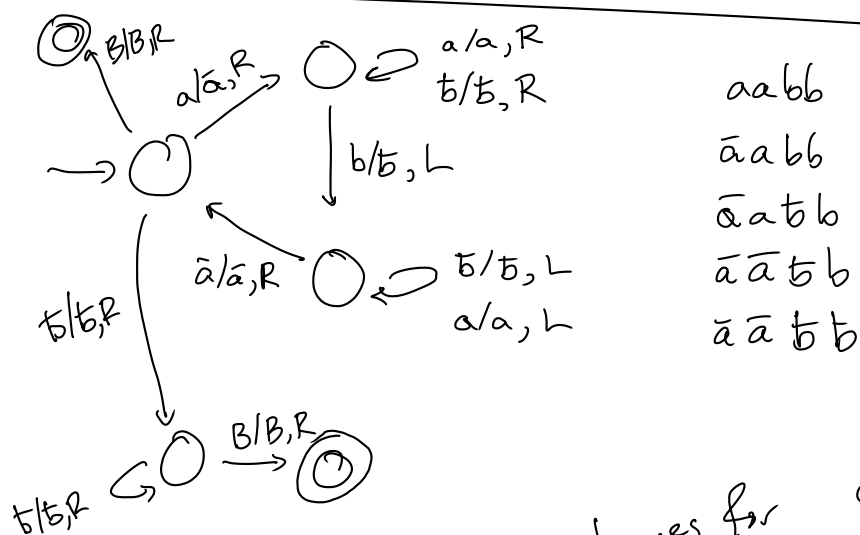
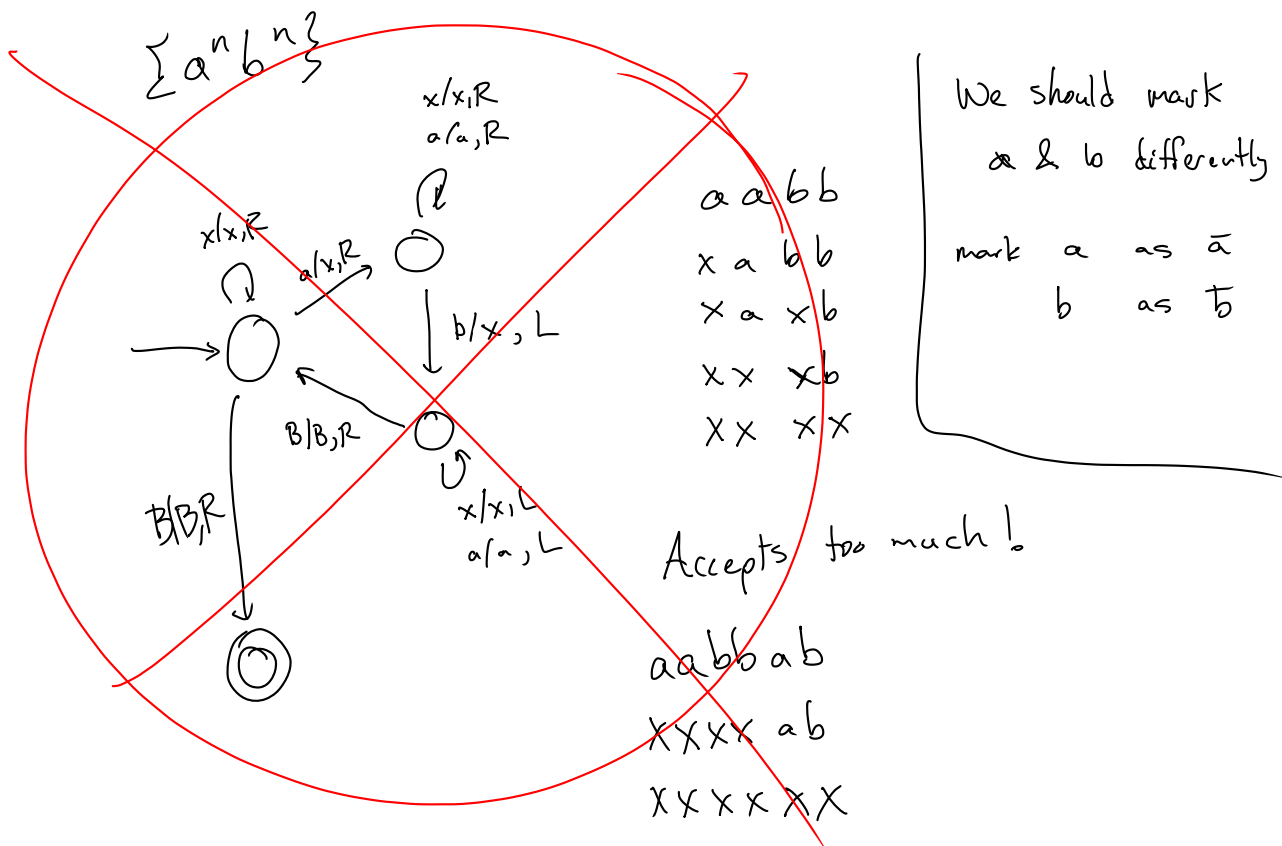
