**HMI Project:**

**Heuristic and Experimental evaluation of E-commerce sites**

### Objectives

The objective of this project is to learn how to conduct a complete experimental evaluation involving real users. By focusing on E-commerce sites, this project will allow you to conduct a heuristic evaluation and an experimental one and to compare the interest and difficulties of these two main types of evaluation. It will be interesting to see if the errors you, as **experts**, detected during the heuristic evaluation have hindered the **users** of the experimental evaluation you will have to conduct.

### Context of the study

In this project, it is requested to carry out heuristic and experimental evaluation of commercial sites offering cultural products or multimedia equipment. For this, we will focus on these sites:

- https://www.isetcom.tn/public/home.faces
- http://www.issatm.rnu.tn/fr/index.php
- https://tek-up.de/

## 1- Heuristic evaluation:

Evaluate **two** of these sites according to the heuristic criteria of Bastien and Scapin **or** those of Nielsen.

## 2- Experimental evaluation:

This evaluation will be slightly artificial in the sense that you do not have the precise usability requirements for these sites. We are therefore not asking you to establish the evaluation strategy for this study. The only indication of this will concern the population targeted by this evaluation. Two groups of users will in fact need to be considered:

- Expert users for a first half of users. Will be considered here as experts the users who already have a good experience of buying cultural or multimedia products on E-commerce sites. Attention, when targeting the test population, one will be careful to distinguish users who already know the experienced site perfectly (real experts) from those who have only used it occasionally at best.

- First-time users for another half of the users. A novice with no experience of the Internet or even of computers will not be considered as a first-time user: it is not the website that you would evaluate with them, but their familiarity with the computer tool. We will rather focus here on people who have a good command of the Internet but who have not made purchases on commercial Web sites.

In addition, we will only be interested in the general customer relationship and the purchase/search for cultural or digital products in this evaluation. You will have to build accordingly your scenarios. However, you are asked to observe at least two users from each target population (experts, first-time users) during your experiments.

**Work to do**

You will be required to conduct the entire assessment at one or more of the three test sites. What interests me about this project is your ability to conduct a proper ergonomic study and to make a good analysis of the results obtained. I will also be attentive to the diversity of interaction situations selected for this study. In fact, you can consider this experiment in different ways:

- **Comparison of two (or more) sites -** In this case, ensure that the same scenarios are presented at the study sites with both test populations.
- **Study of the sites flexibility -** Influence the expertise degree on the interaction. The same scenarios will be proposed to both test populations.
- **In-depth experimental evaluation of a single site -** In this case, all the experiments will be conducted on the same site, but note that you will observe different user behaviors (5-12 users).

The study will be done using the entire studied procedure:

- evaluation plan: in particular, definition of various tasks (at least 4 different scenarios) and recruitment of subjects. The tasks you define can be based on the errors detected in the first part (heuristic evaluation), but it would not be enough to simply find them. Write evaluation scripts.
- conducting the evaluation. There are a number of techniques that can be considered for collecting data: you will be asked to specify in the final report how you conducted the evaluation,
- analysis of observations and writing of a synthesis (analysis of errors in terms of non-respected ergonomic concepts.

At the end of the project, you will be asked to submit an evaluation report that will give an exhaustive review of the analysis.

## 3- Return of projects

Projects will be done in pairs. Given the heavy workload, work in trinomials is strongly encouraged. You need to submit a summary report in print and in electronic version (PDF file).

The project must be returned by **April 20, 2025 at 23:59**. The paper versions can be returned on **April 23, 2025**.

## 4- Project Evaluation

The project will be evaluated according to the following criteria:

- rigour of the methodological approach,
- evaluation coverage: diversity and importance of the tasks selected, representativeness of the test sample, diversity of observables,
- relevance of the analysis: relevance of the problems detected and their analysis (accuracy of the description, accuracy of the problem and its ergonomic characterization),
- quality of the synthesis (editorial quality but also spirit of synthesis).

**The project will be part of your grade.**