

# Usability Study Report

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## Usability Study Recordings:

Zhiqian Zhang:

<https://drive.google.com/drive/u/0/folders/1Cqzxx2kz-VaOQL5SMPyNk75qARkWd8cY>

Yuqi Hu:

[https://drive.google.com/drive/folders/1VUeA3Xs\\_rAILQTOrs31dtz1roXLZmu62](https://drive.google.com/drive/folders/1VUeA3Xs_rAILQTOrs31dtz1roXLZmu62)

## Application scope

### Application description:

**Users - Target audience:** (user personas, as specific as possible)

#### User Persona 1: Sarah - The Newcomer

- Name: Sarah
- Age: 28
- Background: Sarah is a young professional who has recently recognized that her social drinking has escalated into a problem. She is concerned about her health, career, and relationships and is motivated to quit drinking for good.

#### User Persona 2: David - The Supportive Friend

- Name: David
- Age: 35
- Background: David is a close friend of someone struggling with alcohol addiction. He wants to provide the best support possible to help his friend overcome this challenge.

#### User Persona 3: Dr. Anderson - The Counselor

- Name: Dr. Anderson
- Age: 42
- Background: Dr. Anderson is a licensed counselor with expertise in addiction recovery. He wants to stay up-to-date with the latest resources and provide guidance to clients seeking help with alcohol addiction.

### **Main tasks - use cases:** (specific, measurable, concrete)

- browse the website freely and guess what this website is about
- register & login
- record the date he/she drink alcohol
- try to navigate the leaderboard
- view resources

Measuring usability for main tasks:

- From scale 1-7(1 is very hard), how easy is it for each task
- how useful(important) & how effective(easy to find)
- overall effective

**Data description:** (what data is stored and displayed)

- Stored
  - username, email, password (hashed)
  - log dates (of drinking)
- Displayed
  - username
  - history of drinking logs
  - streaks (calculated from log dates)
  - leaderboard (usernames and streaks of top 50 users)

## Experiment

### Preparation

Introduction

- Welcome participants and obtain informed consent
- Ask for consent to record
- Ask to think out loud
- Remind them that they aren't being evaluated, and that they can leave at any time
- Ask participant to think like the target audience

Prepare recording setup (audio, video and screen)

Prepare demographics questions (offering the option to refuse to answer any of the questions.  
Only include relevant questions for the target audience)

Prepare Script of the tasks to be read to participants:

- Script for intuitiveness (initial approach):
  - Can you browse the website freely and guess what this website is about?
- Script for registration & login:
  - Imagine yourself as a new user, could you try to register or login?
- Script for log drinking and view drinking history:
  - Imagine yourself as a person with alcohol addiction issues, can you try to record your drinking date?
- Script for viewing personal streak and leaderboard stats:
  - What do you think the leaderboard at the right side of the screen does?

Prepare Post questionnaire Likert Scales (on scale 1 (very ineffective/very hard to use) to 7 (very effective/very easy to use))

- How effective was the application for registration and/or login
- How intuitive/easy to use was the application for registration and/or login

- How effective was the application for logging drinking and viewing drinking history
- How intuitive/easy to use was the application for logging drinking and viewing drinking history
- How effective was the application for viewing personal streak and leaderboard stats
- How intuitive/easy to use was the application for viewing personal streak and leaderboard stats
- How effective was the application overall
- How intuitive/easy to use was the application overall
- Any final comments/suggestions of improvement

## Experiment Notes

### **Participant1: Mengqi Cao (Interviewed by Zhiqian Zhang)**

- Gender: Female
- Age: 22
- Major: Design

#### **Scores (Effective, Useful):**

- Didn't know the main feature(log the drinking dates) before log in
- Register & Login: 7, 4
  - When first time user click login, she expected to register directly rather than getting an error message and clicking the register
- Log drinking date: 2, 2-3
  - Didn't notice the drinking day logged after save -> make the drinking history more noticeable
  - Accidentally logged the same date twice -> may have a delete log or merge same date together
  - Would like to log sober date rather than drinking date
- Leaderboard: 7, 6-7
  - Didn't notice the live time changed when refreshing
- Overall: 6 , 4.5

