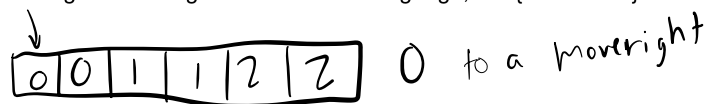


1. Design the Turing machine for the language, $L = \{0^n 1^n 2^n / n \geq 1\}$



↓
a 0 1 1 2 2 move right up to 2

↓
a 0 1 1 2 2 1 to b move right

↓
a 0 b 1 2 2 move right

↓
a 0 b 1 2 2 2 to c move left until a

↓
a 0 b 1 c 2 move left

↓
a 0 b 1 c 2 move left

↓
a 0 b 1 c 2 move left

↓
a 0 b 1 c 2 move right

↓
a 0 b 1 c 2 0 to a move right

↓
a a b 1 c 2 move right

↓
a a b 1 c 2 1 to b move right

↓
a a b b c 2 move right

↓
a a b b c 2 2 to c move left until a

↓
a a b b c c move left

↓
a a b b c c move left

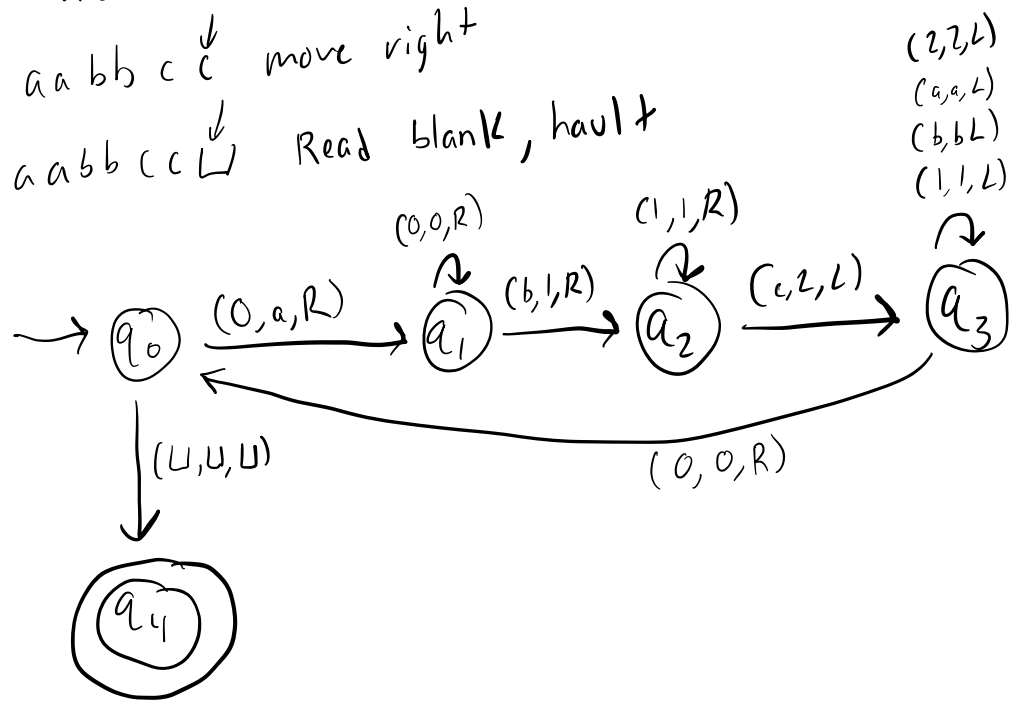
↓
a a b b c c move left

↓
a a b b c c move right

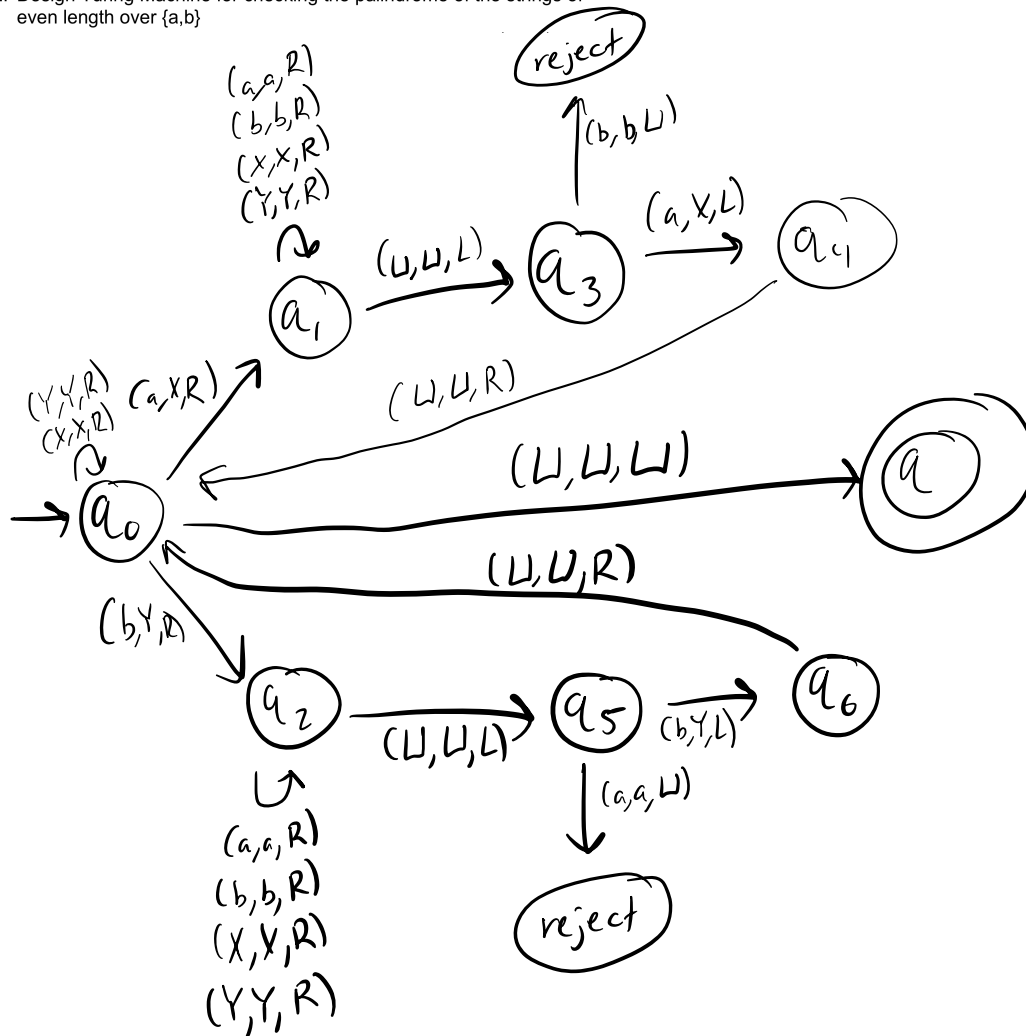
↓
a a b b c c move right

↓
a a b b c c move right

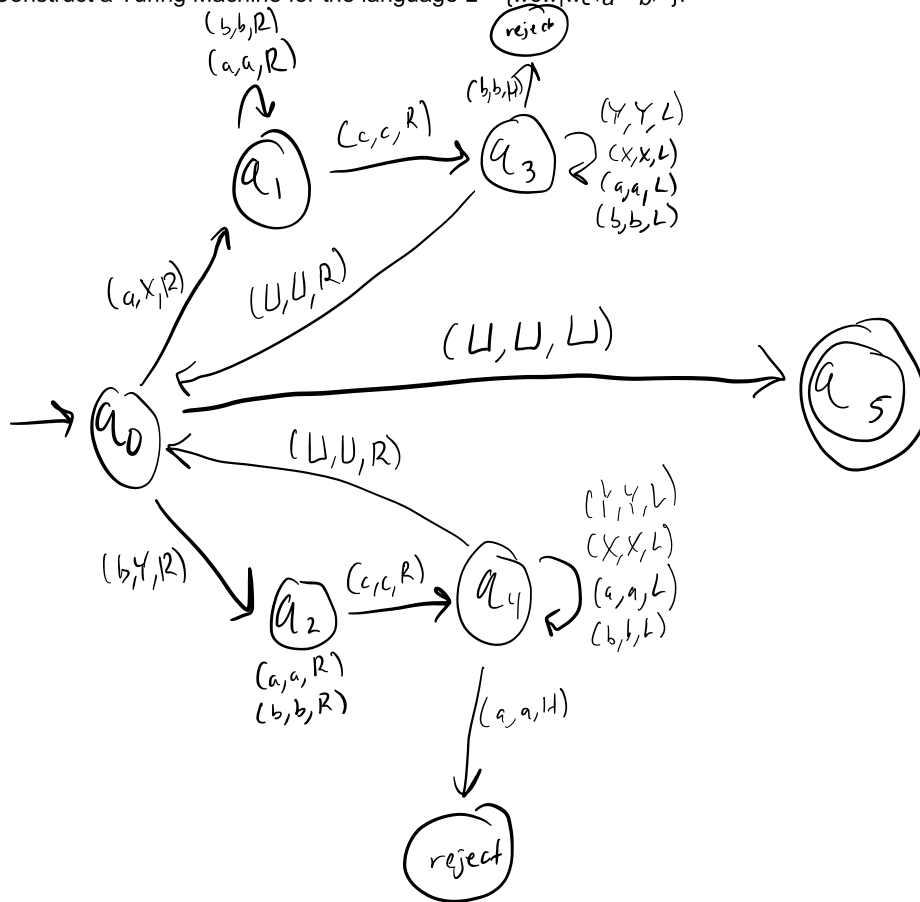
$aabbc$ move right
 $aabbc$ move right
 $aabbc$ Read blank, halt



