
Week 2 – User Interface design principles

Computer Science Team Project

CS2TP 2025-26

This workshop is designed to explore and experiment with different heuristics associated with user interface design. These exercises are designed to ensure you consider a holistic heuristic evaluation of your user interface design. All of the activities and steps explained in this sheet should be done as a team.

You should work through the provided worksheets and also on your project planning and development during workshop sessions. The workshop sessions are a scheduled chance for you to complete team work, but **don't forget, you should also be scheduling your own sessions outside of the workshops to complete the work for this module.** You can also come back to this worksheet in the future for reference if you need to.

Please note: These workshop sessions are the primary way by which you will obtain feedback on your work through this module. Attendance and active participation at each of the *allocated* sessions is expected from all team members, and you may not attend alternative sessions. Failure to engage with these sessions without a credible reason will be interpreted as a lack of contribution towards the team, and will negatively affect that individual's final module mark.

1 Understanding human-computer interaction

1.1 Understanding key terminology

As a team, discuss the **meaning of the following terms** and **makes notes about how and where these testing techniques can be used when it comes to your own application.** This task should take no more than 20 minutes of your time.

- User interface
- User experience
- Human-computer interaction

2 What is the Jakob Nielsen Heuristic?

There are several different software development methodologies such as waterfall, agile etc. In this workshop, we will specifically focus on agile development and testing, as the flexibility that this methodology offers works for most modern-day software development. The biggest advantage of agile development is that it encourages us to solve our problems as a team. There are usually many **roles** in a software development environment, such as business people, programmers, testers, analysts—everyone who all should work together how best to improve their product. Testers are critical part of the development environment as they are responsible for delivering the best possible quality, and who are all focused on testing.

Your turn - As a team, discuss your understanding of the Jakob heuristics taught in the lecture. This task should take no more than 20 minutes of your time.

2.1 Applying the Jakob Nielsen heuristics for your project

Considering Jakob's 10 heuristic principles, discuss as a team how you would evaluate your own website? **Your turn** - For each of the heuristic, design a table and map out whether or not your website meets the rules and guidelines. Where the rule and/or the guideline is not met, discuss how you will consider correcting it. This task should take no more than 40 minutes of your time.

3 Differentiating design strategies

The main aim of human-computer interaction is to create products that users will enjoy. The challenge, however with that of the field is it is multidisciplinary in nature, which makes it rather complex to design products of different value for users with different background and experience. In your experience, you may have come across good and bad website designs, especially in terms of consistency, i.e., colors and typography. Consider answering, as a team, how and why your design is usable and will create an enjoyable experience for your user? The following questions are intended for you to discuss, when it comes to evaluating the design of your own website:

- What is your website's background and foreground colours?
- What font sizes and color (both foreground and background) have you implemented?
- How usable is your website for users with impaired visibility?

Your turn - As a team take the example of *a website that you would consider to be your competitor and your own website, and discuss how your website is different, are you able to point out at least 1 unique design strategy (in terms of standard and quality) when compared to that of your competitor's?*