# ASSIGNMENT 5 – HIGH FIDELITY PROTOTYPE

## DUE: 7 DAYS BEFORE EACH EXAM DATE

## OVERVIEW

Build an interactive high-fidelity prototype with code and conduct a usability test on it. This assignment must be done in group: you can use all the lab hours devoted to this assignment to start working on it and complete the work in the following weeks.

## PREPARATION AND EXECUTION

1. **Create an interactive high-fidelity prototype with code.** Starting from the screens of the medium-fidelity prototype and the plan you made in Assignment 4, develop your code prototype to be sufficient for a usability test, with the programming languages and frameworks you prefer. We suggest you rely on what you learned in previous courses (e.g., Web Applications I), whenever possible.
   The underlying functionality of the prototype does not have to work completely, but a participant should be able to complete *all* your three tasks. Unlike your mid-fi prototype, the hi-fi prototype must look and feel like a *real* application. Simulating a realistic experience is more important than back-end computation or scalability. As for the other prototypes, the trivial (yet mandatory) steps and some of the underlying functionality does not have to be fully implemented. Data should be stored in a persistent way. See the "expectations" below for more details.
2. **Conduct a usability test.** Conduct a usability test with at least 1 participant per team member (i.e., if the group has 4 members, you must run 4 evaluations). Participants should fall within your target user base. You may test with *no more* than 1 Politecnico student unless you have permission from the teacher of your theme.
   Do not test with people you know well and, especially, people who have already seen or be involved in your project so far. Follow the procedure described and exemplified in class and write the details in a *test protocol* (script):
   - Select and recruit participants.
   - Define which role each team member will play (facilitator, observer, …).
   - Refine your three tasks (optionally) and define their criteria of success, with related metrics.
   - Decide on any questionnaires to be used before/after the test.
   - Prepare an informed consent form.
   - Debrief each participant, i.e., prepare some questions you would like to ask.

   During the tests, take some *pictures* of participants doing the evaluation and plenty of notes.
   After all the tests, prepare a list of potential changes that your group would like to implement to fix the main emerged issues.

# Hi-Fi Prototype Expectations

To re-iterate, the prototype can combine interactive features with hard-coded elements. You should balance pre-scripted content with interactive elements to assess the user experience and allow the users to complete your three tasks. Tailor this balance based on your project's needs, ensuring that the prototype serves as a useful tool for gathering feedback and insights, while being clear that it does not represent the full functions of a completed product.

In details:

- It must cover the three previously defined tasks.
- It must respect the constraints of the target device (e.g., size, controls/widgets) and other attributes of your target platform.
- It must clearly apply good and consistent visual design aspects.
- It must be *more functional* than your previous prototypes, yet not a full-functional application.
- It must simulate a realistic experience. The trivial, yet mandatory, steps and some of the underlying functionality does not have to be fully implemented. For example, applications requiring a large set of items can instead have a sufficient amount of pre-stored data.
- Information that can be manipulated by users must be stored in a *persistent way*, e.g., it should not disappear after a refresh or a restart of the prototype.

# Deliverables

Create a new directory called "A5" in your assigned group repository on GitHub and upload, by the deadline, the test protocol in PDF with the filled-up consent forms and questionaries (if any). How you run the test and the summary of its results (together with the photos) will be in the final report.

Finally, the code of the prototype must be present by the deadline in the (new) GitHub repository associated to your group, which is named as your project.

# Grading Criteria (100%)

The assignment will be evaluated at the exam, according to the information included in the final report. The criteria outlined below indicate the focus of the evaluation and the relative weight of each aspect of the assignment.

Prototype (45%)
___ Source code on the correct repo on GitHub with all contributing
___ Outline tools/framework/libraries and the motivation behind their choices
___ Implement fixes from heuristic evaluation and mid-fi prototypes as per A4
___ Fully cover the three tasks
___ Standards and constraints for the target device are followed
___ It feels realistic for a usability test
___ Appropriate trade-offs made between functionality and design completeness
___ Hard-coded aspects, pre-stored data, and any limitation a clearly described
___ Information that can be manipulated are stored in a persistent way
___ Exhibit strong visual design

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Usability test (55%)

___ Evaluation is well conducted in term of roles, materials, and metrics/questionnaires
___ Consent form is properly done
___ Test protocol is complete and thoughtful
___ Used tasks are appropriate in their description and methodology used (if any)
___ Debriefing was adequately prepared and executed
___ Photos of the evaluations were taken
___ Results are clear in term of pain points, successful tasks, outcomes from metrics and questionaries
___ Non-trivial list of potential changes is adequate and justified