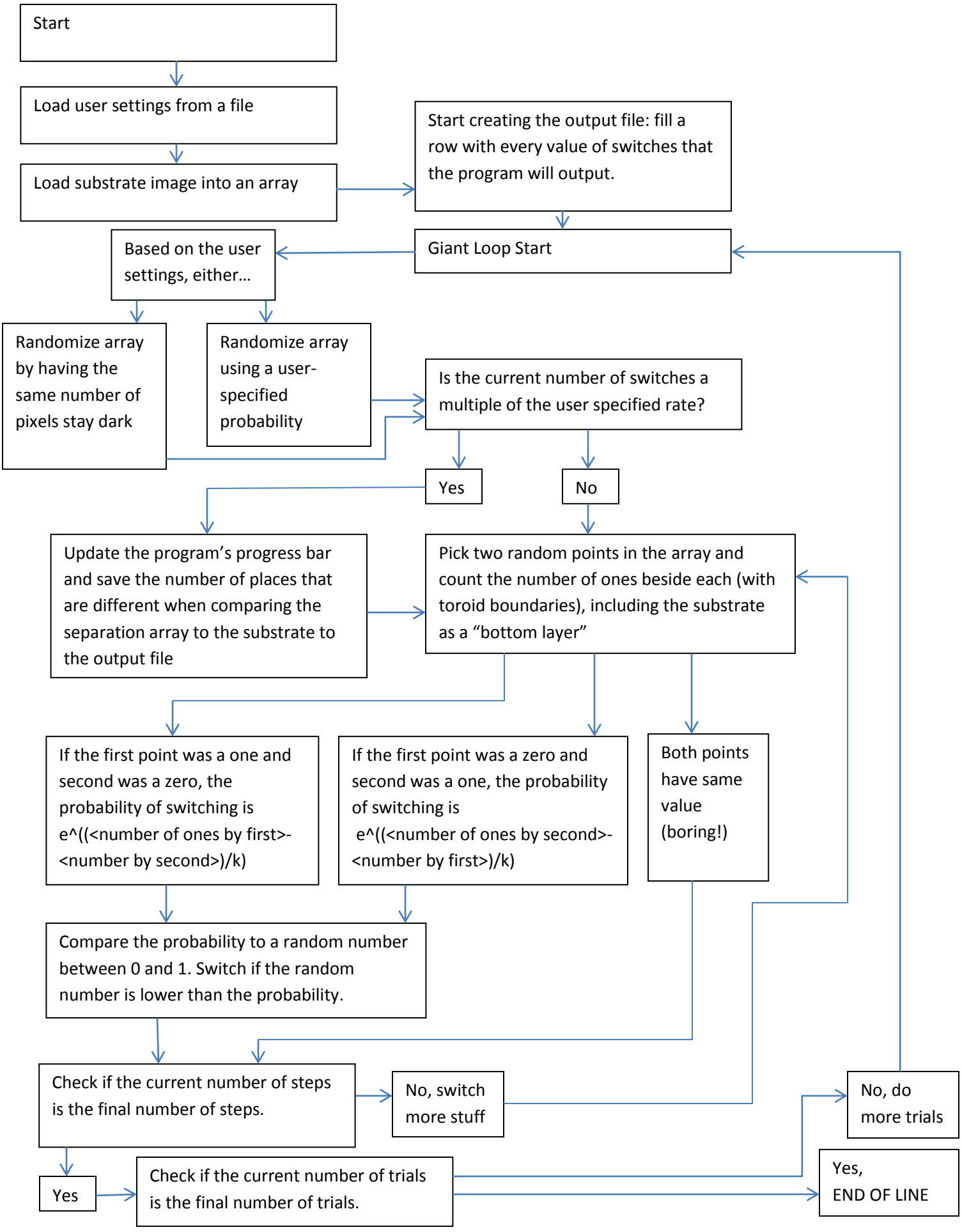
Start
Load user settings from a file
Load substrate image into an array
Start creating the output file: fill a row with every value of switches that the program will output.
Giant Loop Start
Based on the user settings, either…
Randomize array by having the same number of pixels stay dark
Randomize array using a user-specified probability
Is the current number of switches a multiple of the user specified rate?
Yes
No
Update the program's progress bar and save the number of places that are different when comparing the separation array to the substrate to the output file
Pick two random points in the array and count the number of ones beside each (with toroid boundaries), including the substrate as a "bottom layer"
If the first point was a one and second was a zero, the probability of switching is e^((<number of ones by first>-<number by second>)/k)
If the first point was a zero and second was a one, the probability of switching is e^((<number of ones by second>-<number by first>)/k)
Both points have same value (boring!)
Compare the probability to a random number between 0 and 1. Switch if the random number is lower than the probability.
Check if the current number of steps is the final number of steps.
No, switch more stuff
No, do more trials
Yes
Check if the current number of trials is the final number of trials.
Yes, END OF LINE