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Advanced Programming 3

Essay #1

Hitomezashi Stitch Patterns

The Hitomezashi stitch patterns are not just visually pleasing patterns, but they are also examined and studies by mathematicians. We can use different inputs to create a new stitch pattern by establishing a rule. For example, in the video, the lady had used the phrase “MAY THE FORCE BE WITH YOU” for the first input and then used the numeric value of pi for the second input. The rule she had established for the phrase was that for every consonant we encounter, we will denote it as a 0 and a dashed line will be drawn for every point. And for every vowel she encountered, that would be denoted as a 1, which means that a dashed line will be created every other point. For the number pi she passed in, she created the rule where every odd number would be denoted as a 1 and every even number would be denoted as a 0. The same rule for 0’s and 1’s is then applied to the number sequence.

As for creating a program that will build and draw the stitch pattern, I will be using Tkinter Canvas for creating my Hitomezashi stitch pattern. The reason I chose this library is to try something different and explore different libraries other than Turtle. After seeing Ariel’s presentation where she used Tkinter Canvas, I thought it would be a package to try for this assignment. I would also like to attempt establishing the rules in a way similar to what the woman did in the video where you pass in a phrase (string) and a number (int) and establish a rule for consonants/vowels and evens/odds. But in the event that does not work out, I will then use binary numbers to accomplish this task.