CS-213 Project Description 2025

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For Questions & Support : Use **EdDiscussion** forum from Moodle.

Goal. In this project, you will learn to apply HCI methods for producing a suitable interface for an application or a website. Beyond design principles or aesthetics, these methods rely on rapid cycles of prototyping and testing. You will design an interface, run a usability study, improve the design based on your observations, run a second usability study and finally conduct a comparative study with two versions of the interface.

Schedule. Every Thursday 08:15 -> 10:00 in AAC 231 but not on 20.02.2025 (week 1) and not on 20.05.2025 (Ascension). Check for updates on Moodle.

Team. Before week 3, please make teams of 4 students (A, B, C, D) and upload the names on Moodle. Teams will work in a semi-adversarial mode: A and B design V1 of the interface, C & D do the usability test for V1 , C & D design V2 according to their observations, then A and B run V2 usability test. Finally, all together, you design two versions of V3 for the comparative study.

Your Interface. The interface you will design can be for a mobile app, a website or any software application, it is up to you, but we recommend the website since users can test it without having to install anything. The interface must support at least 20 different functionalities (e.g. create, duplicate, delete, cancel, confirm, sort, …) on several screens/pages. We do not recommend designing complex graphical interfaces such as a scheduling/planning tool for a production process but an app with 3 buttons would not be sufficient to raise usability issues.

Tools. This project does not aim to measure your coding skills; you have other courses for that. Of course, you can manually code the interface but we recommend using tools that increase your productivity in order to proceed rapidly to usability tests. In the past, students who manually coded their interface faced difficulties managing deadlines. The tools will be presented on Week 2 (27.02.2025). They are listed in the appendix. Your app does not need to be fully functional to test the interface: what matters for usability tests is the front end, the back end can be 'fake'.

Milestones. Each deliverable counts for 25% of the final grade.

Milestone 1 is a ±5 pages PDF to be uploaded on Moodle by 28.04.2025 at 23:59

- Purpose of the app/website and list of functionalities
- Description of V1 with 1-2 screen captures and text
- Problems detected while testing V1
- Description of V2 with 1-2 screen captures and modifications applied to V1
- Problems detected while testing V2 and suggested modifications

Evaluation criteria: quality of the observations, relevance of the modifications. There is no aesthetic assessment of the interface.

Milestone 2 is a ±5 pages PDF to be uploaded on Moodle by 10.06.2025 at 12:00

- Purpose of the AB testing, selection of the independent and dependent variables
- Description of V3.1 and V3.1 with text or screen captures
- Quantitative results
- Log file analysis
- Conclusions of the study

Evaluation criteria: relevance of the variables, quality of the analyses, consistency of the conclusions.

Productivity Tools for Interface Design

You may use the tool you want to build the interface, but we'll provide help in using Figma.

FIGMA

Figma is a cloud-based design tool that allows you to create user interfaces and prototypes. Over the past six or so years, Figma has exploded in user adoption and has emerged as a preferred alternative amongst UX design professionals. A key advantage of Figma is the ability to easily collaborate with teams in real-time. A tutorial will be given in the 'project' slot on week 2 (27.02.2025)

- [To register in Figma](#).

- [Figma 4-part beginner course](#).

- [Figma User Guide](#).

GEN AI

Beware: if GenAI accelerates the first phase of design, fine tuning the interface may be time consuming. Additionally, while all these AI-tools have free trials they have quite limited functionality.

- [Uizard.io](#): By Miro Labs founded 2017 in Denmark. Uizard is one of the more advanced AI-powered design tools out there that enables users to swiftly create wireframes, mockups, and interactive prototypes for web and app designs. Their Wireframe Scanner is a particularly nice feature that allows you to transform hand-drawn sketches into editable digital mockups by simply uploading a photo of your sketch. [Watch a 3 minute introduction here](#). Unfortunately, exporting options (e.g. SVG, React/CSS) are limited only to paying users so you are mostly limited to the platform.

- [Relume.io](): An alternative to Uizard to generate sitemaps, wireframes, and interactive mockups. A key advantage over Uizard is that their free version allows you to export to Figma through a plugin. However, it is not as advanced as Uizard.io. [Video intro here]().

- [Replit](): Replit is a complete AI cloud-based IDEs with 30M users and supports over 50 programming languages. It enables anyone to write, run, and deploy code directly from their browsers. Note that developing or manipulating complex UX flows and interactions is challenging without dedicating substantial time to the generated code. [Video intro here]().

Templates

- [Uizard.io](), [Relume.io](), and [Replit]() mentioned above have many templates in addition to their AI generation capabilities. Figma also offers tons of templates.