CS3240 Design Assignment S2 AY23/24

Make sure to thoroughly read and understand the following instructions.

Overview

CS3240 Design Assignment is about working on an **individual** assignment that reinforces your understanding of Conceptual Design, Visual Design, and Prototyping.

Instructions

1. The assignment is worth a total of 15 marks and is **15%** of your final grade.

   The submission deadline is Mon**, 1 April 5pm.**
   The submission folder will be open on Canvas after recess week, and you are encouraged to submit your attempt earlier than the deadline mentioned above.
   With this, we hope that you can manage your workload throughout the semester and not rush this assignment alongside the project submission deadlines.
   Do feel free to **clarify any queries on this assignment on the Teams Channel.**

2. Plagiarism will be dealt with as per NUS policies.
   https://www.comp.nus.edu.sg/cug/plagiarism/

3. Submit your work before the due date. Late submission of would invite a deduction of 10% (1.5 marks) per day.

4. Submit a pdf to Canvas-Assignments-DesignAssignment folder in Canvas. Include your Matric Number in the submission file name i.e. **YourMatricNumber_DA.pdf** (or .zip if there are multiple files in the submission). An example will be A0123456Z_DA.pdf(or .zip).

5. In your submission,
   5.1. Clearly state your **name**, **matric number**, **introduction/context** in which you are attempting the question, **scope** you have decided for your work to give a read-ahead for the grader about what to expect in your submission.
   Also include any necessary and relevant:
   (i) information or screenshots (with or without descriptions) about your design process or about design deliverables to elaborate on your decisions
   (ii) links to your work
   (iii) references.
   5.2. If you have any other relevant information not listed above, include it in with a short description.
   5.3. If you have more than one file for submission e.g., if you have any separately attached images or wireframes, or links, provide a short **READ ME (bullet points)** at the start of the main document to help the marker understand your submission. Ambiguity may result in penalty.
   5.4. In case of any confusion, **clarify at the Teams channel or ask your mentor ahead of the submission.** Do not leave such clarifications to the last minute or closer to the deadline.

Deliverable:

A design portfolio that includes, but not limited to, the following:

- Design Task
  - State the design task you have chosen (out of the given 7 options below)
- User Requirements and User Journey
  - State target user(s) of the selected design task
  - List user requirements or features based on user research such as user interviews and/or based on your conceptual understanding of the design task and of competing products.
  - Develop User Flow or User Journey (low fidelity).
    - Describe emotions & user actions as appropriate.
- A list of ideas for your solution (with adequate description/elaboration on proposed features and how to achieve the interactions)
  - Sketches of any kind or anything to supplement your ideas
- Prototype design
  - You will need to make 2 types of prototypes (low-fi and hi-fi).
    For the prototype design, we will be looking at the completeness of the frames covered. Your prototype should ideally cover all requirements of the design problem. In addition, uniqueness of the solution to the problem will also be considered. Below is the content that should be covered for the prototype designs:

    1) Wireframe flow(s) (low-fidelity) OR dialog flow (for ideas that do not involve a physical screen — e.g., voice interface)
       - Intuitiveness of screens and frames (e.g. user able to navigate easily)
       - Descriptions and labels

       Do note that sketches from user research & ideation is not considered wireframe flows/low-fi.

    2) Visual Design of the main interface screens (medium to high fidelity) OR Decision Tree + strategies (for ideas that do not involve a physical screen)
       - Intuitiveness of screens and frames (e.g. user able to navigate easily)
       - Application of design principles you have learnt:
         - Components that we look out for include but is not limited to:
           - Presence of error message frames (or system status)
           - Frame layout and aesthetics (e.g. use of white space, pleasing colour schemes)
           - Consistency in design (e.g. consistent colour, typography, buttons)
- Closing: Reflection
  - Brief reflection on how concepts and design principles learnt in lectures are applied to the process you followed in prototyping for this design task

You are free to organize the design portfolio however you like or to include additional information that you deem necessary.

Note: Ensure that your portfolio is coherent and easy to read. Your portfolio will also be graded based on its organization, look and coherence. You can use whichever platform you deem appropriate to format your portfolio (e.g. Notion, Google Slides, PowerPoint, Canva, Word Document, Website etc.), but do take note of the final submission format (see submission instructions).

