Theoretical Backgrounds of Audio & Graphics

Exercise 08

PLEASE WORK IN YOUR GROUPS TOGETHER ON THIS.

Task 8.1 Programming 3D (45min)

Extend the `tbag_exercise_08_dance` sketch by introducing `PMatrix3D` for object translations and rotations. Encapsulate object drawing at a specific point with specific color into a separate function and call the function for each of the two objects. The interface sould be:

```
  void drawCubeAt(PVector pos, PVector size, color mycolor) {
    // the transformation matrix
    PMatrix3D matrix = new PMatrix3D();

    push();
    // move matrix to position
    // set color
    // apply transformation matrix
    // draw cube
    pop();
  }
```

As a starting-point you may use this skeleton:

```
void drawCubeAt(PVector pos, PVector size, color mycolor) {
  // the transformation matrix
  PMatrix3D matrix = new PMatrix3D();

  push();
  // move matrix to position
  // set color
  // apply transformation matrix
  // draw cube
  pop();
}
```

Task 8.2 interfacing SuperCollider with Processing (45min)

really spent only 45min on this, unless you are verty eager!

- Choose one of the two objects and send its coordinates to SuperCollider. You can do this by adding an OSC-interface to the dance program and steal code from `diorama01` (session `07`).
- replace the synth definition in the SuperCollider code with a frequency-modulation (or anything else you like) and tune parameters accordingly.