ECHO THOUGHTS

A New Way of Remembering

B IMD 351

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Essence Statement

Echo Thoughts is an app that will provide resources suited for college students to reinforce their daily academic tasks.

By including tools to remind daily task, stimulating cognitive games, and studying tools/ tips, college students can worry less about forgetting tasks and potentially improve both their academic studies along with their memorization skills.

Why are we creating this App?

As college students, we constantly find ourselves forgetting tasks. Ranging from simple tasks like bringing something for a class activity to forgetting to study for a major exam. There is always something we tend to forget due to our busy lifestyle.

So, why can't we remember these tasks?

How can we improve our memory?

What resources can we use?

These are some of the main problems and issues that we want to tackle with this app.

By conducting a survey research, we found that a high number of participants had issues related to school, work, and personal life responsibilities. So, we decided to create a tool to alleviate people's stress along with potential issues that might be the causes that makes them forget information.

What are the reasons for our choices on the 3 main features showcased in the app?

As fellow college students, we wanted to focus on resources that a college student will likely want when they think of an app that helps with memory. This is why we came up with 3 main functions: Reminder Schedule, Mind Games, and Focus Study. The Reminder schedule is a tool to organize the user's daily tasks which can be hectic when it comes to schoolwork and work. The Mind games are to help users relax from daily stress while providing games that are currently being used to potentially improve memory. Since the application will be free, it is a better alternative source than popular memory apps that has subscription costs. Lastly, the Focus study is to let users have a tool to not only help them learn to study efficiently but also learn more about the scientific research behind how memory works

What does "Echo Thoughts" Mean?

The idea behind the name of the app is that "memory" is essentially a replay of our sensory information. Like an echo, our app will help students replay information in different ways.
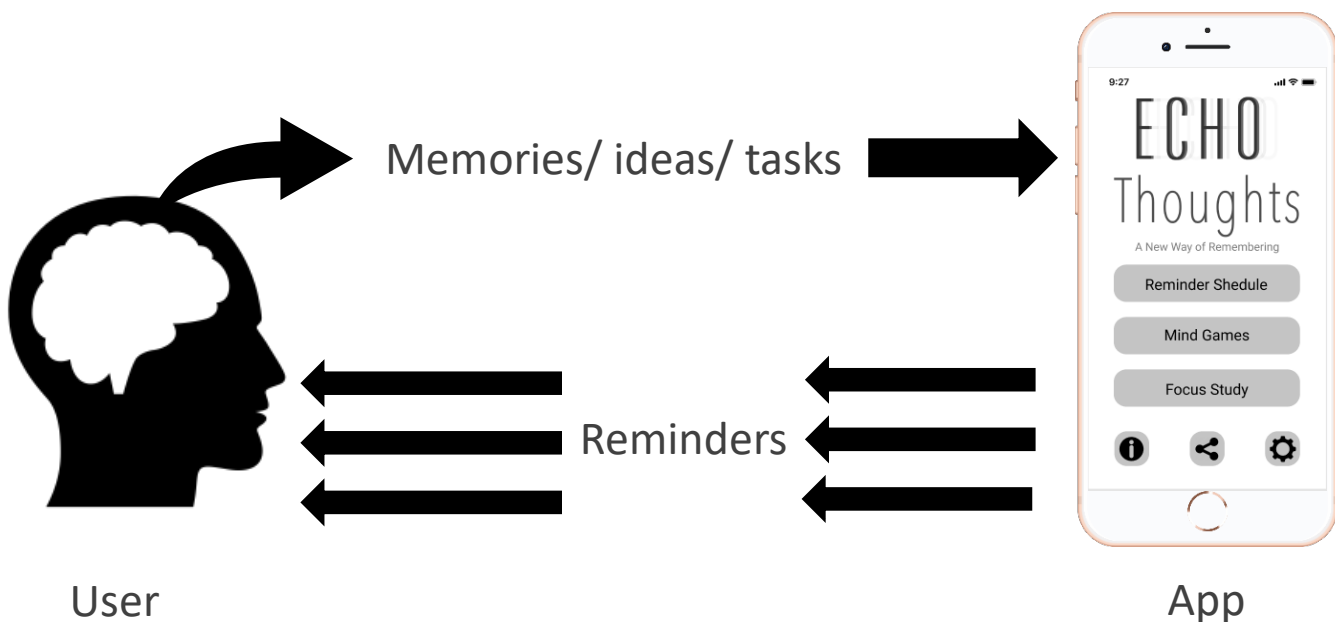
Product Goals

Users will be able to:

-Have s higher completion rate of their daily tasks after using the Reminder Schedule function.

-Learn more about what "short term memory" is and why it is a relevant issue.

-Explore different methods to improve or reinforce their memory through games and offered tools.

-Have resources adjusted to the user's needs by narrowing down the functions the user finds most effective.

User Research Methodology

When we conducted research for our product, we used mixed methods to gather better information about our potential users. For our research, we decided to ask broad questions that can be answered by any age group to get a general idea of what type of potential issues we can target. The general ideas we wanted to ask were:

-Stress levels and causes

-Studying and ability to focus (remember Information)

-Confidence in memory and dependence on technology

-sleep deprivation

-Inheritable diseases related to memory loss

-substance usage

Why did we ask these specific types of questions? After a while of researching articles about short term memory, we found that a lot of mental health issues are interrelated with the potential to affect each other. Stress levels are potential issues that can negatively affect the ability to focus which then loses the quality and quantity of information remembered. By looking at confidence in memory and the dependency of technology, we wanted to see if technology could be a potential cause of memory loss. For sleep deprivation, we know that the process of sleep is for the brain to maintain itself and convert recent memories into long term memories. By seeing how much of the participants have average sleep time below the recommended 8+ hours, we wanted to see if sleep was a factor in the increase of memory loss. For inheritable diseases and substance usage, there are extra data points to find any relatable trends within the group of participants.

<u>Our research results</u>

All the results discussed here will be shown in the appendix area.

After conducting the survey for a few weeks, we received a total of 22 participants in our survey. All the participants fit in the age group that is considered "college-aged students". There was also an almost perfect even distribution between female and male participants.

Stress levels and causes:

When we asked the participants to rate their daily stress levels between 1-10 (1 being not stressed while 10 being extremely stressed) it was predictable that the data would have more people on the stressed side. Surprisingly there were 3 participants that had stress levels of 1&2 which isn't often seen in most college students. When we asked about the causes for the higher stress levels, a lot of participants mentioned 5 different reasons why they're stressed. Those reasons are:

-Homework, tests/exams, school in general

-Work, internships, future careers, finding/applying for jobs

-Socializing, family/friend relationships, responsibilities

-Bills (food, housing, medical, etc.)

