

Assignment 2

Design Project

Good Health and Well-Being: Stress Management App for University Students

Faolán Brazil, Mohd Farzaan, Parijat Dhar, Sai Sugun, Vedant Verma

College of Social Sciences and Law, University College Dublin

IS41520: User-Centered Design

Dr. Madeline Steeds

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1. Research and Requirements Gathering

1.1 Brief Review of Literature Related to Design

University students deal with a variety of stressors that significantly impact their mental well-being, academic performance, and daily routine. These stressors can stem from academic demands, social pressures, and personal responsibilities, leading to a challenging environment for maintaining focus, managing stress, and experiencing restorative sleep. Studies on the common stressors among university students repeatedly highlight the correlation between stress, sleep disturbances, and emotional well-being as key factors influencing students ability to perform effectively in academic performance and maintain good mental health (Gardani et al., 2022; Sasser et al., 2022).

The popularity of smartphone apps has led to their use as practical tools for many university students in the western world, our group decided that this could extend to tools addressing mental health challenges by offering accessible, tailored interventions. Studies from Calderone et al. (2014) and Hanada (2018) support the significance of the roles of sound and colour as therapeutic tools in mitigating stress, enhancing focus, and improving sleep. We strategised to utilise this research in our app by incorporating personalised audio-visual interventions, such as music designed to enhance cognitive states and colour schemes associated with emotional well-being, into our UX Design.

Studies on university student stress identified sleep, focus, and relaxation as primary areas of concern. Gardani et al. (2022) showcased a moderate association between stress and sleep disturbances in undergraduate students. Similarly, Sasser et al. (2022) emphasised that reduced sleep efficiency and increased stress negatively impact academic motivation and engagement. The takeaway from these findings was an urgent necessity to address these stressors to promote overall well-being.

Research on auditory interventions backs up the effectiveness of specific types of sound waves in assisting cognitive performance and reducing stress. Woods et al. (2019) found that beta-band modulated background music improved sustained attention, particularly in individuals with attention deficits. Calderone et al. (2014) emphasised the role of neural entrainment in optimising attention through rhythmic auditory stimulation. In the realm of colour, studies on colour-emotion associations (Hanada, 2018; Valdez & Mehrabian, 1994) revealed that warm hues like yellow promote arousal and joy, while cool hues like blue and green foster relaxation and calmness. These tools could be taken advantage of by smartphone apps, as long as the app is sufficiently programmed to display the appropriate stimuli to the specific individual.

Informed by this literature, this report proposes a user-centred mobile application designed to support stress management for university students through academically supported sound and colour therapies. By incorporating academically backed audio and colour-based interventions into the app's design, we want to promote good health and well-being for our users by offering personally tailored interventions to their specific needs across four core areas: focus, relaxation, sleep, and meditation.

1.2 Process and Results of User Engagement

Survey

A survey was distributed to university students in our class to gather quantitative insights into their stressors and technological experience preferences.

The survey received 19 responses, with key findings including:

- **Sleep:** 74% of respondents rated maintaining a healthy sleep schedule as a top priority, yet 58% reported difficulty falling asleep or maintaining sleep.
- **Focus:** 84% identified improving focus as crucial to their success, and 68% struggled to concentrate in noisy environments.
- **Relaxation:** 79% indicated seeking de-stressing techniques during short breaks, with preferences for listening to music or engaging in calming exercises.

These findings validate the importance of tailoring our app's functionalities to address sleep, focus, and relaxation, and inform the development of targeted questions and features within the app.

Interviews

A semi-structured interview was conducted with a consenting survey participant to gain deeper insights into their experiences and expectations.

Key themes that emerged included:

- **Customisation:** This participant valued the ability to tailor app features, such as blocking specific notifications during focus or sleep sessions.
- **Sound Preferences:** This participant expressed their preference for instrumental music, white noise, and nature sounds.
- **Colour Preferences:** This participant was not knowledgeable or passionate about the colours showcased by the app for helping them achieve their mental health goals, but they did express the importance of how colours could be counterintuitive for their goals, mentioning how a white screen could be detrimental to sleep.

These qualitative insights reinforced the importance for sleep with this participant and the need for flexibility and personalisation in the app's design, as well as lowering our initial priority to incorporate perfect colours for our early designs.

1.3 Personas

Persona 1: Izabela

- **Name:** Izabela Viitanen
- **Age:** 25
- **Location:** Dún Laoghaire, Ireland
- **Occupation:** Full-time postgraduate student, Part-time Barista
- **Field of Study:** Law
- **Hobbies:** Swimming, yoga, and studying

- **Apps Used:** TikTok, Instagram, VSCO

Bio

Izabela is a Law student from Poland living in Dublin completing her Master's degree. She is very ambitious but also very distractible. She struggles to maintain focus and tends to let deadlines pile up but she strives to maintain a well-balanced routine of academics, socialising, and exercise.

Goals

- Finish degree with a 1.1
- Become a solicitor with a big law firm in London
- Attend weekly swimming and yoga classes
- Maintain a good sleep schedule

Frustrations

- Procrastinates on social media regularly
- Struggles to find time for extracurricular activities
- Juggling several intense deadlines

Scenario

Izabela's goal is to finish writing notes for five textbook chapters, but she keeps checking her phone and feels her focus slipping away. She turns to the Student Stress Management app for help. She selects the "Focus" option, and inputs her goal of completing chapter notes. The app plays calming music that encourages focus and activates a timer, syncing music to a 25-minute Pomodoro session. With the calming audio and the timer keeping her on track, Izabela works through her chapters efficiently. The app sends her gentle reminders to take short breaks, and by the end of her session, she feels accomplished and less frazzled.

Persona 2: Robert

- **Name:** Robert McMahon
- **Age:** 21
- **Location:** Dublin, Ireland
- **Occupation:** Full-time postgraduate student, Part-time website designer
- **Field of Study:** Computer Science
- **Hobbies:** Gaming, Coding, Socialising
- **Apps Used:** TikTok, YouTube, Facebook

Bio

Robert is a third-year Computer Science student at University College Dublin (UCD). Robert balances a packed schedule of lectures, part-time coding projects, and gaming. He is often overwhelmed by tight deadlines and the weight of his ambitions. Robert relies heavily on his phone for music to help him relax or focus. He feels most stressed during his commutes.

Goals

- Graduate and work in the gaming industry
- Work remotely in a shared accommodation with friends

- Learn Unreal and Unity game engines
- Manage anxiety

Frustrations

- Hates commuting
- Too many notifications
- Struggles to relax

Scenario

Robert is on a packed bus commuting home after a long day at UCD. His head is buzzing with thoughts about an approaching project deadline, and how he will find time to submit his gaming project for a public competition. His chest tightens as he thinks about how little time he'll have to relax. He opens the Student Stress Management app, clicks the "Relax" option, and answers a few questions about his mood and preferences. The app begins playing soft, ambient music paired with a palette of cool colours, helping Robert take deep breaths and disengage from his worries.

