

Lab 0: CSCI130 - Web Programming

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Goals: To reflect on what is a document, what are web documents.

The goal of this introductory lab is to find different websites extract the logical structure. More specifically, you have to:

- Think about the **logic** of the websites (the **structure**), of the different entities that are presented on each website.
- Ignore the aspects related to the presentation (the **layout**).

Before the creation of a website, you have to know what has to be managed, what will be the content, before it will be presented.

Part 1

- Introduce yourself :)
 - Name
 - Status in program (Junior, Senior, ...)
 - What is your focus in CSCI? (SWE, ML/AI, Data Science, Cybersecurity, ...)
 - Any hobbies? What do you do for fun?
 - Anything interesting that you want to add?
- Connections are important in CS. Whether you are in school or in industry, you will always be a part of a team.

Part 2

- Imagine you have to transfer a printed book (e.g. a novel) to a website or to a structured electronic document. Discuss and justify how you would structure the website containing the book, and what would be the main logical elements that you could be present.
- Represent the website as a tree of elements.

Part 3

- Think of your Resume/CV. How are the elements structured? Think of the sections, not the layout itself.
- (Optional) Create a Resume/CV using Microsoft Word or Google Docs. This will be helpful for next week's lab.

Part 4

- Using the language of your choice (C++, Java, C#, Python, etc), create a program that creates a HTML file with a table of size $n \times m$. Create a program in C++ that creates an HTML file with a table, with the content of the table corresponding to the content of a 2D matrix of int that is given as an input. In addition, you will add a row in the bottom containing the average values for each column.

```
double** M;  
// allocate and initialize M with values  
MatrixToHTMLpage(M);  
string MatrixToHTMLpage(double** M)  
{  
}
```