NTNU
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 7.2.19:
— 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 (a, b) {
    return a + b;
}
```
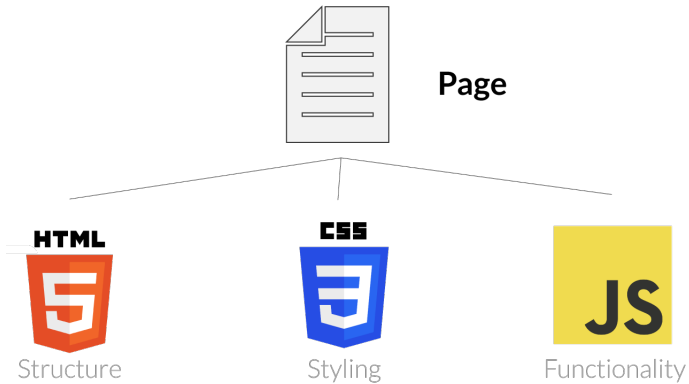
The Three Legs

Page

Structure

Styling

Functionality

Image source: blog.codeanalogies.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

— 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 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`