Possible Design Tasks

Below are the 7 design tasks. Choose 1 out of the 7 for this design assignment. The expectations on what you should include for the design tasks are also provided after this section.

***Do note that you should not choose a topic that is closely related to your group project for this course.**

**** If you have handled similar topic/design before or are planning to redesign an existing app, do declare and seek written approval by sending an email to your mentor with the lecturer CCed.**

1. ProcrastinationBuster – an anti-procrastination app

Jane, a chronic procrastinator, is facing the common struggle of consistently putting off tasks until the last minute. This habit not only leads to burnout but also causes significant distress in her studying and work life. Recognizing the need for change, Jane is eager to break free from the cycle of procrastination, aiming to establish a stable rhythm in her daily responsibilities. Despite her determination, she feels uncertain about how to effectively alter her behaviour and develop healthier habits.

Your task is to design an anti-procrastination app that assists individuals like Jane in overcoming procrastination tendencies and fostering a more productive lifestyle. This app integrates persuasive elements to motivate and guide users toward breaking the procrastination cycle, empowering them to achieve their goals with greater efficiency.

2. PetPalCare – A Pet Caring App

Meet Alice, a dedicated office worker with an endearing canine companion. Unfortunately, her hectic work schedule and travels have made it challenging for her to fulfill her pet's needs consistently. The lack of time and energy has left Alice struggling to provide essential care like walks, playtime, feeding, and clean-up for her furry friend. In light of these challenges, Alice is on the lookout for reliable individuals who can offer assistance in caring for her pet during busy periods or when she's away from her city.

Your task is to design a thoughtful mobile application that connects pet owners like Alice with trustworthy individuals who are passionate about caring for animals. This app aims to provide a reliable solution for pet care, ensuring that pets receive the attention and love they deserve even when their owners have demanding schedules or travel plans. Your app design should include the screens for pet owners like Alice finding individuals who can offer assistance as well as screens for individuals looking for gigs to take care of pets.

3. SilverConnect – a well-being app for the elderly

Meet Emma, a vibrant 78-year-old woman who has lived in her neighborhood for decades. Emma, like many seniors, values her independence and enjoys the comfort of her own home. However, lately, she has been facing some challenges that come with aging, such as remembering to take her medications and feeling a bit isolated.

Your task is to design an app that makes a positive impact on Emma's life that not only addresses her medication management and emergency assistance needs but also enriches her social life by helping her connect with her family members or/and the elderly community, proving that technology can play a crucial role in enhancing the well-being of our elderly population.

4. MedAIAssist – a Medical Condition Identification app for physicians

Dr. Patel, a seasoned physician, is facing a hectic day with a long list of patients to attend to. Among them is John, a middle-aged man experiencing a range of symptoms that are perplexing and don't immediately align with a clear diagnosis.

Your task is to design for an AI-driven app that helps physicians like Dr. Patel to expedite the diagnostic process. The app could allow patients to provide their symptoms, medical history, and any relevant details Or could access Electronic Health Records (EHR) to analyze their past medical conditions, treatments, and prescriptions, ensuring a comprehensive overview of his health. It could allow the physician to process patient's EHRs alongside a vast database of medical literature, case studies, and real-time medical data to identify potential diagnoses and presents them with valuable insights and recommendations. The app could also allow physicians to share the findings with colleagues for a swift and collective discussion.

5. InterviewPro – an AI-driven interview practice app

Hannah, an undergraduate student eager to excel in job interviews, faces a common challenge - the lack of constructive feedback on her interview performance. Despite her efforts, she struggles to identify areas for improvement and wishes for a more effective way to practice.

Your task is to design an innovative interview preparation app that leverages generative AI technology. It assists users in honing their skills for behavioral interviews, providing valuable insights and feedback. However, due to the evolving nature of generative AI, there is a possibility that some AI-generated recommendations may be overly confident or present imaginative scenarios. With a success rate of approximately 70% accuracy in its AI responses, the app ensures users receive reliable and beneficial feedback while acknowledging the potential for occasional overconfidence or hallucinatory suggestions.