-Mental and physical health

Studying and ability to Focus:

We asked how confidant participants are at focusing on studying with a rating of 1-5. The responses were surprisingly close to a normal distribution showing that there is likely something that reduces the ability to focus on studying (which was later confirmed with moderate-high dependence on technology). We then asked for the methods most participants use to focus so we could potentially implement these methods in our app to help users remember better.

Confidence in Memory/ dependence on technology:

From the results of the participants rating their own confidence on whether their memory improved, remain the same, slightly decreased, or gotten worse over the last 3 years. We found that only 4.6% of the participants replied with their memory improved. More than half of the participants replied with memories remaining the same (54.5%) while the rest replied with poor to worse memory in the last 3 years. This means that 40.9% of the participants feel like their memory isn't as good in the recent 3 years. These results show that there is likely an emerging issue with memory. We then asked how depended the participants are with electronics for remembering daily tasks which showed an overwhelming normal to moderate high dependency. This is both a positive and negative result because we can assume that the app would be practical for these participants, but it may also mean that the users would highly depend on technology to remember things rather than using it to improve their memory.

Sleep Deprivation:

As expected, the majority of the participants (68.2%) had an average of roughly 6-8 hours of sleep which is normal for a college-aged student. 22.7% of the participants had 3-5 hours of sleep which is surprisingly a large amount of the participants showing that sleep could be a potential problem to memory loss. Only 9.1% of the participants replied with 9+ hours of sleep which is within the predicted range.

Inheritable diseases related to memory loss:

A large number of participants replied with no close blood relatives diagnosed with Alzheimer's or dementia(63.6%). Another 13.6% replied that they don't know if any of their blood relatives were diagnosed with these health issues. This means that the data is not likely to be a major factor in short term memory for college-aged students.

Substance Usage:

A large majority of the participants replied to not consume any alcohol or rarely any. This means that alcohol isn't a high potential factor in causing any impact on noticeable memory loss. When we asked if users smoke a lot of marijuana or not, an overwhelming 59.1% replied to never have smoked marijuana. The remaining participants were fairly scattered between rarely to high usage of marijuana. We concluded that the results of these two questions showed that they aren't important enough to become a primary focus in our app.

Conclusion:

We found that there is definitely an issue with memory within the small group of participants. By having all these different questions, we were able to find what types of resources we should focus on when creating the app to suit the participants.

User Persona

Sally Musso
Primary user

Background Info:
Sally Musso is an undergraduate student at the University of Washington. She is currently focused on trying to graduate while balancing her work and social life. She has trouble prioritizing her schoolwork because she often forgets to study and rather hang out with her friends. She doesn't know what path she's going to take after school because it stresses her out so she doesn't think about it and tends to live in the moment.

Reason For Using the App:
- Tired of waking up and not remembering anything
- Need reminders to study and finish assignments
- Wants to improve her studying skills

Age: 21

Occupation: Student & Barista

Hobbies: Binge watching Netflix shows and cooking

Personality characteristics:
Outgoing, friendly, and loves kids

User Goals:	Strengths:	Weaknesses:
- Improve memory - Pass her classes & Finals - Balance out her Lifestyle	- Social - Positive thinker	- Parties - Forgetful - Procrastinator

Theo Santos
Primary user

Background Info:
Theo is an undergraduate at the University of Washington. He often loves creative thinking and wants to expand on the ideas that come into his mind. Every day he brings a notebook around to jot down a new story idea or random ideas for his classwork, but he finds himself forgetting a lot of things just because his notes were all disorganized and scrambled. He has always been looking for an app that can be both stimulating and helpful to organize his ideas and task.

Reason For Using the App:
- Constantly having too many ideas and tasks to remember
- Need something to stimulate his creative thinking

Age: 23

Occupation: Student & Cashier

Hobbies: Reading, Hiking, Creative writing, and Drawing

Personality characteristics:
friendly, curious, imaginative, scholarly

User Goals:	Strengths:	weaknesses:
- Become more Efficient - Gain organizational skills	- Creative thinker - Loves to explore new productive Apps	- Disorganized - Easily distracted - Slow at recording information

User Persona cont.

The personas created for this product are mainly focus at different types of College students:

The Scholar/ Critical Thinker (primary):

For these types of people (like Theo), they would want to look for a tool that can help organize their schedules and thoughts. If possible, they would like the tool to be flexible to allow personalization to suit the types of notes and reminders they would like to receive. The tools would also have to be efficient at providing feedback so that the user knows they can trust the app to aid their thinking processes.

The causal student (primary):

These users (Sally) are part of majority of the College Students. These types of students are already busy enough trying to finish their course works and maintain their internship/ part time jobs. This type of users would want an app that has a high potential of helping them improve their memory and studying skills.

Other Potential Personas:

Company Employee (secondary):

They would likely use the reminder schedule function to set reminders for their everyday activities or business plans (work assignments with deadlines, meetings, etc.)

Students K-12 (secondary):

These users would less likely use the app unless they find it effective enough to improve their grades. They would likely focus on the Mind Game function since they would often prefer to play entertaining games rather than use tools for academic reasons.