2. Creative Design and Lo-Fi Prototypes

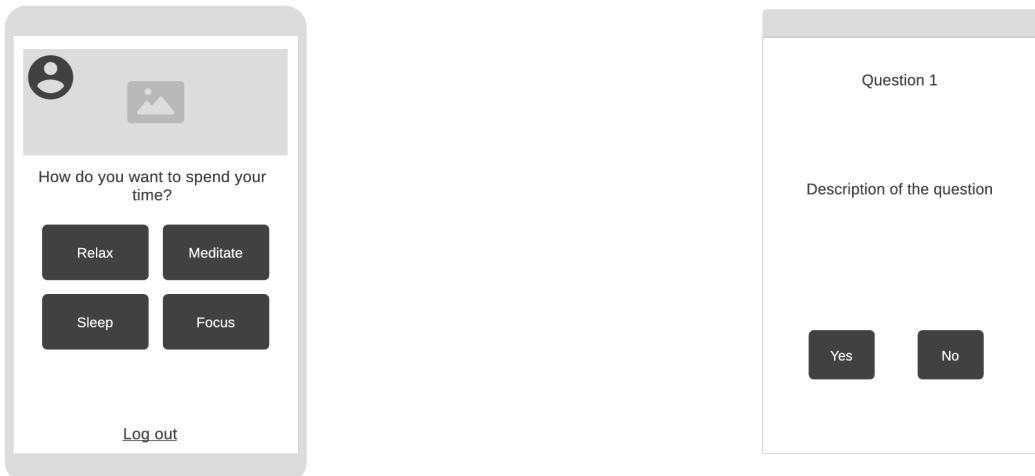
2.1 Idea Generation and Initial Concepts

The brainstorming and ideation process began with identifying core student challenges like sleep issues and focus difficulties from survey insights. Initial discussions focused on addressing these pain points through personalised solutions, leading to diverse ideas such as curated audio sessions and distraction-blocking features. These ideas were refined into distinct design concepts which consisted of prioritising a minimalist, task-focused interface, emphasising customisation and mood-based navigation. Collaborative feedback sessions helped refine these concepts and aligning them with user needs while ensuring simplicity and functionality in the proposed designs.

Links for th efigma and s

2.2 Two Lo-Fi Prototypes

2.2.1 Prototype 1 (App version):

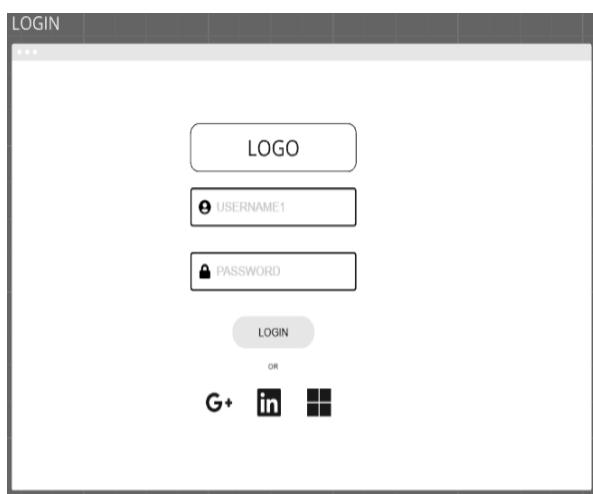


The Link for Lo-Fi Prototype (App version)

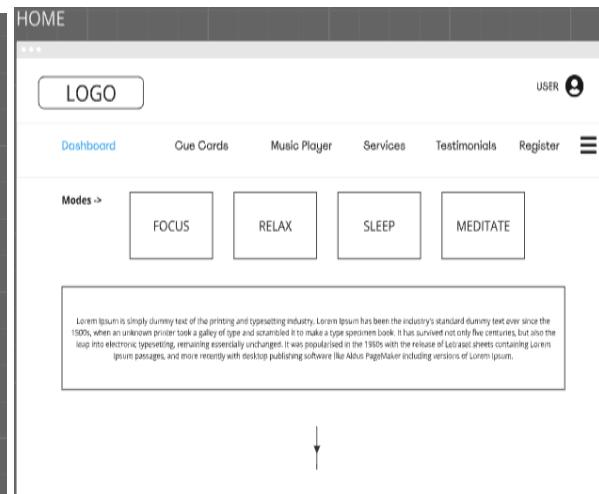
[Click the link for Lo-Fi Prototype \(App version\)](#)

2.2.2 Prototype 2 (Web Version):

LOGIN PAGE:



HOME (DASHBOARD):



CONTACT FORM:



A lo-fi prototype of a contact form. It features a header with 'LOGO' and a user icon. Below the header, there are sections for 'CONTACT US' and 'PROGRESS'. The 'CONTACT US' section contains fields for 'NAME', 'PHONE NUMBER', 'EMAIL ID', 'MESSAGE', and 'MESSAGE DESCRIPTION' with placeholder text 'enter your issue'. The 'PROGRESS' section contains fields for 'RELAX', 'MEDITATE', 'SLEEP', and 'FOCUS' with placeholder text 'In progress'. At the bottom are two buttons: a blue 'Submit' button and a red 'Reset' button.

SERVICE REQUEST:



A lo-fi prototype of a service request form. It has sections for 'CUSTOMER NAME', 'EMAIL ID', 'ACCOUNT NUMBER', 'PHONE NUMBER', 'PIN', and 'ADDRESS'. Each section contains a text input field with placeholder text. At the bottom right are two buttons: a blue 'Save' button and a green 'Add' button.

The link for the LO-FI Prototype (Web version): [Check the link for LOFI Prototype \(Web Version\)](#)

2.3 User Scenario for Prototype

Specific user scenarios were created for the personas and can be found under the *Personas* heading. This prototype presents a simple user interface for selecting activities such as "Relax," "Meditate," "Sleep," or "Focus." The screen is designed to help users quickly decide how they want to spend their time. Features include:

- A profile section for user identification.
- Four interactive buttons for activity selection.
- A logout button for easy session termination

This prototype focuses on guiding users through a personalised experience. The screen displays a question with a description and two response options ("Yes" and "No"). It aims to gather user input for tailoring the experience.

Features include:

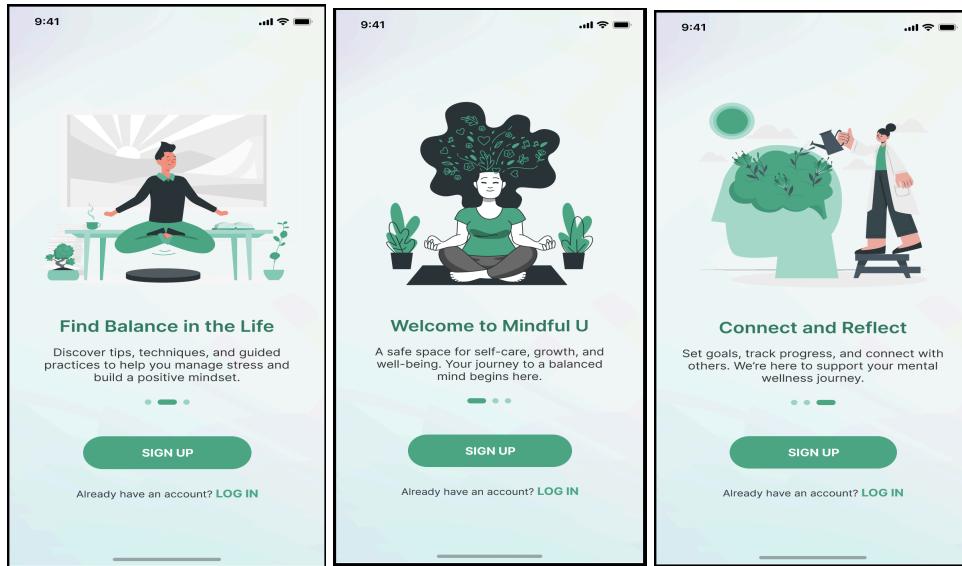
- A straightforward design emphasising clarity and ease of interaction.
- Binary choices to simplify decision-making