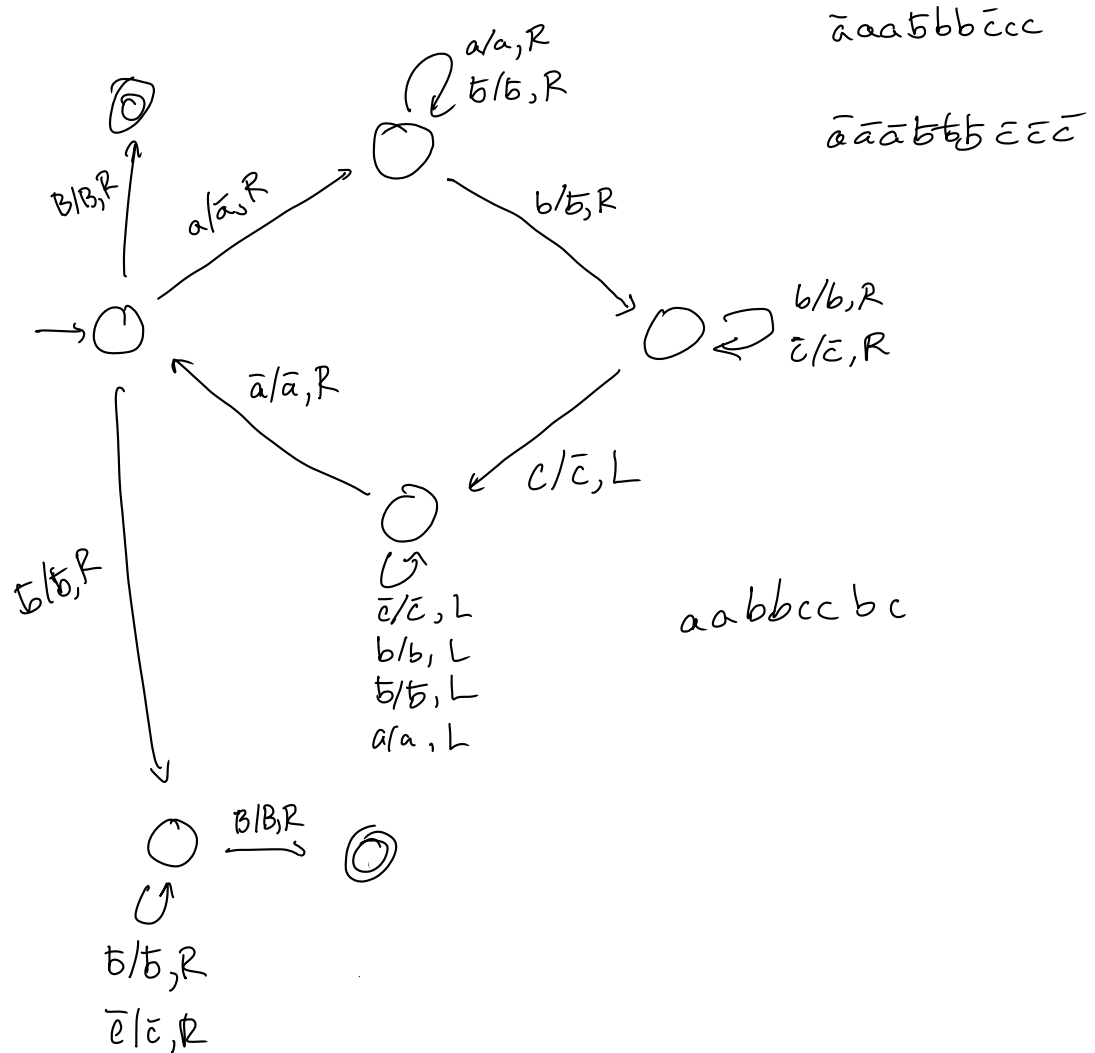




