

Lab 7

Goals

The goals for this lab are:

1. Practice writing an interactive Processing program
2. Practice using conditionals in your program
3. Practice testing where the mouse is clicked within your scene
4. Practice using animation variables
5. *Practice using arrays*
6. *Practice using vectors*
7. Make an interactive program that animates when a mouse is clicked in a certain area

Modality

This is a pair-programming lab - please form teams of two people and trade off typing in commands and giving instructions to they-who-are-typing.

Details

Tasks: This lab is to create an exploding magic box. Modify your existing magic box code so that when the user clicks on the box, it explodes with at least 10 shapes which head in at least 10 different directions. You can use the creature you designed in an earlier lab, or one of the parametric shapes you designed or something new (like an image). Your program must use arrays and vectors to control the animation of the explosion.

Your 'sketch' of the scene must:

- include a box (big enough to be seen but smaller than the screen)
- Use conditionals to only respond to a user's click within the box
- Trigger a simple animation (moving position (and optionally size or color)) of at least 10 objects
- The animation should be controlled by animation variables and by vectors which control the direction of the objects
- Your sketch must use arrays and vectors
- The interaction should be controlled via the `mousePressed`, `mouseDrag` or `mouseMove` functions

Please play with your animation and consider modifying the colors and scale of objects as they emerge. Also consider adding code to make your objects 'bounce' off the walls of the window once they emerge from the box. Also consider playing with the objects speed to make them emerge at different rates from the box, etc.

Example output for a given frame might look like this:

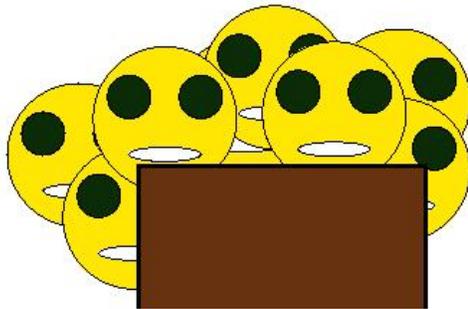


Figure 1: Many faces merging from the magic box.

Demo:

In order to receive credit for this lab, you and your partner must demo your sketch to your instructor along with handing in the image and sketch of your creature via handin. Ask your instructor for details.