3. Hi-Fi Prototype

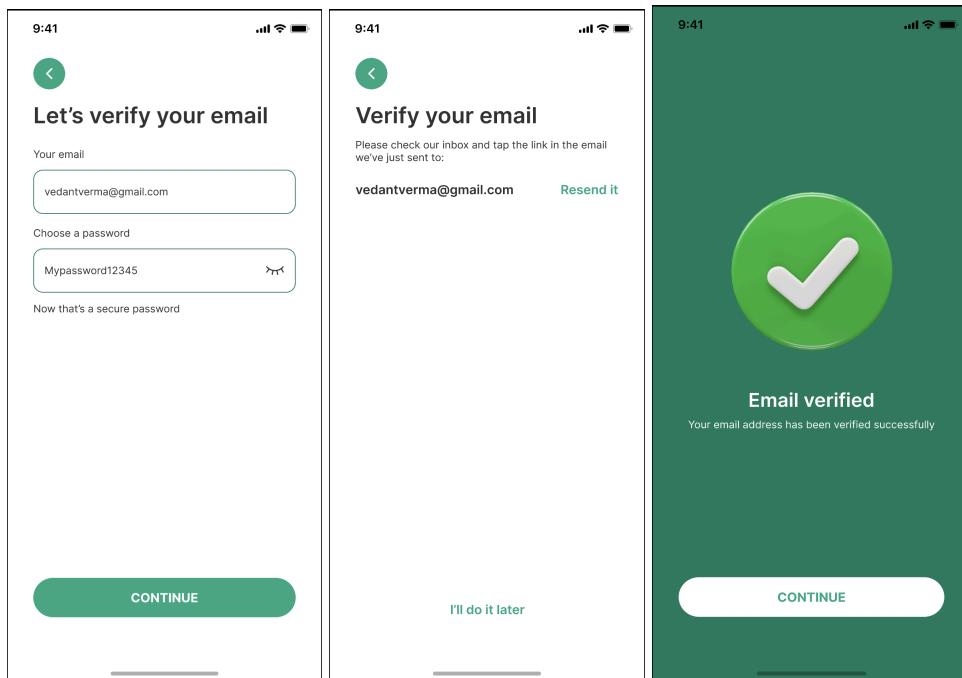
Link: [Click Here for HiFi Prototype \(Figma\)](#)

3.1 Description of Hi-Fi Prototype

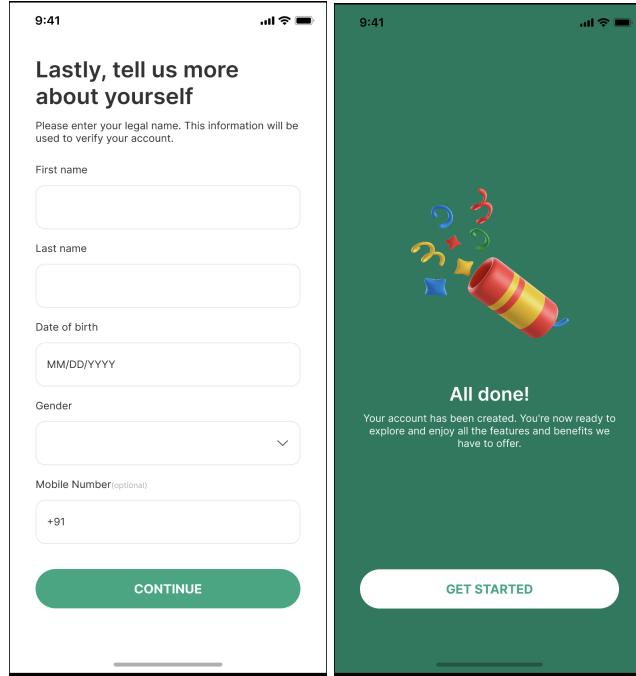
The Hi-Fi prototype for the app, depicted in various screenshots shared, offers a sleek and intuitive user interface designed to support students in managing their mental health. The prototype includes the following key screens and functionalities:



Launch Screen: The launch screen of the app sets the tone for the user's experience with a minimalist and soothing design that emphasises calmness and simplicity. It features a slideshow of images that gradually introduce the app's purpose and core functionalities. Each image is carefully chosen to visually represent the mental states the app addresses—Relax, Meditate, Focus, and Sleep. The use of soft colours and simple graphics not only reduces visual clutter, enhancing user focus, but also helps in establishing a tranquil atmosphere right from the start.



Sign-Up Screen: The sign-up screen is designed with clarity and ease of use in mind. They adhere to modern design principles by offering a straightforward layout that users can navigate intuitively. The process is streamlined to minimise entry barriers for new users while ensuring necessary security measures are in place. The use of neutral colors and ample white space promotes a sense of serenity and order, aligning with the app's overall theme of mental well-being.

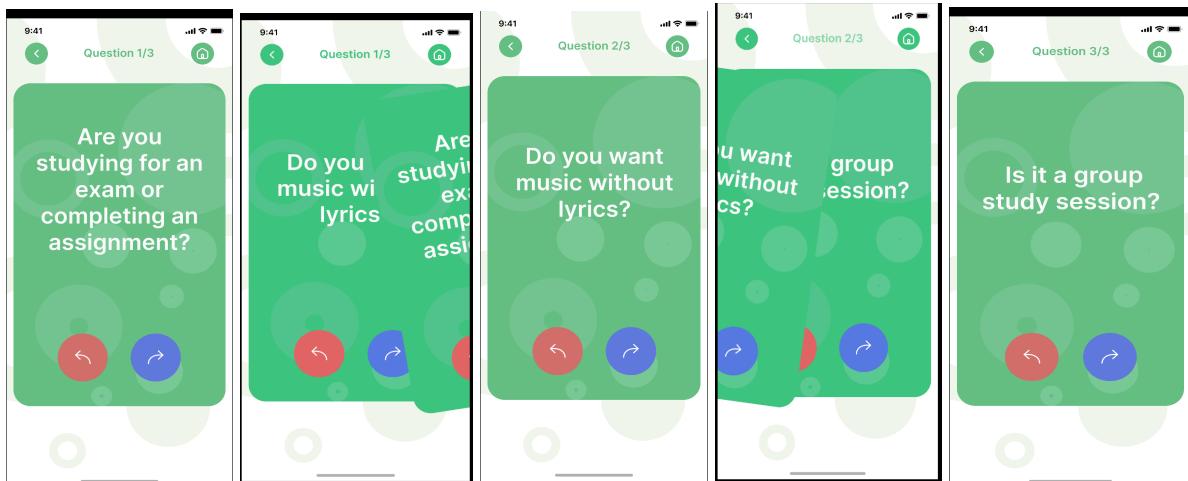


Onboarding Screens: After signup, the app's onboarding screens collect additional personal details—name, phone number, date of birth, and gender. Tailors app interactions and content to suit individual user profiles.

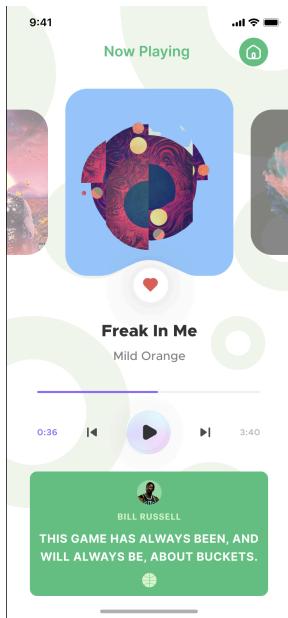
These screens are designed for ease of entry, paving the way for a personalised and user-centric navigation through the app's core features.



Home Screen: Following login, the home screen presents users with a personalised welcome message and four options that correspond to the app's main functionalities. This screen is pivotal as it serves as the central hub from where users select their desired mental state. The design uses large, easily distinguishable tiles that are both touch-friendly and aesthetically pleasing, ensuring that the user interaction is both efficient and enjoyable.



Question Cue Cards: This interactive feature is one of the innovative highlights of the app. Based on the chosen mental state, users are presented with cue cards posing simple yes/no questions. These questions are designed to refine the app's understanding of the user's current mood and needs. The swiping mechanism is intuitive, borrowing from widely-used mobile interactions, which makes it accessible even for first-time users. The design of these cards is minimalistic, focusing the user's attention on the question itself without any distracting elements.



Music Player: The music player is a critical component, designed to deliver the primary therapeutic aspect of the app—music tailored to aid specific mental states. The player interface is uncomplicated, featuring essential controls like play, pause, and skip. The simplicity of the music player design ensures that users can operate it with ease during mental states that may require minimal cognitive load, such as relaxation or sleep preparation.



