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| **Assignment 4 Project Report (Critical Analysis and Academic Writing - not marked, use feedback to improve).** | **Due: 30 April** |
| **Word Count: 1000** |  |
| **Name: Tanzil Chowdhury** |  |
| **Instructions**  **This assignment builds on Assignment 3. You are expected to improve the previous assignment based on the feedback from your mentor and include a section on testing and evaluation.**  For this assignment, you will write a report presenting the final idea for a product to help with studying or revision, including reasons behind design choices and evidence of a prototype.  Use the design thinking principles discussed in lectures when writing this report. The solution should address user needs, showing clear evidence of empathy and user-centred design. Ensure that the design process is well-documented, featuring prototyping with a logical and coherent flow.     1. **On the next page, write the project title and section headings for your project** 2. **Write the content for these sections.**   **Suggested sections to include in Assignment 3:**   * Introduction * Problem and objectives * Solution Description * Prototype (visual representation of idea) * Future Work (including Testing and Evaluation) * Conclusion * Bibliography/Reference List | |

**Music / White Noise Player App**

**Introduction**

Many students struggle with maintaining focus whilst revising or even getting started with the task due to a variety of reasons such as lack of motivation, the task seeming too daunting, and distaste for studying in general due to its boring nature. This leads to people sitting down at their desks and instead of focusing on the task at hand instead ending up distracted in a thing unrelated to their task or ending up scrolling their phone for hours. “On average, students reported being distracted about 20% of their study time, and distraction while studying negatively predicted exam performance” (Walck-Shannon, Rowell and Frey, 2021). Minimising this time spent distracted is a pivotal goal in keeping students focused during revision. My target audience for this project would be those people who struggle with maintaining focus during their revision and those who struggle to maintain focus.

**The Problem**

Focus is a big issue when revising which can be caused by many things such as:

* Boredom
* Distractions
* Stress
* Lack of Interest
* Procrastination

“Results reveal that 59% of students find their lectures boring half the time and 30% find most or all of their lectures to be boring” (Mann and Robinson, 2009) This leads to students self-studying the content which should have been taught in lectures by themselves often being piled up making it seem much more daunting, dull and disengaging. Often it leads to students wasting their study time being distracted causing poorer academic outcomes as their revision was less effective than they thought. This problem needs to be thoroughly addressed to prevent out youth from falling behind. I aim to create a solution to this problem which tries to tackle the problem of students wasting their study time and keeping them focused on their work during studying.

**Objectives**

For my solution to be successful it must achieve the following things:

* Reduce Distractions

Reducing distractions involves students do not go on their phone when they are studying for non-academic purposes. As if a student is not provided with ways to distract themselves, they will naturally gravitate towards studying and try to engage with the material to entertain themselves. This could be achieved through calling out the user when they unlock their phone asking them if they are going to distract themselves or not acting as a gentle nudge in the right direction creating an observer effect of sorts as when users see the prompt, they may feel a bit guilty about their decision and carry on revising instead of getting distracted.

* Maintain Focus

Maintaining focus would involve keeping the student engaged with the work even when the work itself is not that engaging (examples including 1000-word writeups or tedious homework questions.) This could be done through using music and white noise to help students not get bored of their work as fast as they would normally meaning that longer sessions of revision with the student being more present on average can happen rather than them being focused for 20 minutes and on their phone for 30.

* Ensure Consistent Usage

If a student is not consistent in their revision and only revises occasionally, it would only seem natural that their academic outcomes will suffer as internalising information and properly learning it requires consistent study rather than night before the exam. This could be done through rewarding the user for logging time every day to the app through completing revision sessions which can be set as a timer of any number of minutes or a stopwatch of how long they have revised for.

**Solution Description**

This app aims to get people working by using relaxing music to help them stay focused with background noise and stay stimulated during more boring parts of their work. It uses a darker mostly greyscale colour scheme as to not be as eye catching so a student’s focus can be maximised on their actual task rather than scrolling through the app, “Findings indicate that daily screen time was significantly reduced”(Dekker and Baumgartner 2023). It will also come with some preinstalled music playlists with relaxing and classical instrumentals as “people prefer non-vocal (i.e. instrumental), calm, and classical music in the background" (Goltz andSadakata, 2021) as well as white noise. Furthermore, it will also support users creating their own custom music playlists with any audio files downloaded onto their device as some students may prefer listening to their own music whilst studying as they find it more relaxing.

