

## Week 8 - Using External Libraries & Building a GUI



# VA345 Creative Coding

Course Instructor : Assist. Prof. Dr. Selcuk ARTUT

# Food for thought : Zach Lieberman

<http://thesystemis.com>

Zachary Lieberman is an artist with a simple goal: he wants you surprised. His work uses technology in a playful way to break down the fragile boundary between the visible and the invisible

Lieberman has held residencies at Ars Electronica Futurelab, Eyebeam, Dance Theater Workshop, and the Hangar Center for the Arts in Barcelona.

Most recently, he helped create visuals for the facade of the new Ars Electronica Museum, wrote software for an augmented reality magic trick, and helped develop an open source eye tracker to help a paralyzed graffiti artist draw again. In addition to making artistic projects, Lieberman is co-creator of openFrameworks, an open source C++ toolkit for creative coding. He teaches at Parsons School of Design.







# Using External Libraries

Extend Processing beyond graphics and images into audio, video, and communication with other devices.

Examples:

PDF Export

Network

Serial

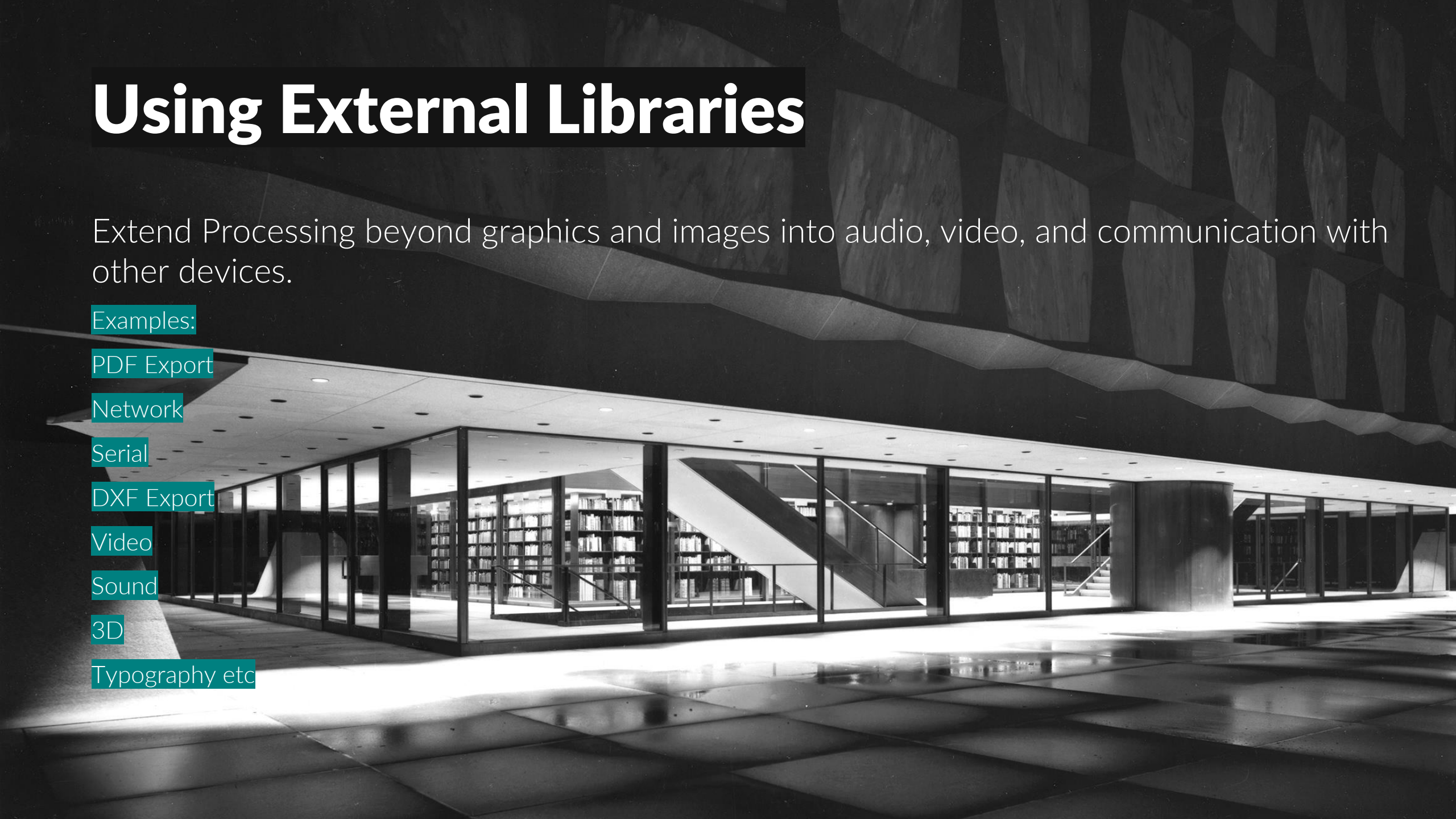
DXF Export

Video

Sound

3D

Typography etc



# Using External Libraries

Let's practice with an example

What if we want to save a vector version of our sketch layout? Later we might want to import it to Illustrating Applications

Workflow : Export from Processing as Pdf and Import to Adobe Illustrator

Resource: <https://processing.org/reference/libraries/pdf/index.html>

# Using External Libraries

```
import processing.pdf.*;

boolean stopRecord = false;

void setup() {
    size(400, 400);
    beginRecord(PDF, "filename.pdf");
}

void draw() {
    // Draw something good here
    line(random(width), 0, width/2, height);
    if (stopRecord) {
        endRecord();
    }
}

void mousePressed() {
    stopRecord = true;
}
```

# GUI

## Graphical User Interfaces

The graphical user interface, is a type of user interface that allows users to interact with electronic devices through graphical icons and visual indicators such as secondary notation, instead of text-based user interfaces, typed command labels or text navigation. (Wiki)

Designing the visual composition and temporal behavior of a GUI is an important part of software application programming in the area of human-computer interaction.