Edit Profile Screen: The Edit Profile screen in the app is meticulously crafted to allow users to update their personal details such as name, email, date of birth, and gender. This functionality is vital for maintaining up-to-date user profiles and enhancing personalisation of the app experience. The screen is designed for ease of use, featuring an intuitive layout with fields pre-populated with the user's existing information. This setup not only simplifies the editing process but also aligns with the app's commitment to user privacy and control. Visual and operational consistency with the rest of the app ensures a seamless user experience, reinforcing user confidence and comfort in managing their personal data.

3.2 Functionality and Insights from Lo-Fi Process

The development of the app's Hi-Fi prototype was significantly influenced by insights gained from the evaluation of earlier Lo-Fi prototypes. The feedback obtained from potential users during this phase was instrumental in shaping the design choices and functionality enhancements seen in the Hi-Fi prototype. Here's a breakdown of key areas impacted by user feedback:

- **Interactive Engagement:** One of the standout features of the Lo-Fi prototype was the incorporation of interactive elements to gauge user preferences and mood states. Originally, the questions were more static and less engaging. Based on user feedback emphasising the need for a more engaging and enjoyable user experience, we introduced swipeable cue cards for responses. This modification not only made the app more interactive but also allowed for a quicker and more intuitive way for users to navigate through the questions, improving user satisfaction and engagement rates.
- **Streamlined User Interface:** Early iterations featured a more cluttered interface with multiple options that confused users. Feedback indicated a preference for a more streamlined, minimalist design that facilitated easier navigation and reduced cognitive load. In response, we simplified the user interface in the Hi-Fi prototype by reducing the number of on-screen options and using larger, clearer buttons. This change not only enhanced aesthetic appeal but also improved usability, particularly for users seeking quick mental health interventions.
- **Personalisation and User Experience:** Initially, the app used a generic approach to user interactions. However, feedback highlighted the importance of personalisation in enhancing user experience. In the Hi-Fi prototype, we retained and expanded the personalisation features, such as custom greetings and music tracks tailored to the user's emotional and mental state. This customisation was based on the answers to the interactive cue cards, ensuring that each session was specifically adapted to the user's current needs.
- **Feedback Mechanism:** The Lo-Fi prototypes lacked a clear mechanism for users to provide feedback about the app's effectiveness and user interface. Recognising the need for ongoing improvement and user engagement, a feedback feature was incorporated into the Hi-Fi prototype. This feature allows users to rate their experience after each session, providing valuable data that can be used for further refinement of the app.

These adjustments and refinements made in the transition from Lo-Fi to Hi-Fi prototypes demonstrate a user-centered design approach. They not only address specific user needs and preferences but also enhance the overall functionality and user experience of the app, making it a more effective tool for managing mental health among students.

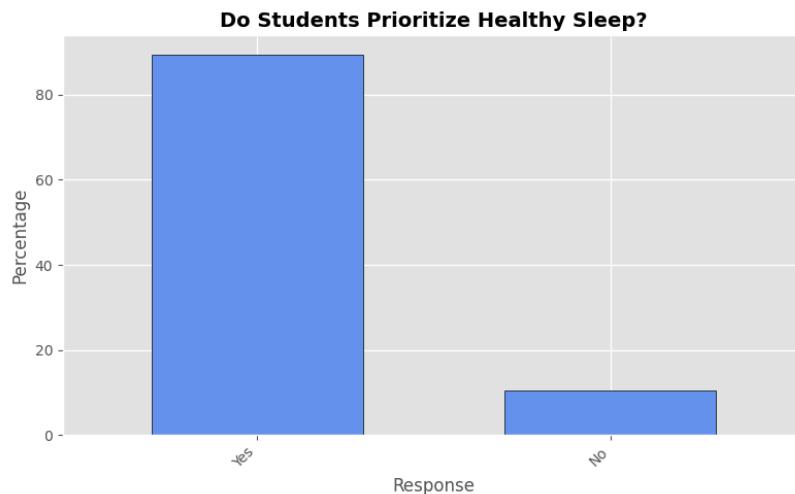
4. Evaluation

4.1 Results of the Evaluation

The evaluation phase integrates survey findings and heuristic analysis to paint a detailed picture of student needs. Survey responses revealed critical challenges in sleep habits, focus, and emotional well-being, along with preferences for app features like personalised audio and mood-specific tools. These insights provide a strong foundation for refining the app to support student mental health effectively.

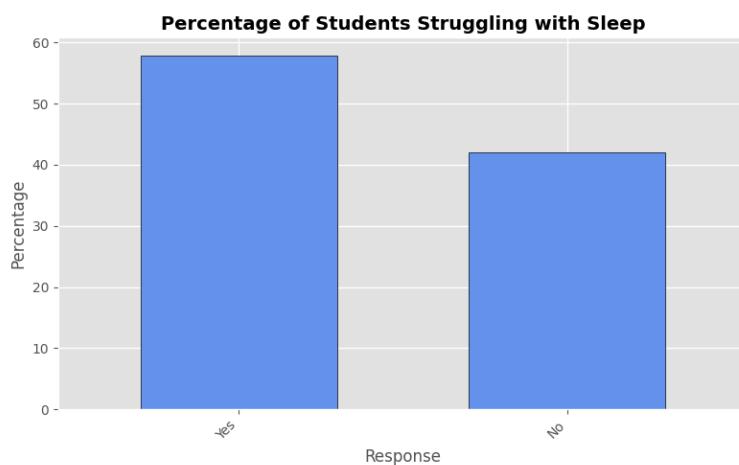
4.1.1 Survey Insights:

1. What percentage of students prioritise a healthy sleep schedule for academic success?



- This indicates the potential demand for sleep-support features in the app.
- 89.47% of students rated a healthy sleep schedule as important for academic success.
- This indicates a high demand for sleep-support features.

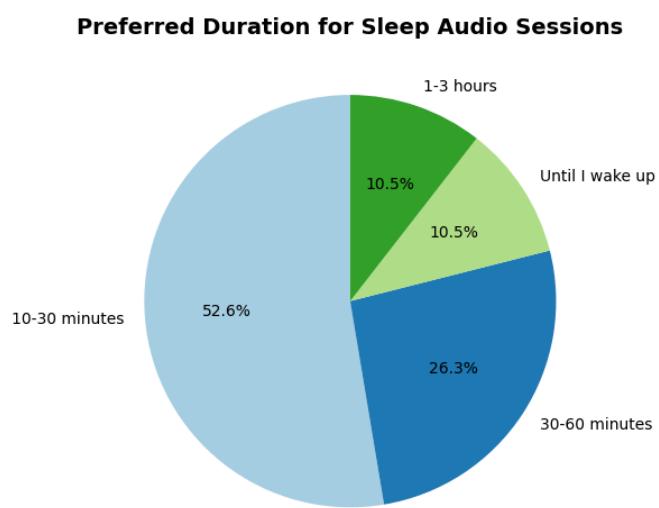
2. How many students report struggling to manage or improve their sleeping habits?



- Identifies the extent to which the app's sleep-focused functionalities might be helpful.

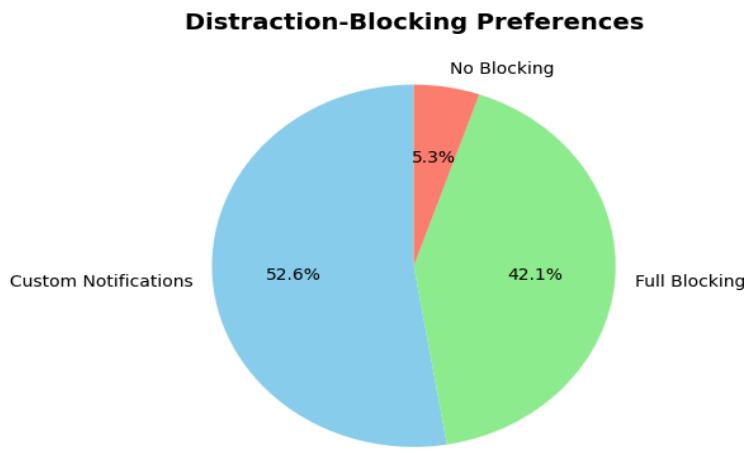
- 57.89% of students reported difficulty managing or improving their sleeping habits.
- Suggests that the app's sleep-focused functionalities would be widely beneficial.

