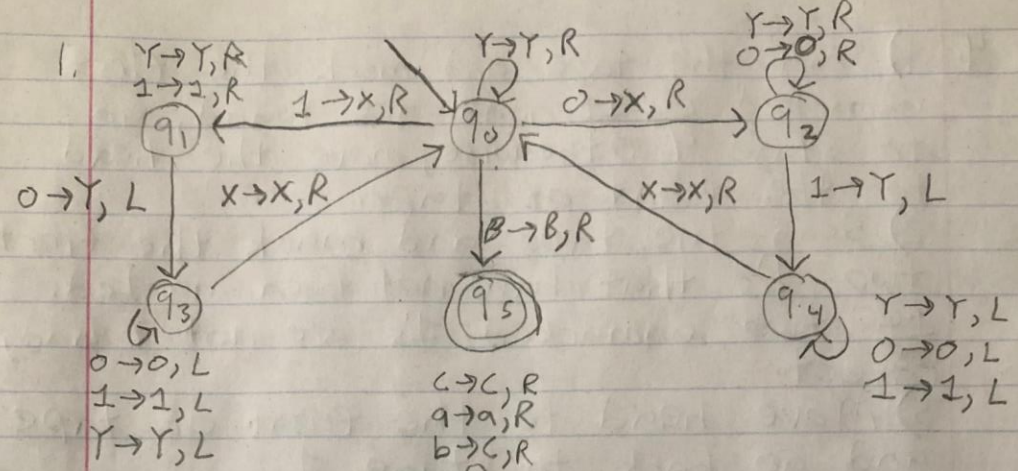
CS 252

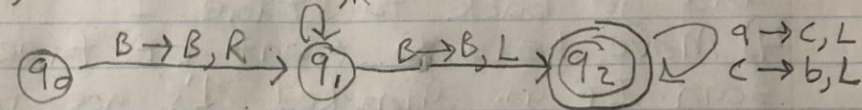
HW #6

Thomas Hart

1.



2. a)



b) The machine turns all a's into c's and turns all c's into b's

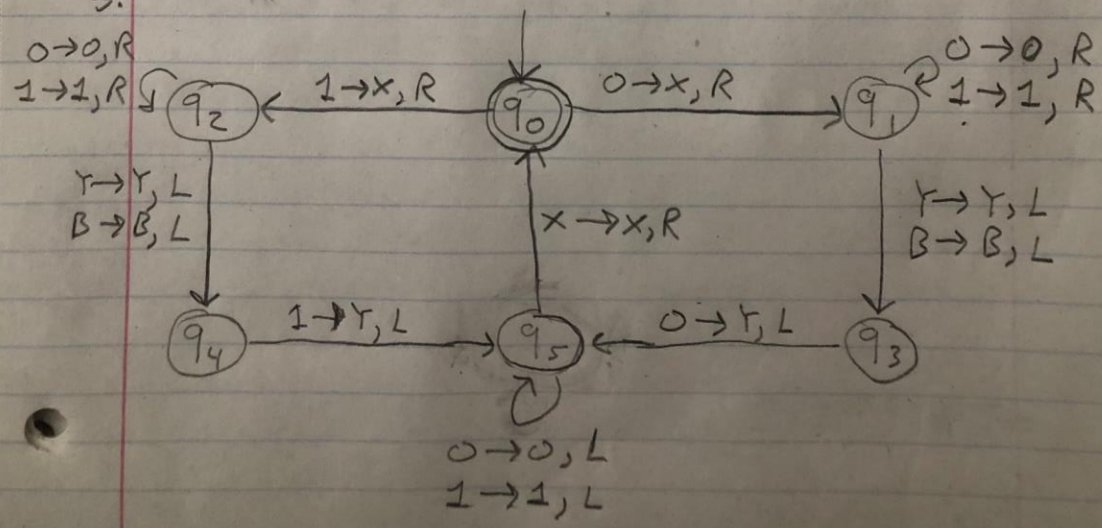
c) q_0Baabca Baac$q_1$ca Baac$q_2$ccB q_2Bccbbc B

B$q_1$aabca Baaccq_1a Baa$q_2$cbcB

Ba$q_1$abca Baaccaq_1 Ba$q_2$abbcB

Baa$q_1$bca Baaccq_2aB B$q_2$acbbcB

3.



4. 1) Scan the tape and mark the first unmarked 0. If none are found, go to stage 4. Otherwise, move the head to the front of tape.
2) Scan the tape and mark the first two 1's that have not been marked. If two unmarked 1's are not found, reject.
3) Move head to the front of tape and go back to stage 1
4) Move head to front of tape and scan. If any unmarked 1's are found, reject. Else, accept.