Storyboard
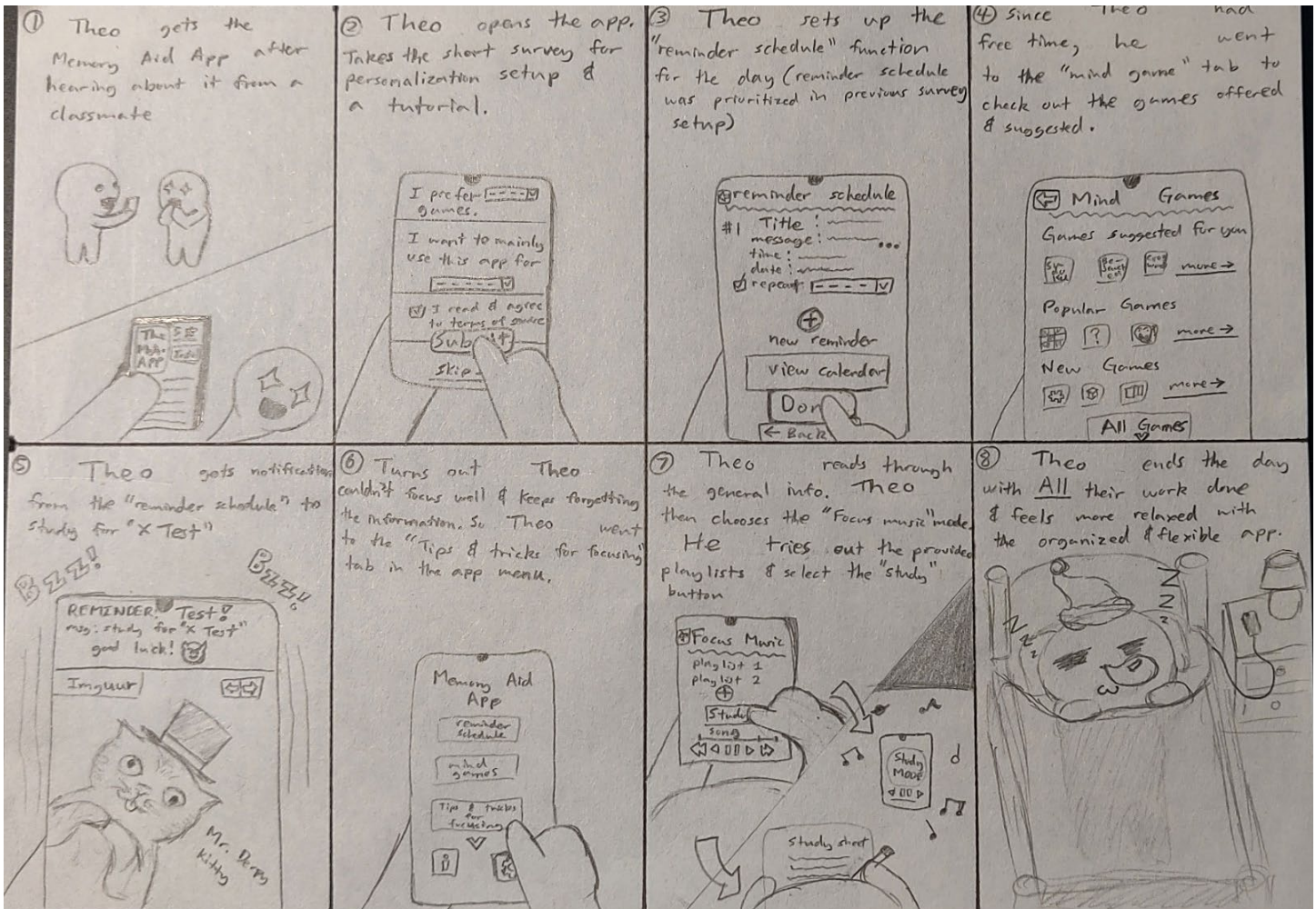
Storyboard text:

Theo gets the Echo Thoughts app after a classmate introduces the app to him.

1) When Theo opens the app, he registers as a new user and completes the optional "App personalization survey". He encounters questions like "what are your preferred games?" , "I mainly want to use this app for _____ function", etc.
2) Theo then tries out the Reminder Schedule function for the day. (He also chose the reminder schedule as the primary function he wanted to use in the personalization survey)
3) Since he had free time, Theo decided to try out the Mind Games function to see what interesting cognitive games are introduced in the app.
4) After a few hours later, Theo receives a notification from one of the tasks he recorded in the Reminder schedule function. It notifies him to study for x test.
5) Since Theo couldn't concentrate, he decides to try out the Focus study function to see what resources are offered.
6) After looking through the general information on how to focus, Theo decides to try out the "focus music" tool that blocks all phone distraction and plays music suitable for studying (lyric-free and not too noisy).
7) Theo ends the day with all his work done. He feels more relaxed than usual after using the app to organize his daily tasks

Prototype
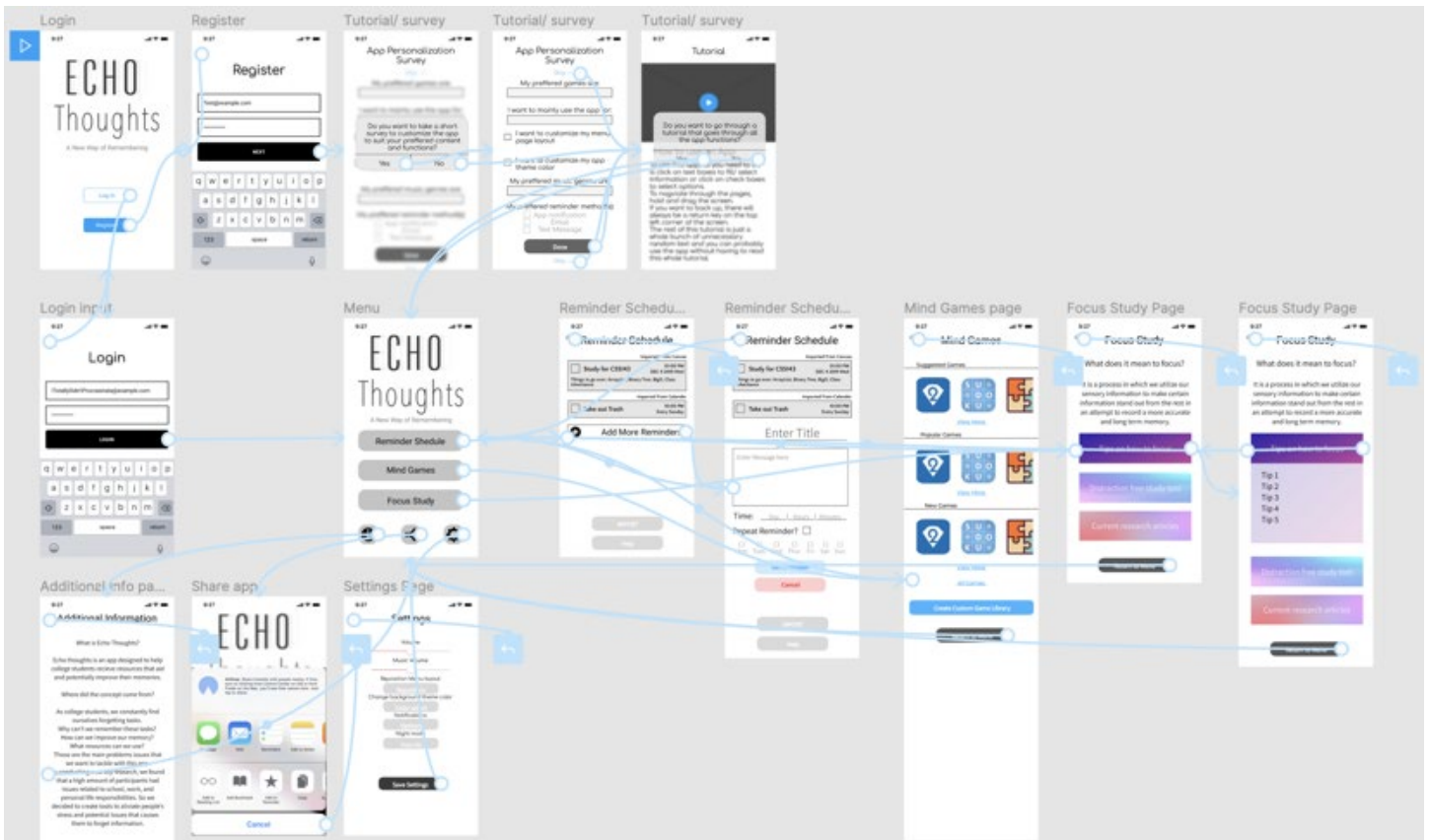
Link to the interactive prototype sample:

https://www.figma.com/proto/Cy1b7IGKzPIxBYWnolI2uS/Echo-Thoughts-prototype?node-id=1%3A22&scaling=scale-down

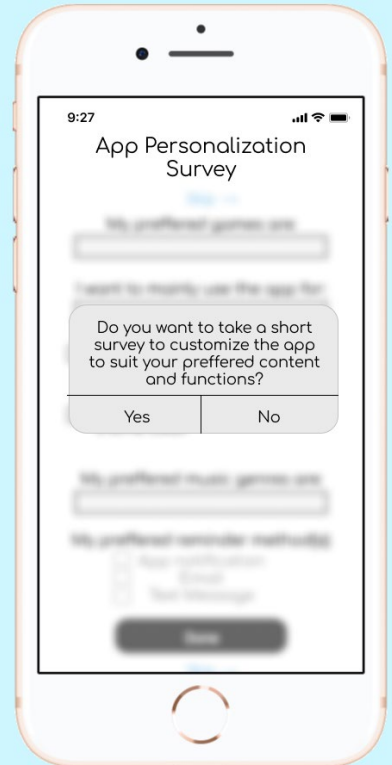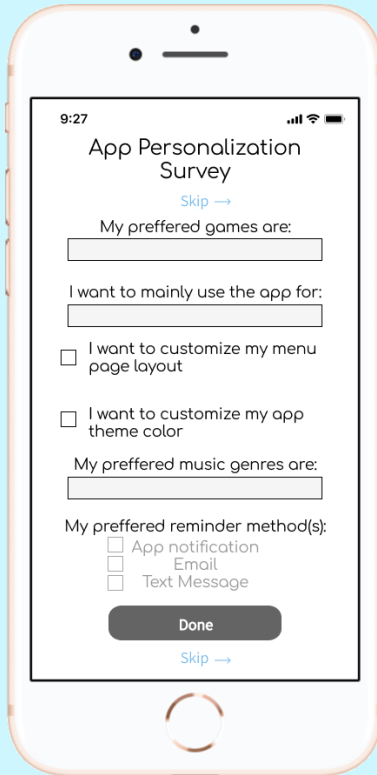Shorter link:

http://bit.ly/EchoThoughts
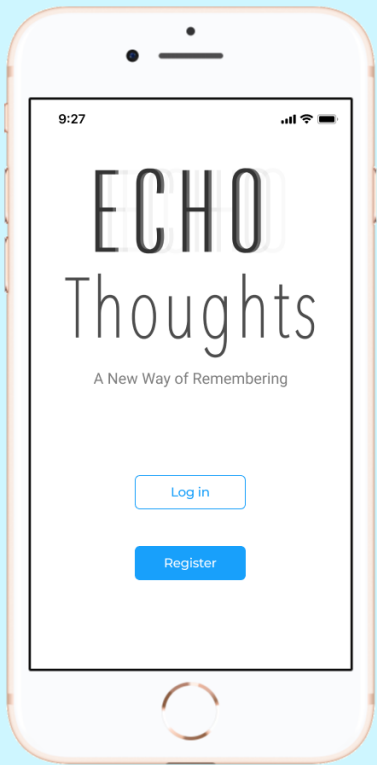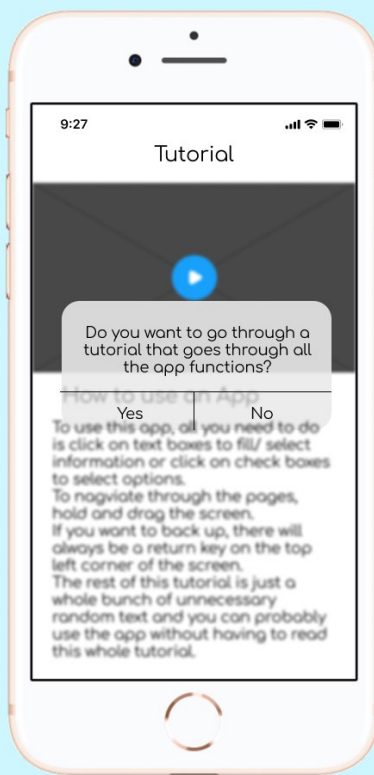
App Menu
(New downloaded app)
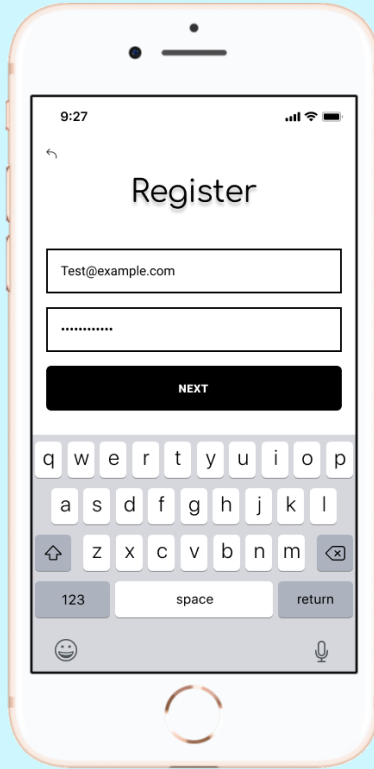
Register page
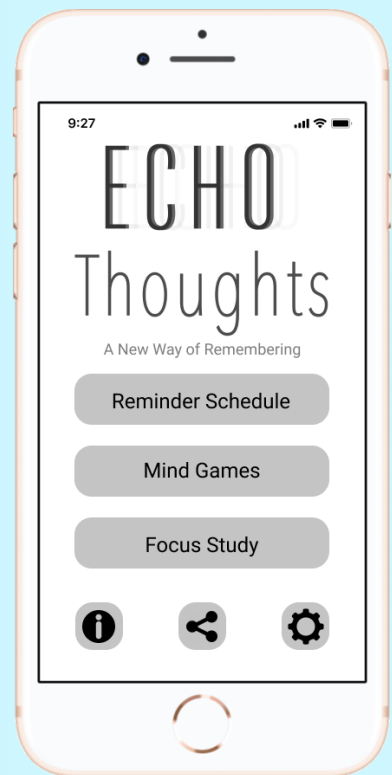(Identical to Login page)