3. What proportion of students prefer specific durations for audio sessions while sleeping?



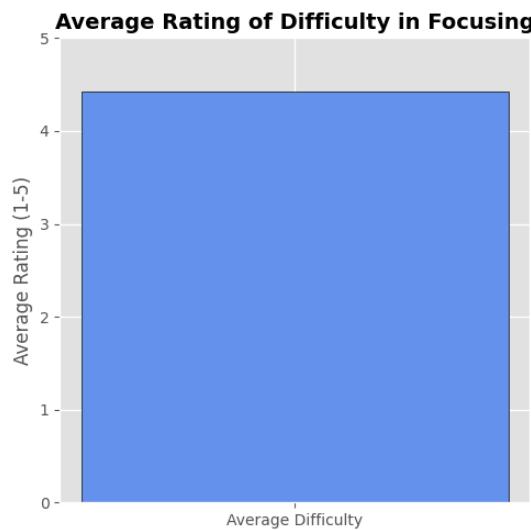
- Helps tailor the app's audio playback duration settings to user preferences.
- 52.63% prefer audio to play for 10-30 minutes, and 26.31% prefer 30-60 minutes.
- The app should offer flexible playback durations to accommodate preferences.

4. How many students would like the app to block distractions on their phone during sleep?



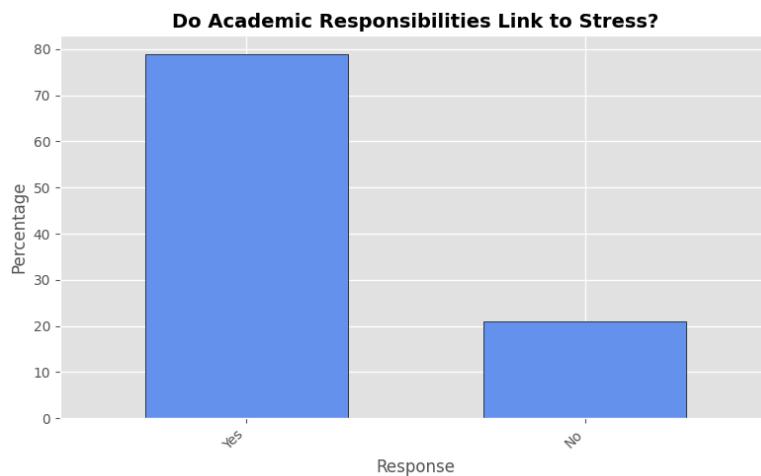
- Evaluate the necessity of integrating distraction-blocking features.
- 52.63% prefer customisable distraction-blocking, while 42.10% favor full blocking.
- Highlighting a need for flexibility in this feature.

5. What is the average self-reported difficulty in focusing during study sessions?



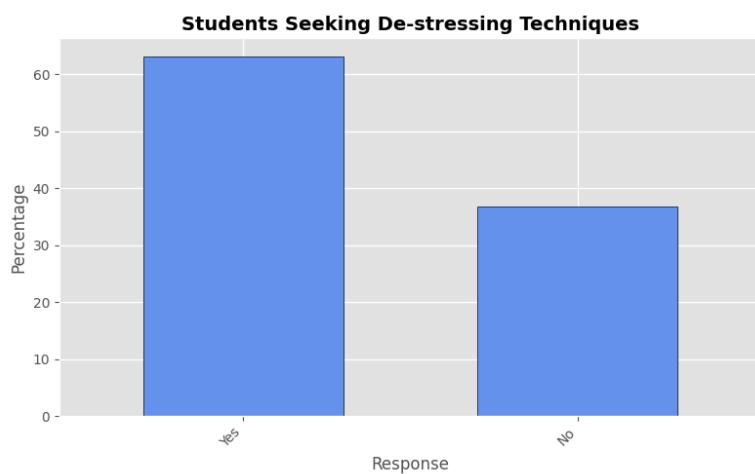
- Determines the demand for focus-enhancing audio tools.
- Students rated their focus difficulty at 4.42/5, showing significant challenges.
- The app's concentration features would likely be well-received.

6. How strongly do students associate their emotional stress with academic responsibilities?



- Validates the need for stress-management features within the app.
- 78.95% strongly associate academic responsibilities with emotional stress.
- Stress-management tools are critical.

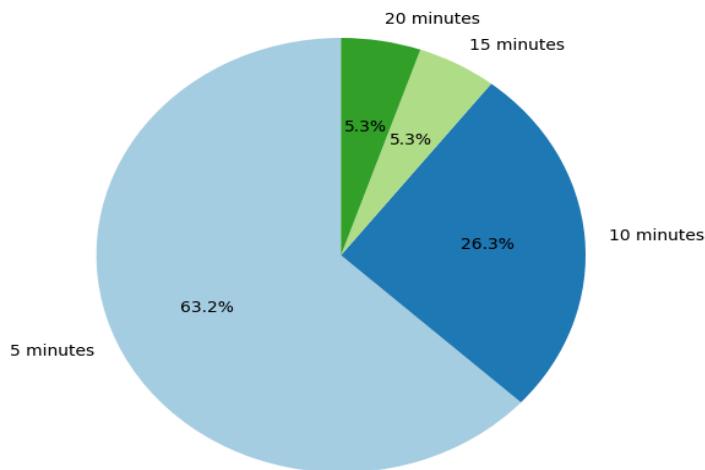
7. What percentage of students seek de-stressing techniques during short breaks?



- Highlights the relevance of quick mindfulness or relaxation exercises.
- 63.16% actively seek quick stress-relief strategies during short breaks.
- Indicates interest in on-demand relaxation exercises.

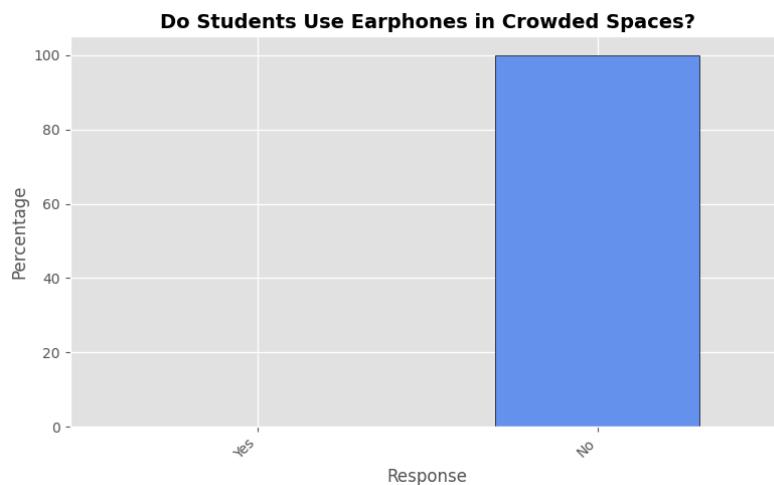
8. How much time are students willing to commit to calming exercises during stressful days?

Time Commitment for Calming Exercises



- Guides the design of activities that fit students' time constraints.
- 63.16% would commit 5 minutes, while 26.31% would invest 10 minutes.
- Short, effective activities should be prioritised.

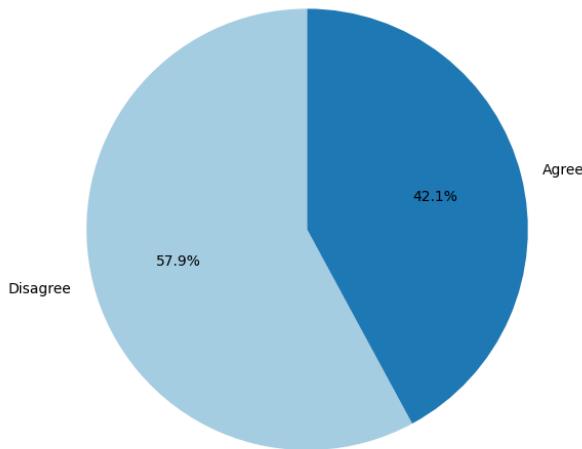
9. What percentage of students regularly use earphones or headphones in crowded environments?