**Prototype of the app Main Menu**



**Testing**

I would test this program by sending it out to a smaller focus group of students who would be potential users of the product and ask them to use it as they would normally for 2 weeks. After 3 days, 1 week and 2 weeks I would ask the participants their experience of using the app as well as any praises or criticisms they have of the app. Furthermore, I would also ask for their overall opinion on the app and any other extra things they believe would improve the experience. Throughout, the period updates would be pushed implementing the suggested feedback, based on the surveys on day 3 and 7 to save time and resources having to organise another group to ask on opinions on the implementations of the features.

**Bibliography/reference List**

Franziska Goltz, Makiko Sadakata 2021 - Do you listen to music while studying? A portrait of how people use music to optimize their cognitive performance, Acta Psychologica, Volume 220, 2021, 103417, ISSN 0001-6918

<https://doi.org/10.1016/j.actpsy.2021.103417>

Walck-Shannon EM, Rowell SF, Frey RF. To What Extent Do Study Habits Relate to Performance? CBE Life Sci Educ. 2021 Mar

<https://pmc.ncbi.nlm.nih.gov/articles/PMC8108503/>

Mann S, Robinson A. Boredom in the lecture theatre: An investigation into the contributors, moderators and outcomes of boredom amongst university students. British Educational Research Journal. 2009

<https://bera-journals.onlinelibrary.wiley.com/doi/10.1080/01411920802042911>

Dekker, C. A., & Baumgartner, S. E. (2023). Is life brighter when your phone is not? The efficacy of a grayscale smartphone intervention addressing digital well-being. Mobile Media & Communication, 12(3), 688-708.

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(Original work published 2024)

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| **Feedback** | |
| **Academic Skills** | You have a nice idea, and your report is structured well. |
| **Critical Analysis** | You have identified a core problem students face when studying and a solution, both backed up by research. |
| **Academic Writing** | Your writing is good, but it could be more concise. When you’re writing reports at university it is important to keep your writing concise, especially as you’ll be up against word limits. Some of the bigger paragraphs could likely be split up. |
| **Academic Research** | You have relevant, credible, and interesting research and have used it to back up your arguments. |
| **Referencing** | Your reference formatting (in-text and bibliography) is inconsistent. Look at the University of Bath referencing guidance for help (https://library.bath.ac.uk/referencing/). |
| **Comments** | Overall, a good report. I like your prototype, but it would be better with some discussion around it and more on the design choices you made. A conclusion section might also be an improvement. |
| **Total Marks 9/12** | 7(/9) + 2(/3) |

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| **Assignment 4 Markscheme**  **Total Marks: 12**  **9 marks for:**  **Academic Skills**  **Design Thinking**  **Academic Writing**  **Critical analysis and Evaluation** | * The assignment demonstrates a thorough understanding of **design thinking** principles and their application in solving **problems.** * The **design process** is well-documented, featuring or mentioning some, prototyping, testing, with a logical and coherent flow. * Strong **critical analysis and evaluation** of the chosen solution, considering feasibility, sustainability, and potential impact. * **Academic writing:** the assignment is presented in a clear, professional format with attention to detail (e.g., diagrams, technical drawings, and references where appropriate). * The solution addresses user needs effectively, showing clear evidence of empathy and user-centred design. * Using systematic approaches to design and test solutions | 7-9 |
| * The assignment demonstrates a good understanding of **design thinking**, with evidence of applying principles to solve the problem. * The solution addresses user needs, though the design may lack some innovation or depth in user-centred considerations. * The **design process** is documented, covering or mentioning key stages such as prototyping, and testing, but may lack detail in some areas. * **Critical analysis and evaluation are present**, though not consistently thorough, with some consideration of feasibility, sustainability, or impact. * **Academic writing:** The assignment is clearly presented, but may contain minor formatting or organisational errors (e.g., incomplete diagrams, inconsistent referencing) | 4-6 |
| * The assignment shows a basic understanding of **design thinking**, with limited application of principles in solving the problem. * The solution partially addresses user needs, but lacks depth in user-centred design and may not fully consider the end-user experience. * **Academic writing:** Documentation of the design process is limited or inconsistent, with some stages (e.g., ideation, testing) lacking sufficient detail. * **Critical analysis and evaluation** are limited, with little consideration of feasibility, sustainability, or the broader impact of the solution. * Presentation is adequate but may contain significant errors or omissions (e.g., missing diagrams, poor organisation). | 1-3 |
| No relevant assignment | 0 |
| **Academic Skill**  **Referencing**  **Total Marks: 3** | **References** are:   * Academically credible according to subject requirements and tutor advice.   Accurately formatted in text citations and in bibliography according to subject convention. | 3 |
| Most **references** are:   * Mostly accurately formatted in text citations and in bibliography according to subject convention.   Most references are academically credible according to subject and tutor advice. | 2 |
| **References** are attempted in text and in a bibliography or reference list, but are not consistently formatted. | 1 |
| No references | 0 |