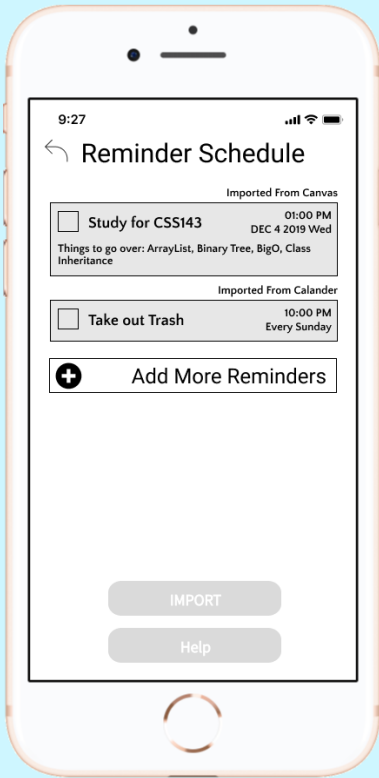App personalization
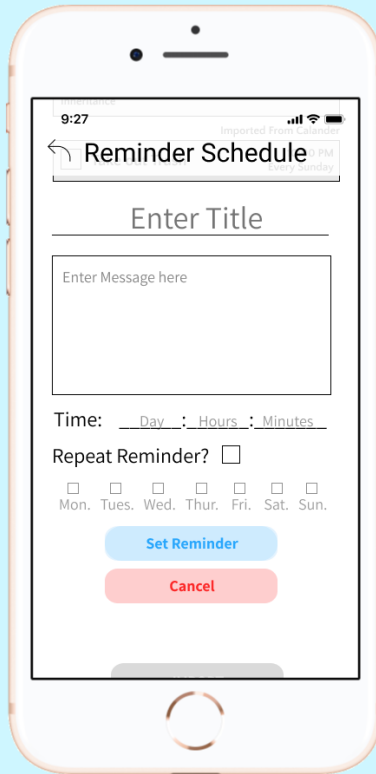confirmation

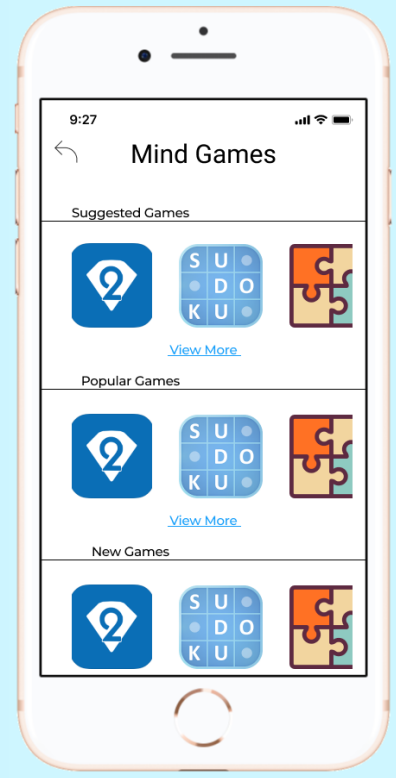
App Personalization
Survey sample

Tutorial sample

Main App Menu
(default looks)

