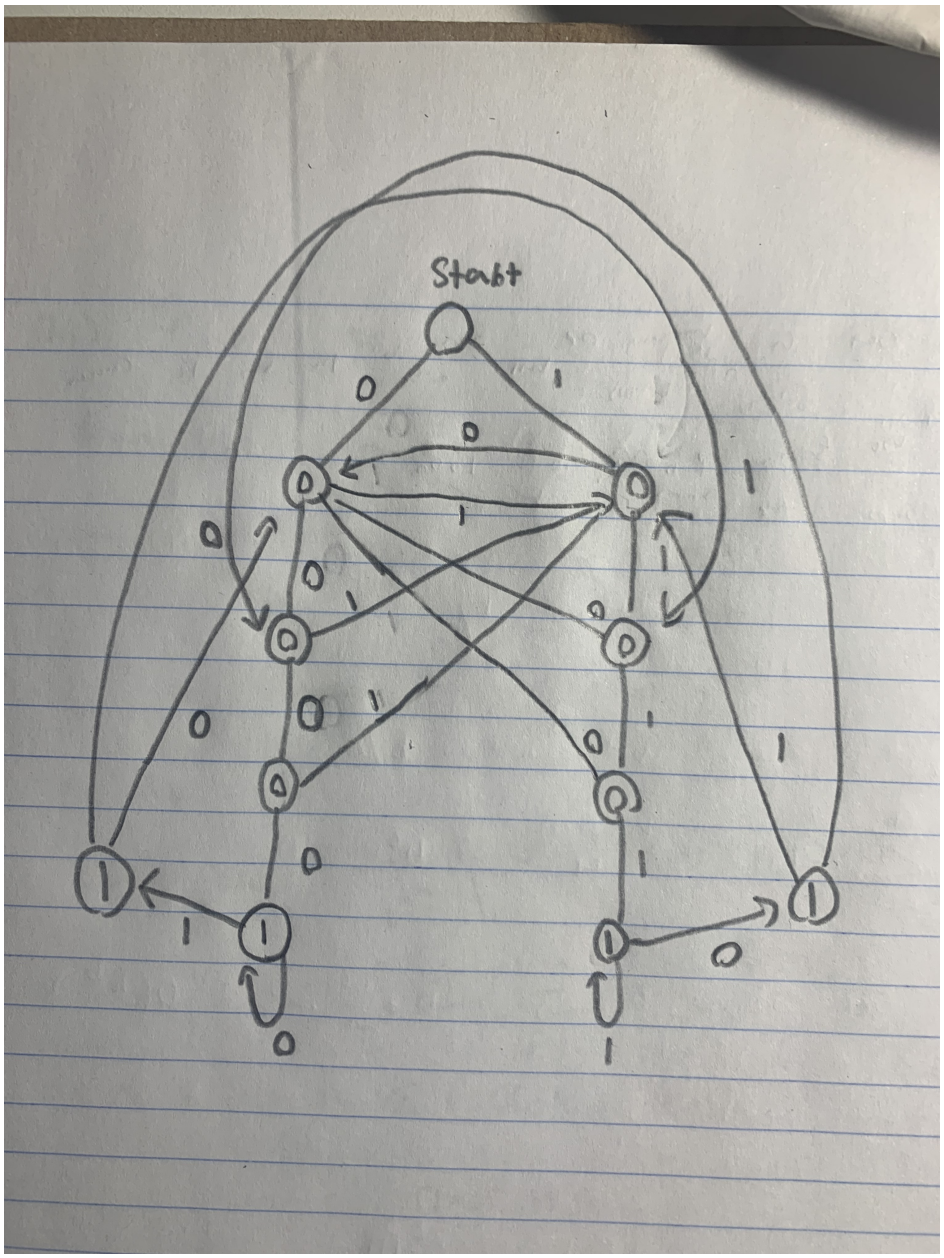
CS251, Spring 2022
Assignment 2: Question 5

Q5a) Design a Moore finite-state machine (where the input is X and the output is Z)cthat outputs 1 after the input is constant for 3 clock cycles, i.e. after 3 consecutive 1s, or 3 consecutive 0s. If the input changes again, the output goes back to 0 until the constant input condition is met again. Draw a fully labeled state diagram.



Q5b) How many flipflops are needed to implement it?

This diagram has 11 states so it would take 4 flip flops to impliment