



Norwegian University of
Science and Technology



MCT4048: Audio Programming

The Fundamentals: Graphical User Interfaces

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Assignment 1: Presentation WAC paper (individual)



Present a summary of a WAC paper of your choice to the class.
The presentation should last 5 min + 1 min for questions.

Schedule of presentations 8.2.19:

- Karolina
- Mari
- Sam
- Sepehr
- Shreejay

This Week: The Fundamentals (40% Individual Work)



- **Syllabus:** <https://uio.instructure.com/courses/17406>
- **Assignment 1** (Total grade: 10%): Presentation WAC paper (individual) – day 3 (February 7, 2019) or 4 (February 8, 2019)
- **Assignment 2** (Total grade: 20%): Presentation mini-project 1 (individual) – days 2 (February 6, 2019) (5%), 3 (February 7, 2019) (5%), 4 (February 8, 2019) (10%)
- **Assignment 3** (Total grade: 10%): Written blog post about the mini-project 1 – February 11, 2019

Program: Day 4 – 8 February, 2019



- 9.15-10.30: WAC paper presentations (2/2)
- 10.30-11.00: Setting up computers with the tools for the tutorial
- 11.00-12.30: Tutorial: Graphical User Interfaces
- 12.30-13.00: Lunch break
- 13.00-15.00: Mini-project 1 development (4/4)
- 15.00-16.00: Final presentations mini-project 1 (3/3)

Learning Outcomes



- Get familiar with how to improve the look-and-feel of web-based projects using CSS files.
- Be capable of improving the design of web audio interfaces using external libraries and CSS files.
- Be able to create an independent project relating concepts and building up from previous knowledge.
- Be aware of best practices in web development or own projects.

Start setting up...



Download:

`https://github.com/axambo/audio-programming-workshop/`

Go to: `code/d4/`

Debugging JavaScript



```
debugger;  
breakpoints;
```

Functions in JavaScript



```
x = sum (1, 2);
```

```
function sum (a, b) {  
    return a + b;  
}
```


The Three Legs

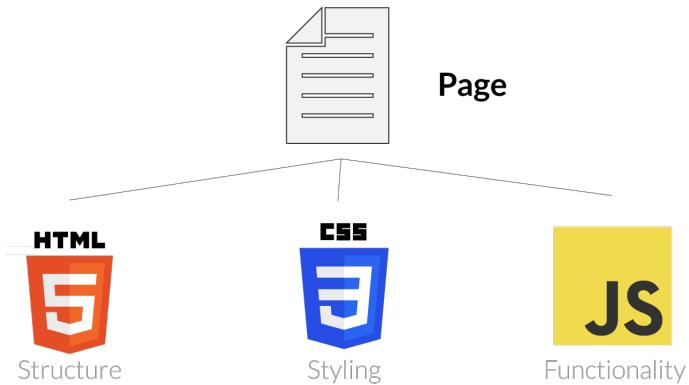


Image source: blog.codeanalogy.com

CSS



- Cascading Style Sheets are used for styling web applications.
- CSS files use the .css file extension.
- To connect the CSS with an HTML file, you must link the file from the HTML document using the `<link>` element in the `<head>`.



- NexusUI.js is a collection of HTML5 interfaces and JavaScript that is helpful for building web audio interfaces.
- The collection includes buttons, dials, sliders, toggles, and so on.
- It is possible to change the colors and look-and-feel (`.colorize()`, CSS).

Mini-project development (4/4)



You are expected to create a mini-project that should be doable within a week. The overall aim is to get familiar with Web Audio. Here are different approaches that you can take:

- Develop an idea based on what we are seeing in class. Feel free to build up everyday, or change if not convinced.
- Adapt an existing code to your needs and document what are the changes.
- Other?

Working style



- Individual work but in shared rooms. You are encourage to share and discuss with your peers.
- One-to-one talks via Zoom or personally with the instructor to catch up.
- There will be 4 time slots during the week to work on the project. It is OK to change the topic over the course of the week. Keep a research journal.

Assignment 2 (part 3) (10%) - Final Presentation Mini-Project



Order provided by the shuffle algorithm :) Spend 5 min max. explaining the following:

- **Description:** What is the title of the project and main concept. Overview of the technologies used.
- **Timeline:** Provide an overview of the 3 days that you have been working in the mini-project. What have you been working on?
- **Achievements:** Give a summary of the achievements of this week through the project. Any progress?
- **Challenges:** Give a summary of the challenges that you have been encountering over the week and how you did face them?
- **What is next?** e.g. blog post, code repository, website publishing... more development?

Assignment 3 (10%) - Written Blog Post Mini-Project



Deadline: February 11, 2019

- Make sure to include the information requested in your presentation (see previous slide) plus feedback received.
- Be familiar with the new metadata to be used so that the blog post has author name, date, the right category (“Audio-Programming”), and a thumbnail for the homepage. See the documentation at: <https://github.com/MCT-master/mct-master.github.io/blob/master/README.md>.
- At least you should use a screenshot and an embedded video showcasing the mini-project. It is a plus if you add links to the source code and a live link (e.g. directory in a personal webpage).
- Add relevant links in the text to generate traffic.

Relevant Links



- Syllabus: `https://uio.instructure.com/courses/17406/pages/syllabus`
- GitHub slides & code:
`https://github.com/axambo/audio-programming-workshop`