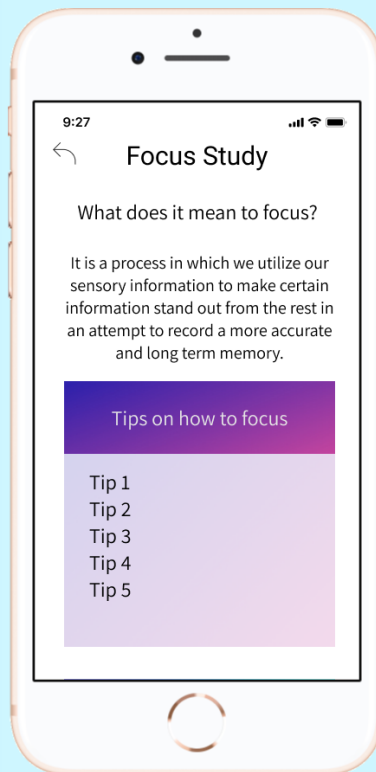Reminder Schedule
check list

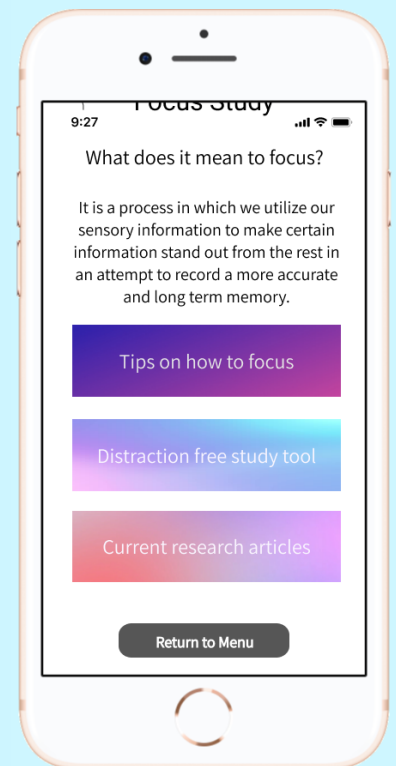Reminder Schedule
creation sample

Mind Games menu
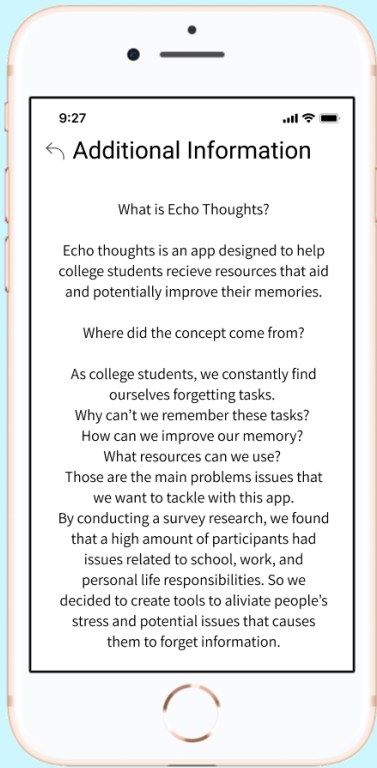(default looks)
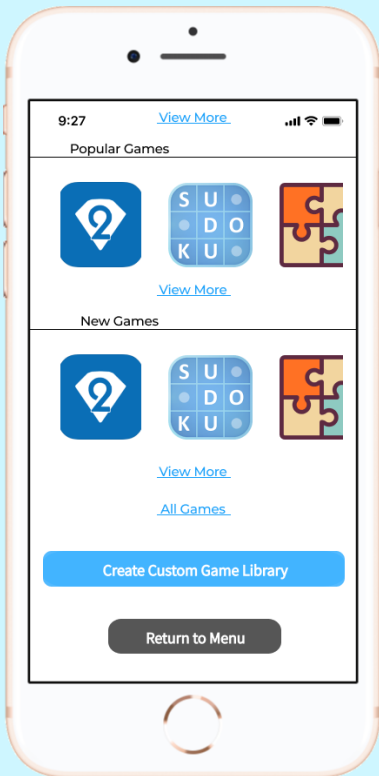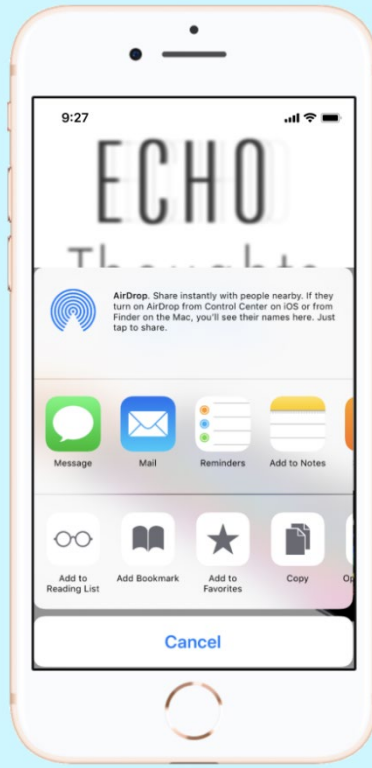

Mind Games menu cont.
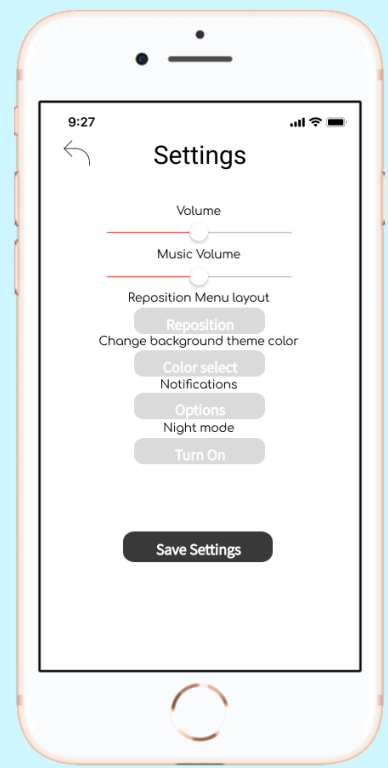(default looks)

Focus Study sample

Focus Study sample
cont.

