

# ICD20 RST Reflection

## January 2024

### Final Project Reflection

After completing your creative task use this form to reflect on your work.

### Finished Project Code Outline

List here all the important coding elements in your project and describe how they contribute to the overall function of your program, highlighting which aspect you are most proud of.

Concept	Line number(s)	Purpose
If function	116, 120, 121, 130, 131, 132, 134, 138, 143, 145, 149, 150, 154, 155, 156, 158, 160, 162, 166, 168, 174, 177, 178, 186, 187, 190, 191, 193, 196, 202, 204, 207, 211, 218, 219, 222, 228, 239, 242, 244, 251, 252, 256, 260, 263, 266, 267, 271, 278, 280	Acts as a base to all my functions, allowing them to work if the previous statement is True, this limits bugs to happen where multiple screens will overlap each other. It also limits the bugs where you can press buttons that are not meant to be pressed on a certain page.
onStep	172 - 284	This function makes up the majority of my coding process, it makes everything work as usual and creates a functioning velocity function. This function makes my characters

		move and my blocks to drop, it randomizes my power ups and my falling blocks.
onMouseDown	153, 163	This creates a functioning toggle switch to switch between mouse movement and Key movement.
OnMousePress	114, 125	Allows my buttons to work and my invincibility power up to kick in.
Fonts	25 lines	Creates all of my instructions and my text in order to know what does what.

### **Difficulties and Opportunities**

Briefly describe one difficulty you faced or one opportunity you had to add a feature to your code. How did your initial design change in the face of this?

One difficulty I faced during this project was the initial lack of random number generation, at the time I did not yet know about the randrange function, so I had to resort to a pseudo-random number generator, the one I used was a Linear Congruential Generator (LCG). This type of random number generator is flawed as from the surface it may seem to generate random numbers but they eventually loop back around creating a not so random number, or a pseudo-random number. During my confusion of creating a LCG I went on to the Documentation section of CMU and searched for Rand and eventually came upon randrange, a much more efficient method of generating real random numbers.

### **Future goals**

Describe what you would do differently if given more time

If I were given more time I would make my falling blocks look and feel better, creating a harder game. I would also add a difficulty slider to increase the starting difficulty. I might even add a proper character instead of just a ball.