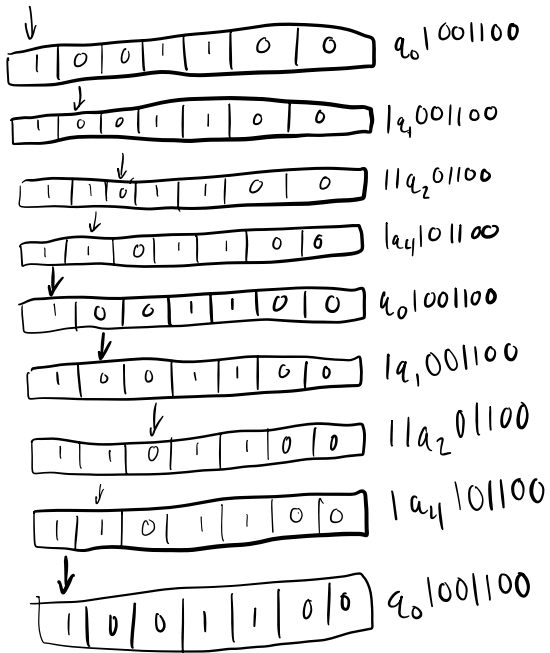
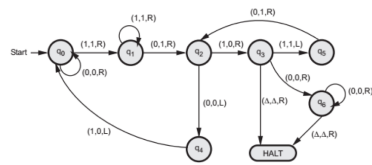
2. Design Turing Machine for checking the palindrome of the strings of even length over $\{a,b\}$



3. Construct a Turing Machine for the language $L = \{wcw | w \in (a^+b^+)^*\}$.

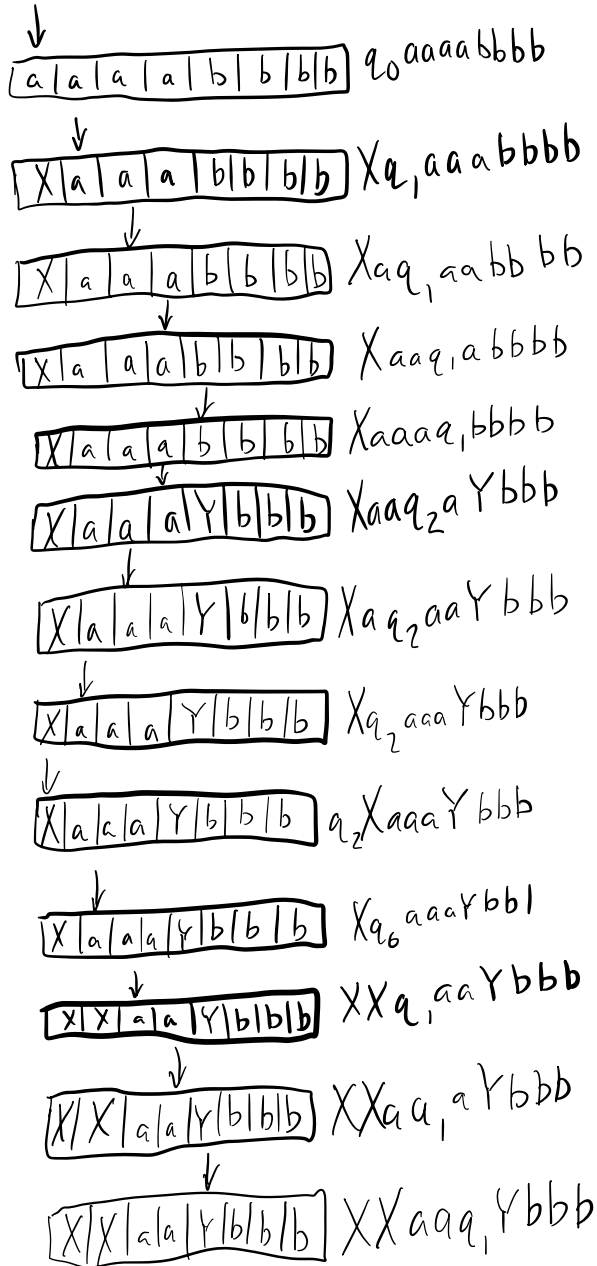
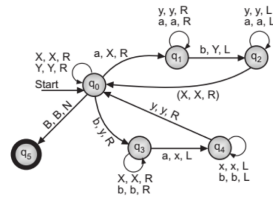


4. Give the sequence of configuration for the Turing machine below, for the string 1001100.



Infinite Loop

5. Give the sequence of configuration for the Turing machine below, for the string aaaabbbb.



Can't move anymore