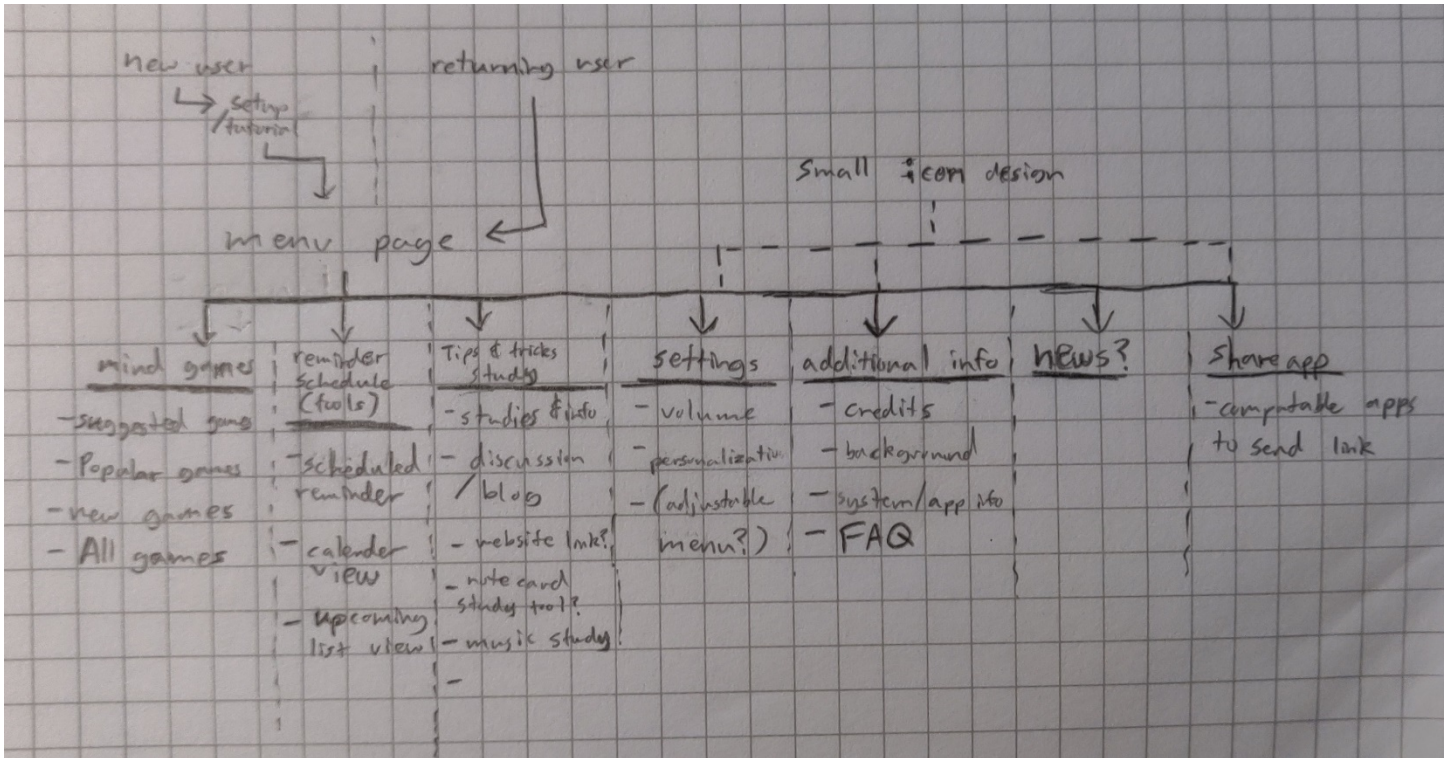## Additional Information page sample

Share button sample

Settings sample

Appendix

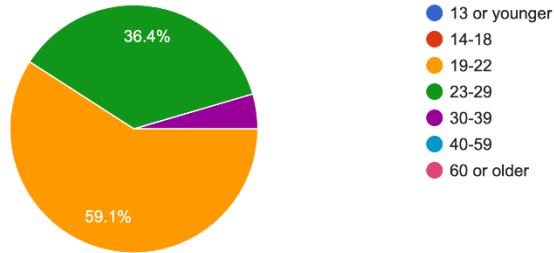## General flow of app content

new user   returning user
  ↳ setup
    /tutorial

                              Small icon design

menu page ←

mind games | reminder | Tips & tricks | settings | additional info | news? | Share app
           | schedule | study | | | |
           | (tools) | | - volume | - credits | | - compatable apps
- suggested game | | - studies & info | | | | to send link
           | scheduled | - discussion | - personalization | - background |
- Popular games | reminder | /blog | | - system/app info | |
           | | | - (adjustable | - FAQ | |
- new games | - calender | - website link | menu?) | | |
           | view | | | | |
- All games | | - note card | | | |
           | - upcoming | study tool? | | | |
           | list view | - music study | | | |

Sample of notification system

[Logo] Reminder Title

Message...

Date: X/XX/XX   Time: XX:XX AM/PM
Repeating on X Day   XX:XX Time
[Snooze X min]   [Close Reminder]
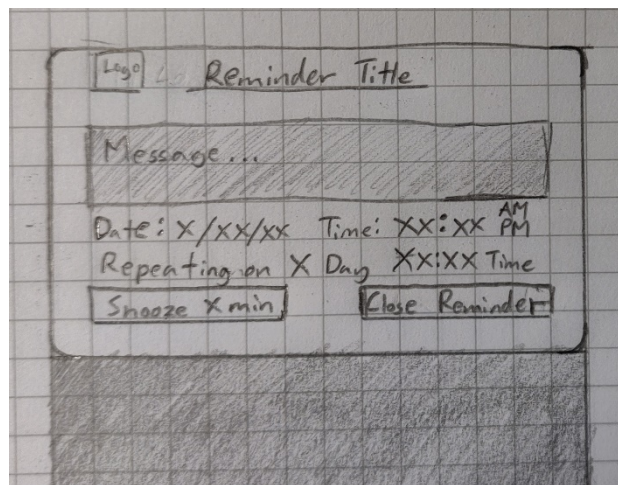
Survey Results

What is your age?
22 responses

- 13 or younger
- 14-18
- 19-22
- 23-29
- 30-39
- 40-59
- 60 or older

36.4%

59.1%

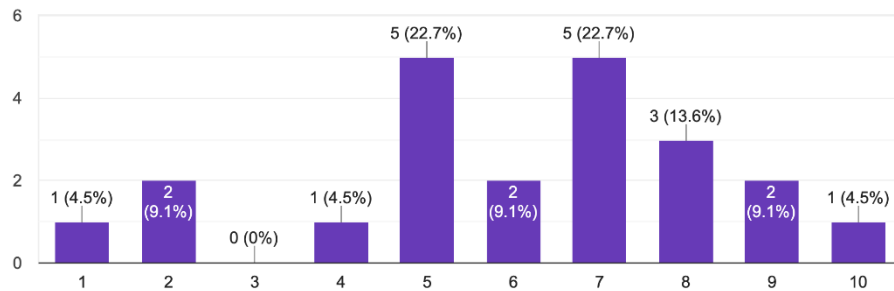## What is your gender?
22 responses

- Male
- Female
- I don't want to say

45.5%

54.5%
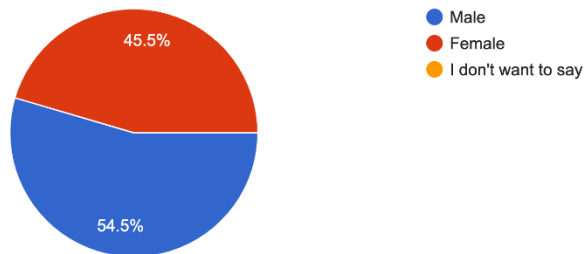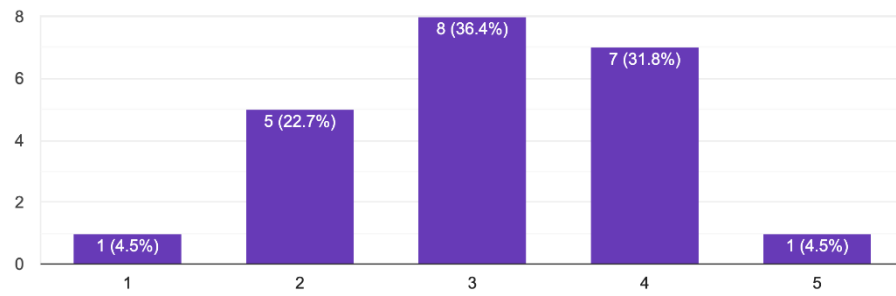
How stressed are you on a daily basis?
22 responses
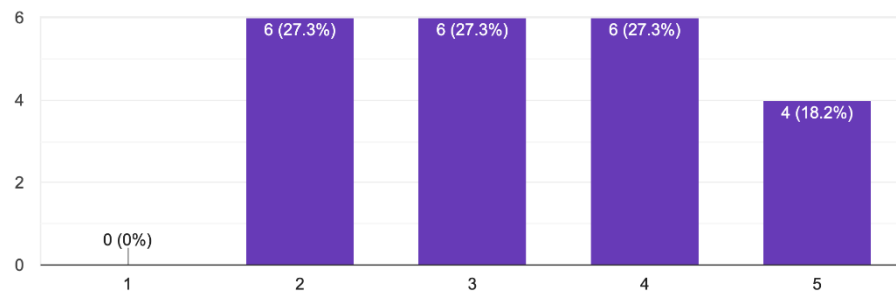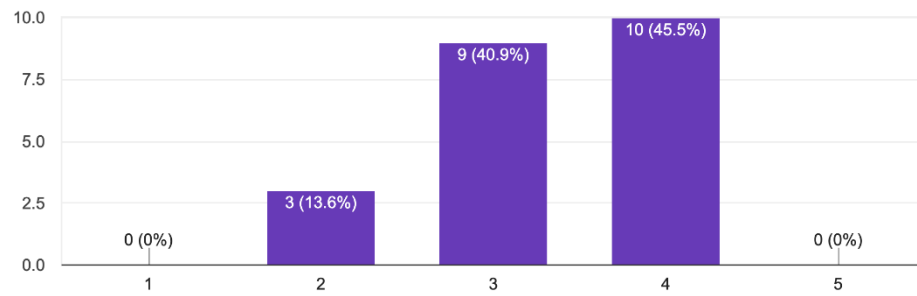
How well can you focus on studying?