Its goal is to enhance the efficiency and ease of use for the underlying logical design of a stored program, a design discipline named usability.

Methods of user-centered design are used to ensure that the visual language introduced in the design is well-tailored to the tasks.



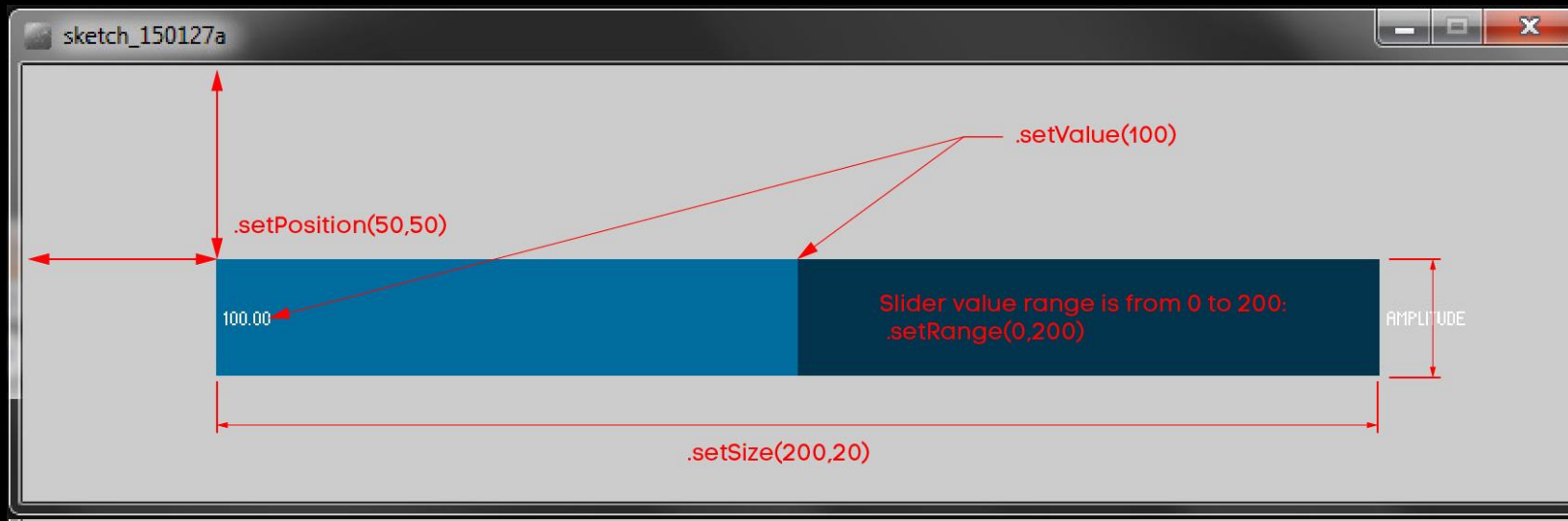
# controlP5 is a library written by Andreas Schlegel for the programming environment processing

Controllers to build a graphical user interface on top of your processing sketch include Sliders, Buttons, Toggles, Knobs, Textfields, RadioButtons, Checkboxes amongst others and can be easily added to a processing sketch.

<http://www.sojamo.de/libraries/controlP5/>



# Let's begin by exploring a slider



# **Free Exploring Time for ControlP5**

Install the library

Go through the examples

Duration : 30 min

# **Advanced in-Class Coding**

# Assignment 005

Design a poster for Creative Coding Exhibition, Abstract Generative Forms with Competency in Typographic Implementation

Method : Use GUI to create a generative pattern application that exports vector format graphics, and import to Illustrator.

Poster information : Paper Size A2

Main title : VA345 Creative Coding Projects

Subtitle : Exhibition

Date: XX.XX.2017 (TBA)

Venue: FASS Art Gallery

Participants: Deniz Beren Akural, İpek Ganiyusufoğlu, Eylül Naz Kirelli, Fatih Doğukan Nuhoglu, Faruk Can Özkan, Kyoung Yong Park, Havva Neslihan Sümer, Cem Tunaboğlu, Zuhale Uz, Cansu Ülker, Göksun Yüksel

Course Instructor : Selcuk ARTUT



# Assignment Checking


Assignment 001 - Mario Automata

Assignment 002 - Perlin Noise

Assignment 003 - Using Loops

Assignment 004 - Using Transformations

Submission Deadline : 15th of November, 2017 via email

Assignment title	
 <a href="#">Assignment 004 - Using Transformations</a>	<a href="#">Edit</a>   <a href="#">Duplicate</a>   <a href="#">View Submissions</a>
 <a href="#">Assignment 003 - Using Loops</a>	<a href="#">Edit</a>   <a href="#">Duplicate</a>   <a href="#">View Submissions</a>
 <a href="#">Assignment 002 - Perlin Noise</a>	<a href="#">Edit</a>   <a href="#">Duplicate</a>   <a href="#">View Submissions</a>
  <a href="#">Assignment 001 - Mario Automata</a>	<a href="#">Edit</a>   <a href="#">Duplicate</a>   <a href="#">View Submissions</a>