- Identifies the feasibility of audio-based features being widely adopted.
- Data shows 0% explicitly marked "True" for wearing earphones in crowds (possible data entry issue).
- This needs to be clarified for accurate insights.

10. How many students expressed interest in participating in further research (interviews)?

Interest in Participating in Follow-up Interviews



- Helps gauge engagement for future app development stages.
- 42.10% are open to participating in follow-up interviews.
- There is potential for gathering qualitative insights for app improvement.

4.3 Heuristic Evaluation

A heuristic evaluation was conducted using Jakob Nielsen's 10 Usability Heuristics to capture design problems in the high-fidelity prototype. Our evaluation was in line with feedback from our surveys and our semi-structured interview.

The flagged usability issues that arose from the heuristic evaluation are categorised below:

1. Aesthetic and Minimalist Design:

- **Issue:** The aesthetic of some screens felt inconsistent, reducing visual engagement and causing users to lose focus.
- **Recommendation:** Incorporate more consistent colour schemes between stressor icons and subsequent question cards.

2. Flexibility and Efficiency of Use

- **Issue:** Once the music starts playing users may feel trapped into staying on that screen by the app
- **Recommendation:** Design overhaul to switch from a full music screen to an overlaying player on a redesigned home screen to reflect the user's mood and current goal.

3. Error Prevention:

- **Issue:** Users cannot fix the potential issue of mis-swiping whilst answering the question cards
- **Recommendation:** Include an undo button after answering questions

4. User Control and Freedom

- **Issue:** Users can currently see song titles, if they pick favourites, they may feel frustrated about going to a goal that won't feature this music
- **Recommendation:** Hide song titles and cover art

4.4 Issue Identified

- A few questions lacked clarity, causing confusion about how to respond.
- The line between similar moods like Relax and Meditate wasn't always clear, creating redundancy.
- While customisation was appreciated, the targeted audience wanted clearer instructions on setting up distraction-blocking features.
- The minimalist design in the prototype sometimes lacked visual appeal, leading users to suggest more engaging interfaces.

4.2 Design Changes and Future Development Recommendations

- **Clarify Question Wording**
 - **Design Change:** Revise questions with concise and user-friendly language, using tooltips or examples for ambiguous terms.
 - **Future Development:** Including A/B testing for different phrasings to identify the most effective wording.
- **Differentiate Similar Moods**
 - **Design Change:** Using visual indicators such as icons or color-coded categories and distinct audio descriptions to clarify the difference between Relax and Meditate.
 - **Future Development:** Integrating user feedback to refine the mood categorisations for better alignment with real-world use cases.
- **Enhance Customisation Instructions**
 - **Design Change:** To include a step-by-step guide or interactive tutorial for setting up distraction-blocking features.
 - **Future Development:** Offer preset options for common scenarios like "Block All Notifications" & "Allow Priority Only" to simplify user decisions.

5. Summary Poster

A Journey in Developing a Stress Management Solution for Students
UXD User-Centered Design

Faoilán Brazil, Mohd Farzaan, Parijat Dhar, Sai Sugun, Vedant Verma

OVERVIEW

This app is designed to help college students manage their mental health and well-being during stressful times. By providing personalized audio sessions tailored to individual needs, it helps students focus, relax, sleep better, and practice mindfulness. Whether it's dealing with sleepless nights or needing a moment of calm during the day, the app acts as a supportive tool for students to feel more balanced and in control of their mental health.

REQUIREMENTS GATHERING

Survey:
 To truly understand the struggles students face, we conducted a survey focusing on sleep habits, stress levels, and preferences for relaxation techniques. The feedback helped us pinpoint key areas where students need the most support.

Personas Creation:
 The personas of Isabela and Robert provide a comprehensive understanding of the diverse challenges faced by postgraduate and undergraduate students, highlighting their unique needs and motivations. Isabela Viitanen, a 25-year-old International Business postgraduate student from Poland, is ambitious yet struggles with focus and procrastination. She aims to balance her academics, social life, and exercise while maintaining a good sleep schedule. However, her tendency to get distracted by social media and juggle multiple deadlines often leaves her overwhelmed. Isabela uses the Student Stress Management app to stay on track, selecting features like focus timers and calming music to complete her academic tasks efficiently, while gentle reminders encourage her to take necessary breaks.

DESIGN & LO-FI PROTOTYPE

We believe that a simple, easy-to-navigate app with mood-based options for focus, relaxation, sleep, and meditation will resonate with students. Our initial prototype uses a basic design to test if the app's core features meet user needs. The aim is to provide a no-frills experience that focuses purely on functionality and user flow.

Phone App:

Web App:

EVALUATION

The evaluation of the proposed mental health app for college students was conducted using survey data and user feedback. The primary aim was to assess the need for such a tool, validate the app's core features, and ensure its design aligns with user expectations. Below is a detailed breakdown of the evaluation.

The survey responses highlighted critical insights into the challenges faced by college students. These include:

Sleep Challenges:
 Approximately 76.95% of students strongly associated academic responsibilities with emotional stress. This validates the need for stress-management features, such as quick de-stressing exercises and mindfulness activities.

Focus and Concentration:
 Students rated their focus difficulty at 4.42/5, reflecting significant challenges in maintaining attention during study sessions. This indicates a strong demand for concentration-enhancing tools.

Prototypes were well-received, with the Lo-Fi design praised for its simple, user-friendly interface and mood-centric navigation, while the Hi-Fi prototype garnered positive feedback for advanced personalization features like group study options, nature sounds, and sleep fade-out music. Despite this, a potential data issue was noted, as no students reported using earphones in crowded environments, which requires clarification in future surveys. Additionally, 42.10% of students expressed interest in participating in follow-up interviews, demonstrating engagement and enthusiasm for the app's development. Overall, the evaluation confirmed the app's relevance and highlighted the importance of customizable, flexible, and accessible features to support the mental health and well-being of college students. These insights provide a strong foundation for refining the app to meet the diverse needs of its users.

HI-FI PROTOTYPE

References

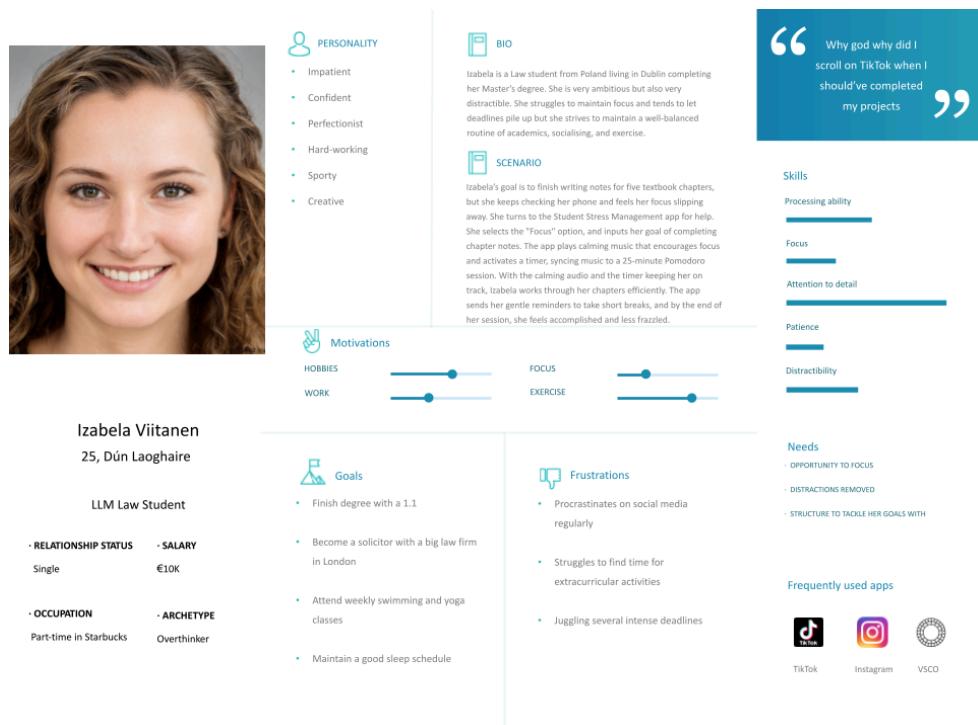
1. Gardani, M., Bradford, D. R. R., Russell, K., Allan, S., Beattie, L., Ellis, J. G., & Akram, U. (2022). A systematic review and meta-analysis of poor sleep, insomnia symptoms and stress in undergraduate students. *Sleep Medicine Reviews*, 61, 101565-101565. <https://doi.org/10.1016/j.smrv.2021.101565>
2. Sasser, J., Lecarie, E. K., Gusman, M. S., Park, H., & Doane, L. D. (2022). The multiplicative effect of stress and sleep on academic cognitions in latino college students. *Chronobiology International*, 39(3), 346-362. <https://doi.org/10.1080/07420528.2021.1999970>
3. Woods, K. J., Hewett, A., Spencer, A., Morillon, B., & Loui, P. (2019). Modulation in background music influences sustained attention. *arXiv preprint arXiv:1907.06909*.
4. Calderone, D. J., Lakatos, P., Butler, P. D., & Castellanos, F. X. (2014). *Entrainment of neural oscillations as a modifiable substrate of attention*. Trends in Cognitive Sciences, 18(6), 300-309. <https://doi.org/10.1016/j.tics.2014.02.000>