6. SlideCraft – an AI-powered Slides creation app

Aditya, a dedicated employee gearing up for an important presentation at work, faces a common challenge: he has all the content ready but lacks the design skills and time to create visually stunning and professional slides. Eager to make a lasting impression, Aditya seeks a solution to enhance the aesthetics of his presentation without investing significant time in design.

Your task is to design for an innovative slides creation app that harnesses the power of generative AI to assist users like Aditya. The app allows users to create impressive slides with minimal effort while acknowledging the occasional possibility of unconventional design. In case of undesired outputs, the app should provide a way forward to help users reach their desired results.

7. SmartLearn – an AI-enhanced Learning Management app

Farah, an ambitious undergraduate student, relies solely on her university's learning management system, such as Canvas or Luminus, to access course information and resources. Despite her efforts, Farah often finds it challenging to locate specific information, get timely answers to her questions, and maintain a streamlined approach to her coursework.
Your task is to design an AI-enhanced learning management system that provides personalized learning experiences. While embracing the potential of generative AI, the app acknowledges the occasional presence of overconfident responses or imaginative suggestions. With an approximate 80% accuracy rate in its AI responses, the app ensures Farah receives valuable and tailored support while being mindful of the potential for occasional overconfidence or hallucinatory responses.

Design task feature expectations

You should produce interactive prototype that addresses the requirements of your design task. For instance, if you choose a design task on a travel planner app, you should include requirements like creating an itinerary, booking for hotel, providing a travel calendar and so on (read the design task carefully!). In general, provide features for at least three user tasks.

Important Note:

- For the lo-fi wireframes, you are expected to provide them for all 3 user tasks. Add notes to explain your designs if needed.
- For the hi-fi prototype, you are expected to provide extensive screens that cover all edge cases for **one** user task with a **minimum of 5 screens**. Clearly mention in your design which user task was selected for extensive design.
- You are encouraged to provide hi-fi screens for the other 2 user tasks as well for better understanding of your idea, but you will not be penalised if you do not provide them. In case you decide to work on the hi-fi designs for the other 2 user tasks as well, they don't have to as extensive as the first user task.

Apart from the required screens that answers your design task, you should also include some basic screen components into your design tasks, for example:

1) Signup, sign-in and sign-out/ login, logout, registration feature
2) Menu bar/navigation bar
3) Search component (e.g. search bar)
4) System status components
   Error messages, confirmation messages, notifications, alerts

AI task resources

- Learn what you can do about AI hallucinations in this guide by Google with AI design patterns and ethics to be considered during UX design: https://pair.withgoogle.com/guidebook/patterns
- Learn more about how UX design changes for generative AI apps in the following articles:
  - Different levels of AI in AI-UX app design: https://voyager.beehiiv.com/p/altitudes-of-ai
  - Common UI/UX visual design patterns in generative AI powered apps: https://medium.com/whitespectre/emerging-ui-ux-patterns-in-generative-ai-a-visual-guide-74000c7198a4

    - AI-UX Interactions (examples): https://aiverse.design/browse
    - New UI-interaction paradigm, with AI (by Jakob Nielsen - same person who came up with the 10 usability heuristics): https://www.nngroup.com/articles/ai-paradigm/?utm_source=voyager.beehiiv.com&utm_medium=referral&utm_campaign=ai-isn-t-another-toy-for-the-techies-it-s-here-to-stay

- For more guidance regarding your AI task, you may contact tutor Charisma at MS-Teams or at charisma.kausar@u.nus.edu or Telegram: @ckcherry23.

Grading

Following table shows a guideline we shall use for evaluating the work out of total available 18 points. The points indicate the weightage for each section to help you organise and prioritise the sections in your submission. The final grade will be awarded based on quality of work.

A+	>= 15 points
A	12-14 points
B	9-11 points
C	6-8 points
D	< 6 points

Design Task - User Requirements and User Journey (3 points) - Wireframe (low-fi) or dialog flow (2 points) - High-fidelity visual design or decision tree + design strategies eg design system (4 points)	9 points
Reflection	2 points
Overall Portfolio Design - First impression e.g., Aesthetics and Layout (1 point) - Consistency (1 point) - Clarity and content (2 points)	4 points
Creativity /Novelty	3 points