Introduction to Programming II Project Log

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| **Project title:** | Drawing app |
| **Topic:** | 8: Callbacks |
| **What progress have you made this topic?** | |
| Understood and utilised asynchronous function loadImage() in my preload() function. It loads the images at the same time the canvas and UI are being setup, allowing a shorter load time.  Debugged my own program. | |
| **What problems have you faced and were you able to solve them?** | |
| * Tried to implement buttons to switch stamp tool shape, but was unable to select anything other than the last item in the shapes array. This was because the index order for-in loop in JS is implementation-dependent, and array values may not be accessed in the order as expected. (Source: w3schools)       Ver 1: for (i in stampShapes) {    Ver 2: for (var i=0; i<stampShapes.length; i++) {  The variable i seems to have clashed with another global i, hence the value of i in this loop was not what I intended to get. I solved this by changing var to let.    Ver 3: for (let i=0; i<stampShapes.length; i++) {  This version works as let makes i a local variable instead of global. I can now select any shape in the DOM.  Fixed error where checkbox appears to be checked after unchecking it and switching the tool back to it.      Added this block:   * Huge issue with stamp tool fixed spacing not being applied and being drawn in the wrong direction when shift key is held down.     Original code:    It is hard to think of one single algorithm for rendering the straight line with/without fixed spacing as a straight line without fixed spacing uses the size of the shape as a gap. It would be problematic if the input spacing for fixed spacing (a) needed to have a minimum length of the size of the shape and (b) is less than the size of the shape.  Hence I worked from 2 different functions and gradually combined into 1. There was a lot of spaghetti code but after renaming my global variable ‘spacing’ to ‘gap’ (‘number of **gaps’** compared to ‘**gap** length’)), the solution became clear.  An intermediate draft, before combining into 1 function. I was confused what to put as the for-loop condition:  I cleaned up the code to this:    Final version where I renamed ‘spacing’ to ‘gap’:    Combined renderAlternate() and renderAlternateFixed into 1:    Visual result: (all 3 lines were drawn with tool radius = 30)    ^No fixed spacing means each gap is the current tool radius.   * Issue: spacing input field accepts alphabetical inputs and turns input into empty string, the only fix is if I set the lower limit to anything other than 0 (to 1 in this case). Meanwhile, all of the tool radius fields do not accept alphabetical inputs and default invalid inputs into 1. They share a lower limit of 1. | |
| **What are you planning to do over the next few weeks?** | |
| Test and discover more bugged out functions or things that are not working as intended. My spraycan is not working properly and I still can’t figure out how to detect a right mouse click. | |
| **Are you on target to successfully complete your project? If you aren’t on target, how will you address the issue?** | |
| I believe I am on target, I’ve finished this extension and have 1 + 1 extra more to enhance/fix. | |