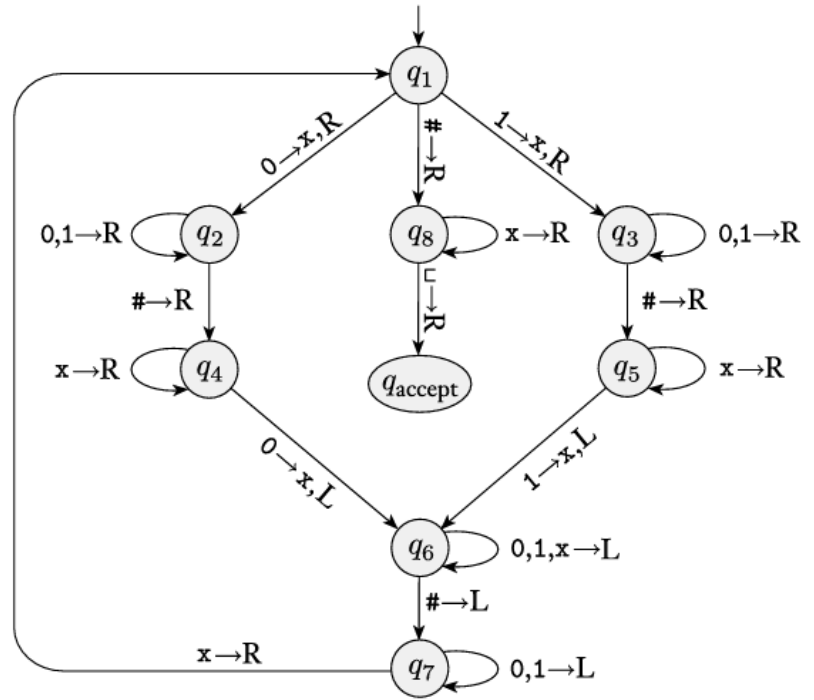


# TM

1) Given the TM above, give the sequence of configurations for the following strings o

1) 010

2) 01#01



## TM

2)The Turing machine M has

- States q and p; q is the start state.
- Tape symbols 0, 1, and B; 0 and 1 are input symbols, and B is the blank.
- The following transition function:

State	tape Symbol	Move
q	0	(q,0,R)
q	1	(p,0,R)
q	B	(q,B,R)
p	0	(q,0,L)
p	1	none (halt)
p	B	(q,0,L)

Simulate M on the input 1010110, and identify one of the configuration of M from the list below.

000001q0

101p0110

00000000qB

000p0110

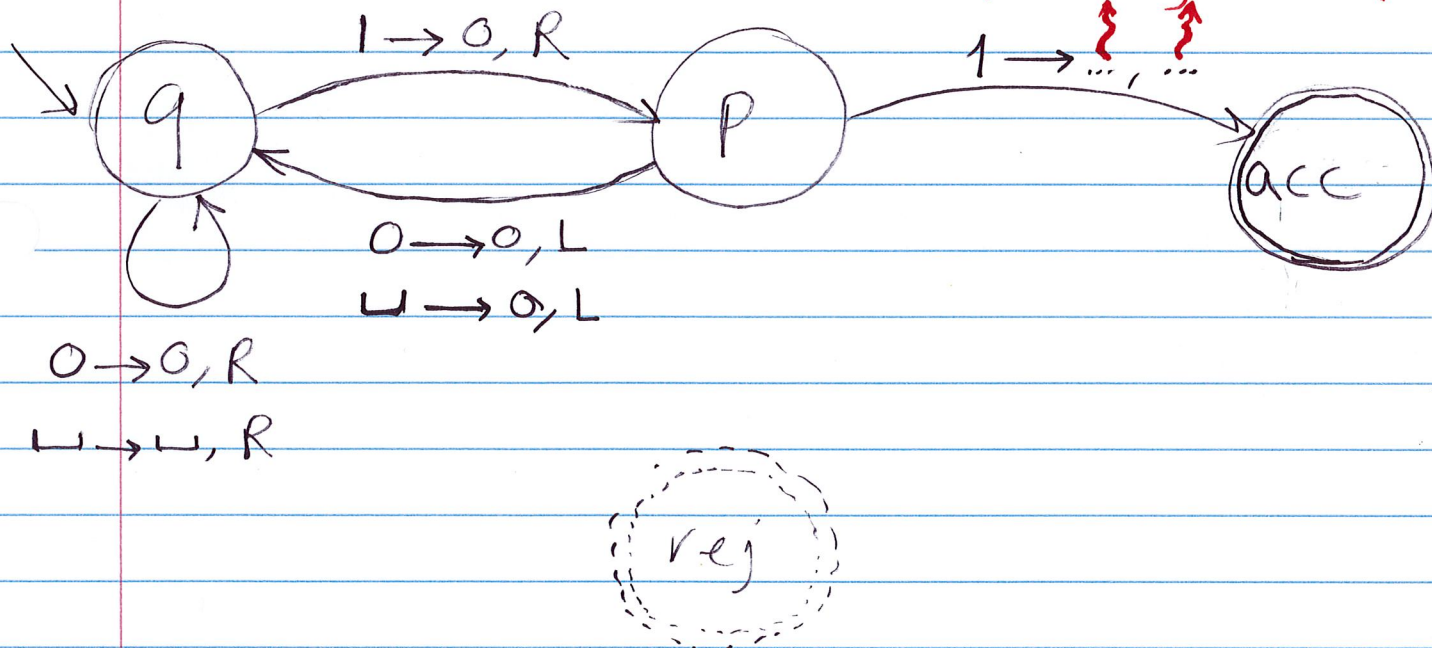
What strings does this TM accept?

# T M

# Lab

## Problem 2)

don't matter  
because as soon as TM  
enters "acc", process halts  
and input string is accepted



## TM

3) Design a Turing Machine for the following languages

1)  $L_1 = \{a^n b^n \mid n \geq 0\}$

2)  $L_2 = \{u \# v \mid u, v \in \{0,1\}^* \text{ and } |v| = 2 \times |u| \}$