22 responses

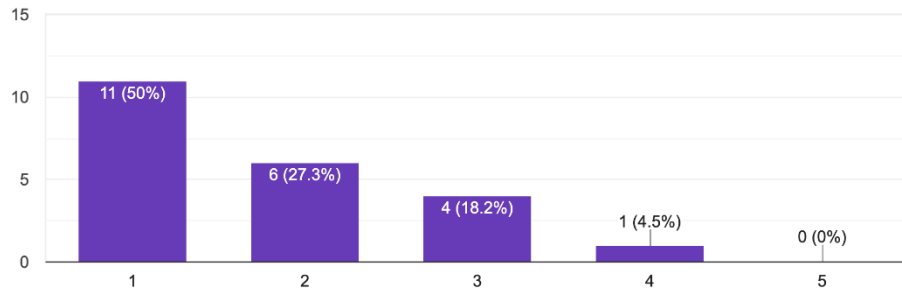## How confidently can you remember/recall details from the last 24 hours?

22 responses

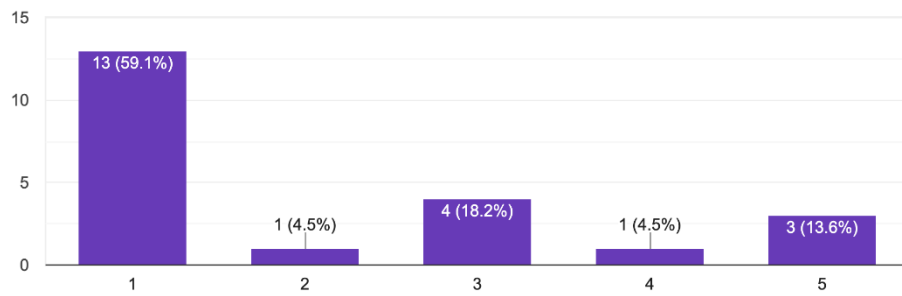## How dependent on electronics are you for remembering daily tasks?

22 responses

How often do you consume alcohol?

22 responses

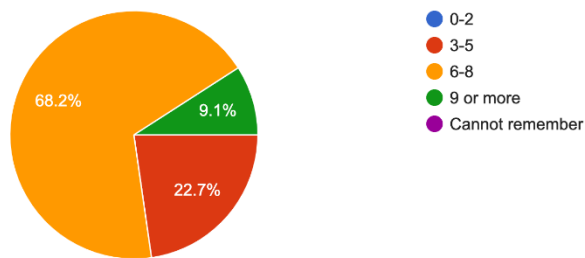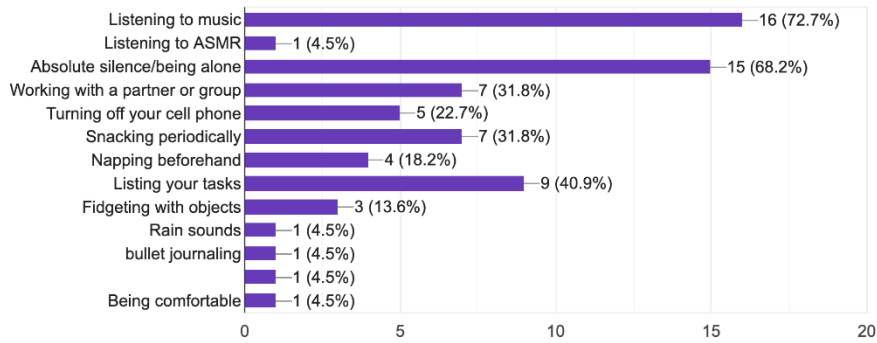## How often do you smoke marijuana?

22 responses

How many hours of sleep do you get per night on average?

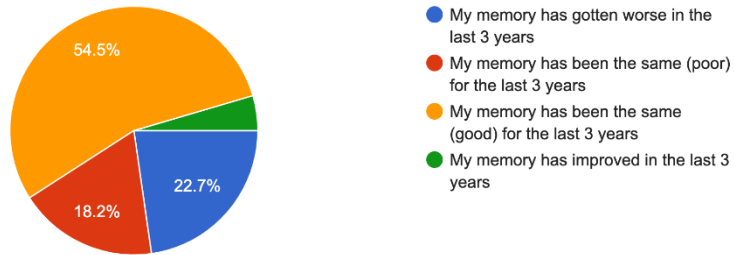22 responses

What helps you focus/concentrate on a task?

22 responses

Category	Count
Listening to music	16 (72.7%)
Listening to ASMR	1 (4.5%)
Absolute silence/being alone	15 (68.2%)
Working with a partner or group	7 (31.8%)
Turning off your cell phone	5 (22.7%)
Snacking periodically	7 (31.8%)
Napping beforehand	4 (18.2%)
Listing your tasks	9 (40.9%)
Fidgeting with objects	3 (13.6%)
Rain sounds	1 (4.5%)
bullet journaling	1 (4.5%)
(blank)	1 (4.5%)
Being comfortable	1 (4.5%)

Do you feel your memory has gotten worse with time, has it been fairly stable, or has it improved in the past 3 years?

22 responses

- My memory has gotten worse in the last 3 years — 22.7%
- My memory has been the same (poor) for the last 3 years — 18.2%
- My memory has been the same (good) for the last 3 years — 54.5%
- My memory has improved in the last 3 years

How many people in your immediate (blood-related) family have been diagnosed with Alzheimer's or dementia?

22 responses

- None — 63.6%
- 1 — 18.2%
- 2
- 3+
- I don't know — 13.6%