### **Participant2: Zhuoheng Li (Interviewed by Zhiqian Zhang)**

- Gender: Male
- Age: 22
- Major: Computer Science

#### **Scores (Effective, Useful):**

- Didn't know the main feature(log the drinking dates) before log in
- Register & Login: 6.5/7; 7
  - the nav bar is not that noticeable
- Log drinking date: 7, 4-4.5
  - have been sober for xx day: 4-4.5
  - Would like to log sober date rather than drinking date
  - Worried about maybe the user may cheat on the sober/drinking date

- Leaderboard: 7; 7
  - a little bit slow
- Overall: 6; 6

**Participant3: Yongxin Xu (Interviewed by Zhiqian Zhang)**

- Gender: Female
- Age: 24
- Major: Computer Science

**Scores (Effective, Useful):**

- know the main feature(log the drinking dates) before log in
- Register & Login:
  - 7, 7
- Log drinking date:
  - 6, 7
  - Noticed the sober days function
  - Worried that it'll be hard for person with lower self-control
- Leaderboard:
  - 7, 6
- Overall:
  - 7, 6
  - leaderboard seems stressful for people who has less sobriety days

**Participant 4: Yuxin(Interviewed by Yuqi Hu)**

- Gender: Female
- Age: 22
- Job: Software Engineer

**Scores (Effective, Useful):**

- Guessed the purpose and main functions correctly before log in
- Register & Login:
  - 4, 6 for register; 5,6 for login
  - Mentioned the labeling for input text fields could be confusing
  - The border of text boxes are too light, not obvious enough
  - Validate if username or email is taken before submitting
  - Require strong password
- Log drinking date:
  - 4, 4
  - Entering date with the calendar is not convenient
  - For each drinking data, allow users to enter additional information like what's the occasion and how much they drank
- Leaderboard:
  - 6, 4
  - Load time too long, it's noticeable that it pops up a while after
  - Let user (outside of top 50) view their places on leaderboard
- Resources:
  - 5, 6
  - Add more resources

**Participant 4: Zijian (Interviewed by Yuqi Hu)**

- Gender: Male
- Age: 25
- Job: CS Student

**Scores (Effective, Useful):**

- Guessed the purpose but wasn't sure about main functions before log in
- Register & Login:
  - 7, 7 for register; 7,7 for login
- Log drinking date:
  - 7, 5-6
  - Want more instructions on how to use, a little confusing for first time users
  - Had trouble locating the current streak information
- Leaderboard:
  - 7, 7
  - Also want more info on this functionality
  - Maybe add friends/chat with users on the leaderboard?
- Resources:
  - 7, 7
- Final comments:
  - Maybe include a chat bot to help users

**Participant 4: David (Interviewed by Yuqi Hu)**

- Gender: Male
- Age: 33
- Job: CS Student

**Scores (Effective, Useful):**

- Guessed the purpose but wasn't sure about main functions before log in
- Register & Login:
  - 7, 7 for register; 5,6 for login
  - Maybe ask for more info at login, like age, gender, phone number, etc.
  - Add a message after registration before redirecting to dashboard
- Log drinking date:
  - 7, 5
  - Entering date with the calendar is not convenient
  - Shouldn't be able to enter the same date
- Leaderboard:
  - 7, 7
- Resources:
  - 5, 7
  - Add more resources
  - Add more design to this component, like horizontally scrollable
- Final comments:
  - App icon on the nav bar should bring user to some default place
  - Make it look prettier

# Prioritized list of issues and corresponding changes:

Summarize the most crucial issues and changes proposed and made

Ranked from Must, Should, Could, to Would

**Issue:** Users should be able to delete from drinking logs

**Change:** Allow users to delete any specific drinking log they creates

**Priority:** (Must, Could, Should, Would): Must

**Was implemented? How?** Yes, we added a delete button in the drinking history component, also added a window confirmation to ask whether the user is sure to delete the log.

**Issue:** User can log drinking for the same date and duplicate will appear in history

**Change:** Validate date input before saving to database

**Priority:** (Must, Could, Should, Would): Must

**Was implemented? How?:** Yes, we added a step to check if the user-date combination already exists in the database's sober-logs collection before saving a new log.

**Issue:** Unclear for first time users on how to record drinking dates/use leaderboard, etc.

**Change:** Add information button to display instructions.

**Priority:** (Must, Could, Should, Would): Must

**Was implemented? How?** Yes, added information buttons on login, register, drinking history and leaderboard by adding informationPopover component.

