

MPM16B

Introduction to Computation for Experience Design

Problem Set 2

Functions and Objects

Problems:

1. Painting with pixels. For this problem, you will create virtual paint brush. Create a **function** that draws a pattern at a given (x, y) position. Use your function in conjunction with Processing's mouse events to make a drawing tool. Experiment with shape, colour, transparency, etc..! [3 pts]
 2. Modify your paint brush so that it varies over **time**, too. The variation should be introduced as one or more new parameters to the brush function. *Hint: remember that the draw() function behaves as a loop!* [3 pts]
 3. Use your new animated brush to create a composition that evokes **rhythm**. The answer to this question can be either a screen capture (if you draw the composition by hand) or an applet (if you wish to programmatically generate the composition) [2 pts]
 4. Write a function that determines if two rectangles overlap. Write a simple sketch to demonstrate your function in action. [3 pts]
 5. Modify your answer to PS 1, question 2 (representational picture) so that it is packaged as a **class**. [2 pts]
 6. Use your new class from question 5 to create two **instances** of your cute/evil being. Make sure that your class allows you to customize them slightly so that they don't look identical to one another. [3 pts]
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How to submit

Each of the questions above should be answered by a single Processing sketch (except #3). At the very beginning of the sketch, put a comment containing your name, the problem set number and the question number. Export each sketch as a web applet, and upload them to your web space. Your answers should be up on your webpage **before class** on the day the assignment is due.

Coding Style

For this assignment, you will be marked on your coding style as well as correctness. That means using variables/system variables instead of hard-coded values, properly formatted and indented blocks of code, appropriate names for variables and functions, comments to provide clarifications, etc... Use common sense!