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## **Post-reflection**

When I began this JavaScript course, my programming skills felt like it was full of holes. It was a mix of the basic understanding and I had a hard time with the logic that often left me feeling frustrated. As the semester went on I not only gained a better understanding but I also found a way to use creativity in my code, in a way I haven't before.

I've come a long way since the start of this course. When I first started I knew how to use if statements and if else but I always had a hard time writing the if statement from memory and getting it right on the first try. I just couldn't wrap my head around the logic and conditions. I especially had trouble with greater-than or less-than conditions. Now I feel that I can both read and write these statements much faster than before and my understanding has improved. My improvement in these skills has helped me to write more complex code which was important in creating interactive experiences in my future projects..

As I previously mentioned in the pre-reflection, when I began the course, I had a basic understanding of PHP. When I was first learning this language I had a hard time learning the foreach loops and what the condition meant by 'variable' of 'variables'. Once we covered the for of loops in javascript it helped all those pieces click into place and solidified this knowledge for me. Furthermore, I had a similar experience when looping through for loops with the incrementing 'i' variable. While I could write it from memory I didn't fully understand the logic behind how it worked. Now I know that 'i' is just incrementing and counting through the loop and I even know how to loop backward for when you have to splice elements from an array. Another aspect of my learning that has improved over the semester is arrays. When I started, I

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understood what arrays were, and that I could add items to them to be called later but I had no idea how to loop through them. Now that we are at the end of the semester, I feel comfortable looping through arrays. I can use them with ease to create multiples of the same object or to store javascript objects inside of them. This ability to store objects in arrays, combined with structuring objects with JSON has allowed me to create more readable and dynamic code. For example, when I used arrays to refactor my code it helped me create thousands of bullets that could be created on command and then stored in one array.

On another note, all of these new skills I've acquired have helped me greatly so far in being able to bring my creative ideas to life. Aside from the previously stated skills that I've improved on. I feel very comfortable using skills like the p5s map function. I also noticed that I am getting better at calculating overlaps with p5's dist() function but I can also do it with just if statements and conditionals. I noticed I became the most comfortable with this from the Variation Jam project where I had to calculate the overlap from all sides of a rectangle. During this project, calculating rectangle overlaps made me realize these struggles lead me to find other more creative solutions. For example, to calculate both the overlap for the top and bottom of the rectangles, I had to combine other if statements to check if the player was not just overlapping but in the top or bottom half of the rectangles area.

There are of course things that I still struggle with: one being delays. While I know how to calculate a delay with a counter and a timeout, I still have a hard time wrapping my head around the steps to make it work. I understand the basic concept but it doesn't come to me as quickly as other conditions. Additionally, I feel challenged by the concept of using booleans to

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create types of tracking. While I understand that I can use true or false values to track when things happen, actually writing the statements still confuses me. I feel that this is an important skill that I will have to practice in order to feel more comfortable using Booleans and to create more advanced code in the future. Finally, the last concept that I feel challenged by is the idea of using gravity in my code. I have a hard time knowing when to call gravity and when I have to set it to 0 to make the object stop falling. While it is something I struggle with, I enjoy creating immersive games with this kind of physics-based motion. I plan to experiment more with mimicking other forms of nature, like playing with the concept of rendering water or wind.

All in all, I feel that I've opened up so many doors with Javascript, not just in game design with p5 but also including my practice in web development and design. I feel way more comfortable with JavaScript logic and I can already see how it is helping me in this aspect of my career. Since the start of the semester, I have already seen an improvement in my comfortability with integrating vanilla javascript into my creative projects at work. I feel that I can come to solutions much quicker than before and I feel more confident in these skills. Furthermore, I now understand what it means to truly become a creative coder. While it is something I struggle with, I didn't even really know about the idea of creative coding. I was shocked by all of the endless possibilities and the ways that you can make a simple game interesting with just a few changes. I think that is one of the most valuable things that I've learned from this class.

I can already feel how this will impact my future as a coder. I was always eager to experiment and learn new ways to incorporate code into my practice but now I feel more confident in learning other skills outside of javascript. For example, I can see myself eventually learning

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Python, to experiment with projection mapping and visual design in programs like Touch Designer. What's more, I've also discovered that I like the creation aspect of game design, which makes me want to try my hand at more game-oriented languages like C++ or Java. Overall, I am thrilled to have been able to improve my knowledge of JavaScript and logic. I'm looking forward to all the different ways I can use these new skills in my current practice in web development and also in other multimedia art projects to come.