5. Hanada, M. (2018). Correspondence analysis of color–emotion associations. *Color Research & application/Color Research and Application*, 43(2), 224-237. <https://doi.org/10.1002/col.22171>
6. Valdez, P., & Mehrabian, A. (1994). Effects of color on emotions. *Journal of Experimental Psychology. General*, 123(4), 394-409. <https://doi.org/10.1037/0096-3445.123.4.394>
7. Wexner, L. B. (1954). The degree to which colors (hues) are associated with mood-tones. *Journal of Applied Psychology*, 38(6), 432-435. <https://doi.org/10.1037/h0062181>

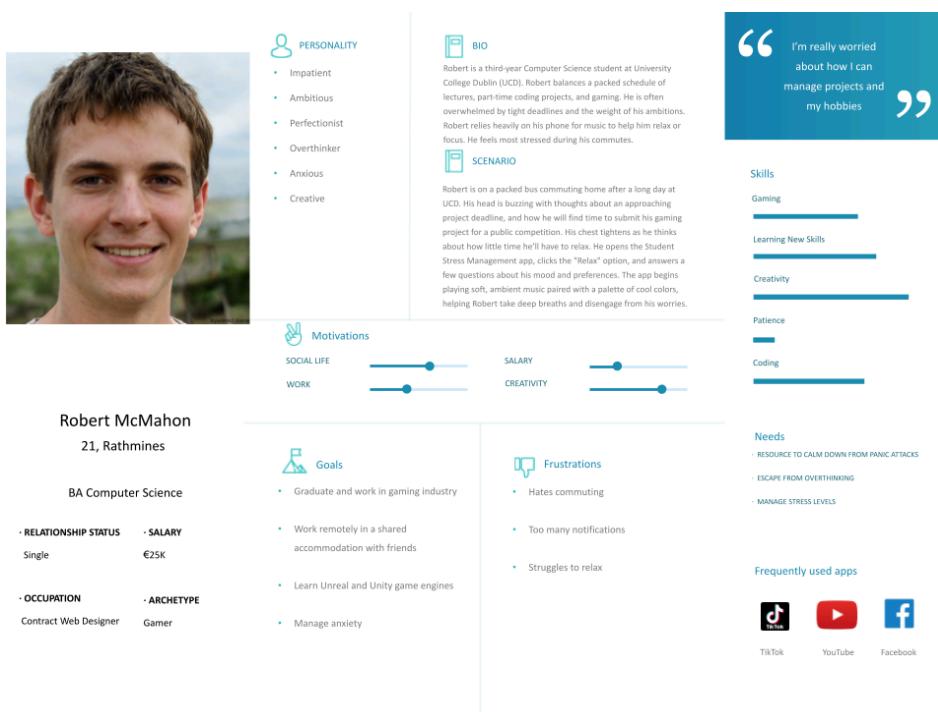
Appendix

Personas

Persona 1 - Izabela



Persona 2 - Robert



Survey

Link: [Click here to check out our survey](#)



Supporting Stressors of University Students- Short Survey

Semi-structured Interview Question Sheet

1. Give me an overview of your typical week in university
 - a. Can you describe a chill week vs a hectic week?
2. How did you find answering this survey?
 - a. Did the questions feel relevant to the topic?
3. Could you describe your current sleep routine?
 - a. Do you feel it impacts your studies?

4. You mentioned struggling to improve your sleep. How do you think sound or music in this app concept might help you with sleep?
5. What kind of sounds do you find relaxing or helpful when trying to fall asleep? (E.g., white noise, nature sounds, instrumental music)
6. When you study, what helps you stay focused?
 - a. Are there any common distractions?
7. Have you used techniques like Pomodoro or music-assisted focus before?
 - a. How effective were they for you?
8. What type of music or ambience helps you focus? (E.g., classical, lo-fi beats, silence.)
9. How do you usually cope with stress during a busy day? (E.g., exercise, music, talking to friends.)
 - a. Do you think it's possible for a short-term activity or routine or a remediate can help with stress? (or is it more like a weekly activity that takes up a whole day that really helps?)
10. What do you do when you have only 20 minutes to de-stress? Would you use an app during that time?
11. Imagine an app that asked you quick, swipe-based questions (like a Tinder format) Does this sound like a design you might get tired of?
 - a. Would you prefer some presets?
12. Is there any specific feature you'd love to see in an app designed for students' sleep, focus, or emotional well-being?
13. If you could design your ideal technological remedy for managing stress, focus, or sleep, what would it look like?
14. Is there anything else you'd like to share about how stress affects you or how technology might help?

Interview Transcript

Transcript	Coding Themes
Interviewer: So yeah, ready for the first question? Can you please describe a typical week for you in university?	
Participant: A typical week? I work out 5 - 6 days a week, usually in the evenings. I get out of bed probably like 11 in the morning because I don't have classes until the second half of the day. Get up, eat some food that I cooked the previous day, go to class, go to the gym. Afterwards, go home, buy some food or cook some food, do some work, play some video games, probably go to sleep at like 3.	Routine
Interviewer: Sounds pretty efficient. What if you were to describe to me one of your more chill weeks versus one of your more	

hectic weeks?	
Participant: Pretty much every week is the same because if I'm not working, I'll get anxious, so I can find something to work at. So, like, every evening I work. Even if it's the beginning of the semester, like, I don't even know what my assignments are, I would probably have a project that I'm working on.	Anxious Routine
Interviewer: OK. Thank you for answering that. And can I ask you how you found answering the survey? Do you feel like the questions you were answering were relevant to the topic? We're developing an app to help students manage their most prominent stressors on a weekly basis with a focus on sleep, focus, relaxing, and keeping calm. Do you think the questions were relevant?	
Participant: Yeah, the questions are relevant.	App design
Interviewer: OK. Then the next question I have for you is: would you describe your current sleep routine, and do you think it's having a strong impact on your studies?	
Participant: Don't know if it has that big an impact on my studies, but I definitely can't perform to a high level if I had bad sleep. It depends on the demands. Day-to-day, I don't need to be in top form. I can still go to class, take notes, and get some work done. But if it's a situation where I do have to perform, like giving a presentation or actively participating in class, I'm very mentally slow and foggy on days where I don't sleep properly. It definitely affects me in the gym too, which ties into my mental health and emotional well-being.	Routine Anxious
Interviewer: So on those days, do you think you would try to sleep a little earlier than 3 AM ahead of the hectic day you're anticipating?	
Participant: No, because I wouldn't be able to get to sleep. I'd just be lying in bed, not sleeping. I have trouble getting to sleep. And even if you go to sleep earlier, because it's consistency that matters, I don't know if going to sleep earlier would necessarily even be better the next day. I'm used to sleeping 3:00 to 11:00. What is that? That's eight hours of sleep each night, and if I have	Routine Sleep

