1. Consider the following Turing machine. In the transition Function, q0 is the Start state, q_{accept} is the Accept State and q_{reject} is the Reject State. In the transition function '#' represents Blank Space. Now simulate this machine with '00000000' string and find whether it is accepted or rejected by the machine.

State	Input	Transition
q0	**0**	**q1, # ,R**
q0	**x**	**q_{reject}, x, R**
q0	**#**	**q_r, #, R**
q1	**0**	**q3, x, R**
q1	**x**	**q1, x, R**
q1	**#**	**q_{accept}, #, R**
q2	**0**	**q2, 0, L**
q2	**x**	**q2, x, L**
q2	**#**	**q1, #, R**
q3	**0**	**q4, 0, R**
q3	**x**	**q3, x, R**
q3	**#**	**q2, #, L**
q4	**0**	**q3, x, R**
q4	**x**	**q4, x, R**
q4	**#**	**q_{reject}, #, R**

2. Consider a Turing machine with the following transitions:

State	Input	δ(State, Symbol, Move)
Q_o	a	Q_1,#,R
Q_0	#	Q_{accept}, #,R
Q_1	a	Q_1, a, R
Q_1	b	Q_2,x,R
Q1	x	Q_1, x, R
Q_2	a	Q_3,x,R
Q_2	b	Q_2, b, R
Q_2	x	Q_2, x, R
Q_3	a	Q_4,a,L
Q_3	#	Q_6,#,L
Q_4	a	Q_4,a,L
Q_4	b	Q_4,b,L
Q_4	x	Q_4,x,L
Q_4	#	Q_5,#,R
Q_5	a	Q_1,x,R
Q_5	x	Q_5,x,R
Q_6	x	Q_6,x,L
Q_6	#	Q_{accept}, #,R

Here 'Q_0' is the start state, 'Q_{Accept}' is the accept state. Trace the execution of this Turing machine with the string **aabbaa#** as input. Note that '#' represents the blank symbol.