**Issue:** Leaderboard takes too long to load and it suddenly pops up

**Change:** Add a placeholder showing user that leaderboard is loading

**Priority:** (Must, Could, Should, Would): Should

**Was implemented? How?:** Yes. The slowness has something to do with the fact that our deployment database is free tier, which we can't change for now. We simply display a progress indicator as the leaderboard is loading, so that users won't be confused/surprised.

**Issue:** Tasks unclear (whether to login or register and where to do so) for first time users

**Change:** Add navigation messages (links) like "Already have an account? [Login](#) now."

**Priority:** (Must, Could, Should, Would): Should

**Was implemented? How?:** Yes, we added navigation messages in the intro component, the login component, and the register component to clearly let first time user know what are the tasks and where to go.

**Issue:** Users outside of top 50 cannot view their own places on leaderboard

**Change:** Add a label showing user's own place

**Priority:** (Must, Could, Should, Would): Should

**Was implemented? How?:** Yes, we added this part in the leaderboard component. After fetching the current user's rank from the database, that information is displayed with a proper message.

**Issue:** Navbar not that much noticeable when opens the app

**Change:** Use greater contrast in color to make navbar more clear

**Priority:** (Must, Could, Should, Would): Should

**Was implemented? How?:** Yes, we used colors with greater contrast and distinction than before (used to be dark purple and black) for background of the navbar and the general background.

**Issue:** Didn't notice the drinking day logged after save

**Change:** add alert message

**Priority:** (Must, Could, Should, Would): Should

**Was implemented? How?:** When a user logs a date, we show a success message using pop-up alert (after the request's successful and component re-rendered).

**Issue:** The streak is not noticeable enough

**Change:** change the location and font style and/or size

**Issue: Priority:** (Must, Could, Should, Would): Should

**Was implemented? How?:** Yes. First, we make the entire message ("You have been sober for xxx days") bigger. Also, we make the number of days a different, contrasting color, so that users can immediately notice it. We did the same thing for the user's rank on leaderboard.

**Issue:** App icon on nav bar has no function

**Change:** if not logged in, it should bring user back to the introduction; if logged in, to the dashboard

**Issue: Priority:** (Must, Could, Should, Would): Should

**Was implemented? How?:** Yes, we added navigation functionalities to the navbar icon, clicking on it will take user to the "base" (introduction if not logged in; otherwise dashboard) view.

**Issue:** Input fields for login and register process are not clear enough

**Change:** Add placeholders in the text box to specify expected input

**Priority:** (Must, Could, Should, Would): Should

**Was implemented? How?:** Yes, we added placeholders in each text box to remind users of what to enter. For the credential input for login, the placeholder changes based on chosen credential type (username/email).

**Issue:** The process of record drinking date isn't convenient enough

**Change:** Change the calendar to plain text input (mm/dd/yyyy)

**Priority:** (Must, Could, Should, Would): Should

**Was implemented? How?:** Yes, we removed the data picker (calendar) and simply ask users to type in the date. If the data is invalid (wrong format, future date), user will be alerted.

**Issue:** Prefer to have log sober date rather than drinking date

**Change:** Change log dinking date to log sobriety date

**Priority:** (Must, Could, Should, Would): Could

**Was implemented? How?:** No. We feel like only recording drinking days is less effort for users, which make early quitter more likely to keep using the app.

**Issue:** User can register with dummy passwords like 123456

**Change:** Require strong password using client side validation

**Priority:** (Must, Could, Should, Would): Could

**Was implemented? How?:** No. The security level is okay for now. Our users do not have any sensitive information stored on their accounts. We will consider requiring strong password or other ways of logging in the future.

**Issue:** Only 3 resources might be too few

**Change:** Add more resources

**Priority:** (Must, Could, Should, Would): Could

**Was implemented? How?:** Yes, to better help users quit drinking, we added 3 more useful resources that they can refer to.

**Issue:** Need to re-enter information if try to register with existing username/email

**Change:** Validate if username/email is taken on client side

**Priority:** (Must, Could, Should, Would): Would

**Was implemented? How?:** No. For now the only way we know to implement this is an api that responds with all existing usernames/emails. Implementing this feature would mean that even unauthenticated ones can get all existing usernames/emails by sending the request.

**Issue:** Want more information in drinking history

**Change:** Allow user to add occasion and amount of alcohol for drinking logs

**Priority:** (Must, Could, Should, Would): Would

**Was implemented? How?:** No, this is a very good point and it will make the app to better provide help to our users. But this is currently out of scope for our app. We will consider implementing this in the future.