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ART385 Interaction Design

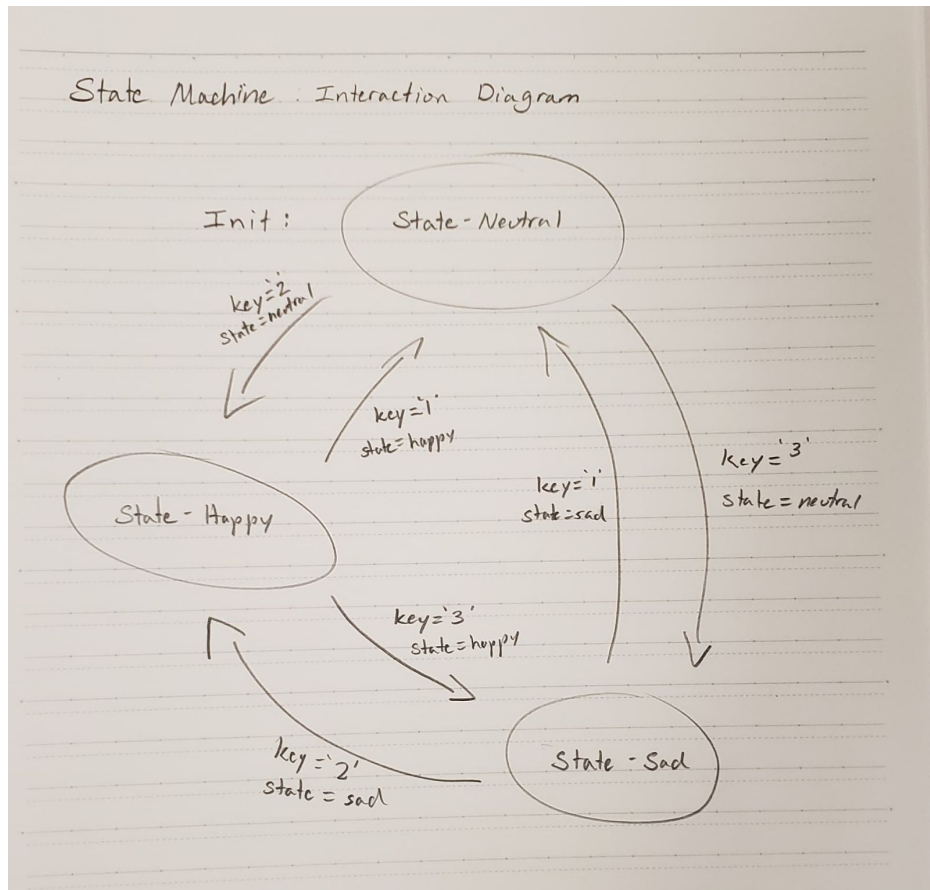
CSP to P5.js Design Document

February 13, 2020

Assignment

This assignment will revisit the CodeSelfPortrait assignment by adding “states” to the program in order to simulate emotion. There will be 3 main emotional states (neutral, sad, and happy) that can be changed using keyboard commands. Much of the coding structure will be based on the BallLoop.pde program that was designed in class.

Interaction Diagram:



Software Design

The data design consists primarily of loading image data depending on a multitude of if statements in the “main” function. There are three integral functions for this program:

- `run(speed)` is the function that creates the running motion of the person. This function loops the person through 3 frames based on the “counter” variable used. Since I have not learned how to use time units such as milliseconds or seconds, I used the counter to simulate that.
- `opacityChange(emotion)` is the function that takes a certain image set (in this case, blush and tears) and makes them alternate on a spectrum between low and high opacity. This program was used to add visual effects to the extraneous aspects of the emotes that appear on the side of the person.
- `imageSet(x,y)` is not the name of any function in the program but refers to the many images created prior in the CodeSelfPortrait assignment. Using functions, I encapsulated the images so they can be added with a single line of code AND so they can be manipulated directionally.

The architecture design is centered around the `keyPressed()` function where the user can press ‘1’, ‘2’ or ‘3’ on their keypad that will change the state of the person. The graph below shows the interaction:

Input	Output
1	stateNeutral
2	stateHappy
3	stateSad

Finally, the procedural design simply starts the program with run(2) as a default and will not change unless the user changes the states. When the user changes the state, the speed of the person will change and will correspond to the emotion.

Reflection

Since I was using the same image set from the CSP project, it was an easy transition. I really enjoyed creating the new emoticons to express emotion instead of changing the imageset from the CSP project since I did not want to change the 8-bit art appeal of it. I also enjoyed cleaning up my code by encapsulating it into a function. It was really satisfying. Perhaps the only issue I ran into was putting the statement "state=stateNeutral" in my void draw(){} function instead of my setup as it caused an issue where I wasn't able to change the states. Overall, I liked the assignment.