cis3.5, fall 2009, project II—user-controlled animation with processing

overview

- This is the project for unit II of cis 3.5. This project covers interactive web programming using Processing.
- The project is worth 15% of your term grade. It will be marked out of **15 points**.
- The project is due on **Thursday November 5**. Email it to: `sklar@sci.brooklyn.cuny.edu`
  PLEASE use a **zip** utility to bundle your files together and send them as ONE attachment to the email. See further instructions on the class home page.

project description

- The purpose of the project is to create an interactive application in Processing that involves animation and lets the user control that animation with the mouse and/or keyboard. It is up to you to decide what the animation will be—a game, a simulation, whatever! Be creative!

  A simple example would be to simulate a ball bouncing up and down, and if the user clicks on the ball, then the ball stops bouncing. Your project should be a bit more involved than that, but you could start with this idea and build on it.

  Remember to build slowly, starting with small bits that you know will work and adding on to them gradually. It's a good idea to save copies of intermediate versions, just in case your code starts developing in a direction that you don't like or can't get to work. Then you can easily go back to a previous intermediate version.
- As usual, the project has two parts: (1) design, and (2) application. The design is worth 5 points, and the application is worth 10 points. The design part involves written documentation, to be written using a word processor (e.g., in Word) and submitted as a PDF file (preferably). The second part is to be written using Processing.

  I very strongly recommend that you start by working on the design part first. Draw out your ideas on paper. Think carefully about what you want your application to look like and how you want the user to interact with it. Think about what the user might do wrong and how you would deal with that. Then, after your design seems solid, start programming!

1 design (5 points)

Describe (in words) the application that you are going to create. Plan out what the Processing window will look like, how it will change when it is animated, and what the user will do to interact with it. Be sure to include a drawing in your documentation that illustrates your design ideas, as well as instructions for the user.

2 application (10 points)

Using **Processing**, implement the application that you have designed.
Your application must contain the following **required elements**:

- Different shapes (e.g., lines, ellipses, triangles, etc.) and different colors.
- Animation—at least one of the shapes in your application must move around.
- Interactive aspects—the application must respond when the user presses particular keys or moves/clicks the mouse.