

Lab 3: Web Programming - CSci130

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Please keep the different documents that you are creating during the lab sessions as they can be used to assess your participation to the course.

Goals: To create documents with **HTML5** and **CSS3** using the selectors.

Exercise 0. Towards Midterm 1 – HTML5/CSS3 training

- HTML quiz (40 questions): https://www.w3schools.com/html/html_quiz.asp
- CSS quiz (25 questions): https://www.w3schools.com/css/css_quiz.asp

Make sure you understand the reason of all the answers for all the questions. Repeat until you get at least 90%.

Exercise 1. More CSS with events and links:

In this exercise, you have to create a web document (HTML page) with the following constraints:

It has a header, footer, and an article in the body. The article has five sections.

The last section has a table with the different days of the week in the column, and different hours in the rows (8h-10h, 10h-12h, 12h-2h, 2h-4h, 4h-6h). At this stage, the cells of the table will be empty. Use the `thead`, `tbody`, and `th` tags appropriately.

The first word of the first section will have a font of 12pt while other words have a font of 10pt. The last section will be in italic.

When you move the mouse over the rows, the color will change to green. When your mouse is on a particular cell (`td`) the color will change to red and will be different.

The first letter of each day will be in uppercase while the rest will be in lowercase.

Links will be red when new and not visited, once the link has been visited it will be blue, if the link gets focus (like with the tab key) it will become yellow, then if the visitor hovers the link with a pointer it will be green, and finally, if the visitor activates the link it will be blue.

Exercise 2. More CSS for the menu (use the code from the previous lab and complete it)

By considering the exercise that had 5 pages, with 5 sections,... that you have used and enriched with CSS. Update the pages so the sections are presented with:

- The links are in a horizontal menu on the top.
- Section 1 in the middle of the page; Section 2 and 3 are below section 1, on the left; Section 4 and 5 are below section 2, on the right.

Exercise 3: Animation with CSS3.

By using moving different elements at different speed, you have to create the illusion of motion and a 3D effect by moving several objects at different speed.

In a webpage, you have to create an animation with:

- The sky (blue background)
- Different clouds that move at different speeds (boxes with round edges)
- Image of a landscape under the sky and the clouds (a green box).
- A gray mountain represented as a triangle:
 - Start with a box (div) with borders
 - Set the size of the borders to 50.
 - Set the height and width to 0.
 - Update the parameters to have only a triangle.
- One or more trees (combination of boxes with different colors and round edges)
- When you move your mouse on a cloud, the cloud will expand and you will have a link becoming visible.

Exercise 4: To be uploaded on Canvas (assignment to be due for Monday afternoon)

By using CSS3 animations, create a webpage that represents (you have the **choice**):

- The ocean with fish swimming and moving algae.
- A landscape with flying birds and clouds moving on in the sky, and fog in the background of the scene. Consider different layers moving at different speeds to simulate a 3D effect.
- A scene with a runner walking in the foreground – the runner has a static position (you can use a gif file) – and the background will use the parallax scrolling principle.
- A bottle with bubbles moving up, if you hover the mouse on the bottle, the drink and the bubbles will change color.