<p>to get up at 10 the next day and I say, "Oh, I'll go to sleep at 2:00," so I get up at 10, it's going to be bad sleep just 'cause it's out of sync with the usual sleep.</p>	
<p>Interviewer: OK, brilliant. Thank you. Now, you mentioned struggling to improve your focus. Is that true for you?</p>	
<p>Participant: If I'm severely sleep-deprived, like 5 days of 6–7 hours of sleep, which is low for me, then I'm not able to focus at all. There's no point in even trying. But that's not that often.</p>	Sleep
<p>Interviewer: OK. You mentioned the importance of sleep. Do you think music or sounds from the app we've described would be helpful for you with your endeavours to sleep?</p>	
<p>Participant: I find music to be, well, what's the word? Arousing? Stimulating. So it just makes my mind active. Usually, I'll listen to rain or wind. I find bassier noises are easier to sleep to as well. Like, low winds versus high-pitched winds. High-pitched sounds, like cheap recordings with rustling leaves, can be irritating. I usually go to YouTube for these sounds and have playlists bookmarked. Repeating the same sounds isn't irritating if I go without them for a while; when I return to them, I sleep like a log.</p>	Sounds App design
<p>Interviewer: OK, could you rank the effectiveness of nature sounds, instrumental music, white noise, or lo-fi music for sleep?</p>	
<p>Participant: I'd put nature at #1, then brown noise, then white noise. Relaxing music would be last because it just keeps me awake. It's the opposite of helpful for sleep.</p>	Sounds App design
<p>Interviewer: OK, when you study, what helps you stay focused? Are there any common distractions you can think of?</p>	
<p>Participant: What distracts me? Well, I don't think I get distracted that often. It's not as if I'm trying to focus and my focus just goes. If I do something, I'm actively looking for something else to do, maybe subconsciously. I deleted TikTok and YouTube shorts because I was using them too much. But even without those</p>	Procrastination Habit

<p>tools, I'll still procrastinate; like playing my guitar. It's not as attention-grabbing as TikTok, but I can still spend an hour doing it. Ultimately, the issue isn't the tool; it's wanting to procrastinate, whether it's stress or dissatisfaction with the work I'm doing.</p>	
<p>Interviewer: One of the hopes for our app is to serve as a source of focus and take away distractions on your phone. But do you think the root issue is the need to procrastinate, rather than external stimuli like notifications?</p>	
<p>Participant: Yeah, there are definitely two parts to it. But the need to procrastinate is the root cause that you're not going to address just by getting rid of those stimuli.</p>	Procrastination
<p>Interviewer: Do you think there could be something like a sound that helps you focus, similar to how sounds help you sleep?</p>	
<p>Participant: I like Pomodoro stuff. If I've been procrastinating for 20 minutes, I probably should get up, walk around, and then get back to it. But I'm like, "No, I need to start working now," because I feel guilty. So I never take that break that I probably should. I think it'd be cool if I had breaks scheduled, and no matter what, I get up and do something. And it wouldn't run the risk of turning into two hours like TikTok can.</p>	Procrastination Habit
<p>Interviewer: The next question I have is, have you used techniques like Pomodoro or music-assisted focus before?</p>	
<p>Participant: I've used the music one, but it usually doesn't work that well for focus for me. Pomodoro I have tried, but there's that guilt barrier. If I've been procrastinating, I feel like I don't deserve a break, so I don't do it. And often there's nothing interesting to do during a break, like walking through the building or looking out the window, it's not that engaging.</p>	Sounds Procrastination
<p>Interviewer: OK, so how do you usually cope with stress during a busy day? Like, do you turn to exercise, music, or speaking with friends?</p>	

<p>Participant: The gym. I've been working out almost six years now, and I haven't missed a week in that time. On the rare occasions where I skip consecutive days, stress bears down on me. Working out doesn't make me feel good; it makes me feel normal, and the absence of it makes me feel bad. I protect that time fiercely, nothing gets in the way of my workout.</p>	<p>Habit</p>
<p>Interviewer: Do you think short bursts of activity can help lower stress levels, or does it require a consistent, long-term routine?</p>	
<p>Participant: Doing it more frequently is better. Recently, I was very stressed, and I let responsibilities build-up, thinking I'd fix everything with one big break, like a holiday. But I couldn't switch off, and a week wasn't long enough to recover. I think keeping stress down consistently is better.</p>	<p>Routine</p>
<p>Interviewer: Do you think it's possible to consistently reduce stress? Or would you need to be creative with your approach?</p>	
<p>Participant: Yeah, I think it's possible, but you'd need variety. To avoid stress, you'd have to distract yourself somewhat. Novelty experiences are more effective. If I'm with a friend, but my mind is on what's stressing me, then I feel bad for two reasons: I'm stressed and I'm not paying attention to the person I'm with.</p>	
<p>Interviewer: So, what do you do when you have 20 minutes of free time where you don't need to be working on a stressful task?</p>	
<p>Participant: I have a bad habit of thinking, "How do I be productive with this free time?" Everything is geared toward productivity. But recently, I've been working on changing that. I often pick up my guitar. I've shifted my mindset from needing to make progress to just playing things I enjoy. It's relaxing because it absorbs my focus enough to block out stressors but isn't stressful itself.</p>	<p>Procrastination</p>
<p>Interviewer: Imagine an app that asks you swipe-based questions to customise a session for focus, sleep, or relaxation. Does that design sound appealing, or would you prefer preset</p>	

options?	
Participant: Answering questions sounds intuitive, like a setup wizard. But it'd get annoying if I had to do it every time. If I only want two functions every time, I'd prefer to configure a mode and reuse it later, with the option to make a new one if needed.	App design
Interviewer: Is there a specific feature you'd want to see in this app? Has anything come to mind during this discussion?	
Participant: I don't know if you've already thought about it, but reminders for Pomodoro breaks would be useful. What I do now is drink water during study sessions, when my water bottle is empty, I get up to refill it. It's like a built-in break. But sometimes I'll just ignore it and stay dehydrated because I don't feel like I deserve a break. So yeah, a reminder to take breaks could be helpful, but you'd need to overcome the guilt of procrastinating to make me actually engage with it.	Routine
Interviewer: If you could design your ideal technological remedy for managing stress, focus, or sleep, what would it look like? Would it be an app, or would you imagine something completely different from a smartphone?	
Participant: Honestly, I'd want a drug that makes me fall asleep instantly. I wish melatonin was legal in Ireland. Sleep is just so important. Even with bad sleep, you can still perform at 90% of your capacity, but I'd love to have that last 10%.	Sleep
Interviewer: Is there anything else you'd like to share about how stress affects you or how technology might help?	
Participant: One thing, I use a lot of apps and browser tools for work, like ChatGPT, Stack Overflow, email, and Teams. But I'm always just one tab away from YouTube or Instagram. I'd love a browser that only works for things I should be doing. Like, if it could detect when I'm procrastinating and block those pages, that'd be amazing. When I deleted YouTube off my phone, I still procrastinated, but it didn't turn into an hour-long rabbit hole like it does with TikTok or YouTube.	Procrastination Habit

<p>Interviewer: Don't you think you'd just use another browser to bypass the restriction?</p>	
<p>Participant: No, I don't think so. When I deleted apps like YouTube, I procrastinated less and didn't waste as much time. It's not about having no distractions, but having fewer intense, time-sucking ones.</p>	
<p>Interviewer: OK, well, thank you for answering those questions. We can stop the recording now.</p>	
<p>Participant: You're welcome.</p>	