
submitting
(everything
else on
page is still
there)

6

Design Testing Results

- Akira Nair
 - Said that sleep time and wake-up time fields in the Daily Entry form on page 2 aren't that essential, so I made them optional
 - Said that I should make the Daily Entry form on page 2 inaccessible after the user clicks submit, so I designed the confirmation screen, which is page 6
 - Said that the user should be able to return to the dashboard without having back buttons on-screen or using the browser back button, so I made the logo a button that always takes the user to the dashboard
- Siddharth Hathi
 - Said that I should put a partially-transparent background image on the sign-in page to make it more visually appealing, so I did
- Ryan Tjoa
 - Said to make put the Daily Entry form directly on the dashboard page instead of having a button that links to a separate page, so I did

Prioritization of Features

Will Implement

- Creating a new account via Google Sign-In creates linked spreadsheet in Google Drive according to a template
 - Signing in works properly, sending the user to their dashboard
- Signing out works properly
- Daily Entry form on dashboard page accurately updates the user's spreadsheet and turns into the confirmation section (page 6)
- System to add friends works properly - one person must submit a friend request and the other must accept it to establish a connection
- User can make an entry public to all their friends, so it shows up in their feed
- Profile page (page 4)

Will Implement if Time Permits

- Analytics panel on dashboard that links to an analytics page with graphs of the user's data and their friends' data (page 4)
- Allow user to see their own past entries from their dashboard
- Allow user to share any of their entries with friends after submitting, in case they realize they should have checked the box
- User gets a reminder email if they don't complete the daily entries for 5 days in a row

Database Design

- Users table
 - Rows for every registered user

- Columns: id, name, email, and profile picture name
- Friends table
 - Rows for each friendship
 - Columns: first friend's id, second friend's id
- Pending friend requests table
 - Rows for each pending friendship
 - Columns: requester's id, requested friend's id

Proposed Implementation Schedule

- 11/2 - Learn how to use Google Sheets API with JavaScript
- 11/5 - Write HTML and baseline CSS for pages 1-2
- 11/8 - Fully implement Google Sign-In and the creation of a spreadsheet in user's Google Drive
- 11/14 - Daily Entry form properly updates the spreadsheet (ready for teacher check-in)
- 11/18 - Complete friend request system
- 11/21 - Allow users to check their feed and see entries shared by friends
- 11/27 - Complete profile page and finish remaining CSS (ready for user testing)
- 12/6 - Fix bugs from user testing and add nice-to-have features if time permits

Potential Showstoppers and Open Questions

- If the user manually changes the layout of the spreadsheet linked to the website (deletes columns, etc.), that might cause problems
 - Need to somehow notify the user that they need to fix their spreadsheet
- Will I be able to use the Google Sheets API to directly generate the analytics graphs, or will I have to do that myself with some other graphing tool?
- Might be hard to implement the friend request feature