Similar changes for $a^n b^{2n}$
 $a^{2n} b^{3n}$

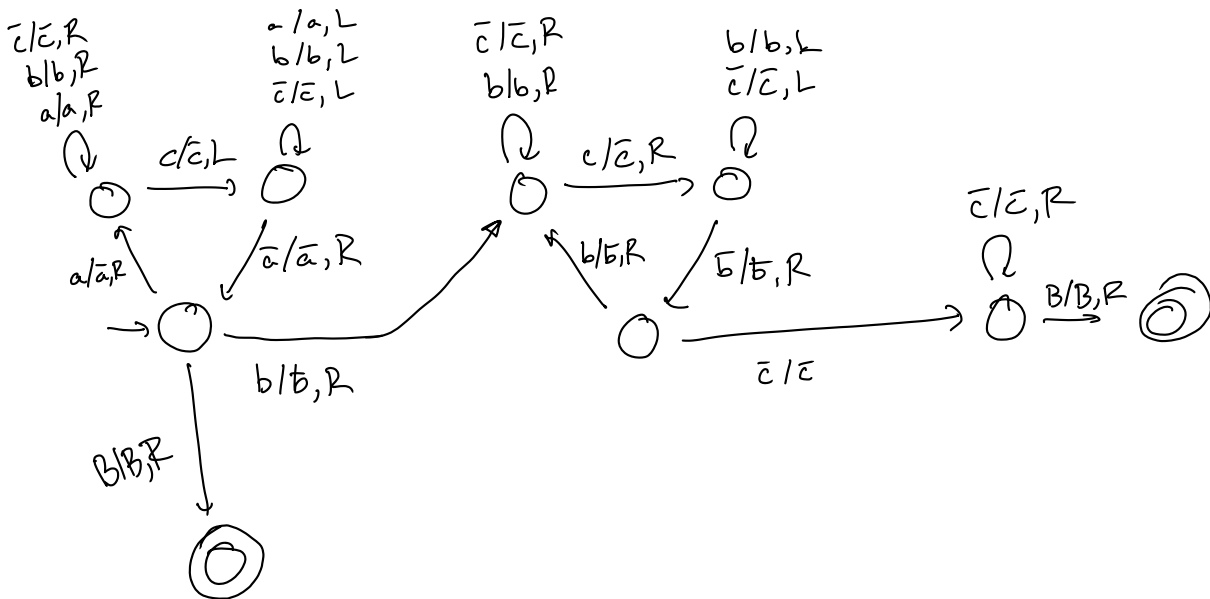
Do it by marking!



$$a^n b^m c^{n+m}$$

Do it by marking:

mark a & mark c,
repeat until all a's are done,
then do it with b's & c's.

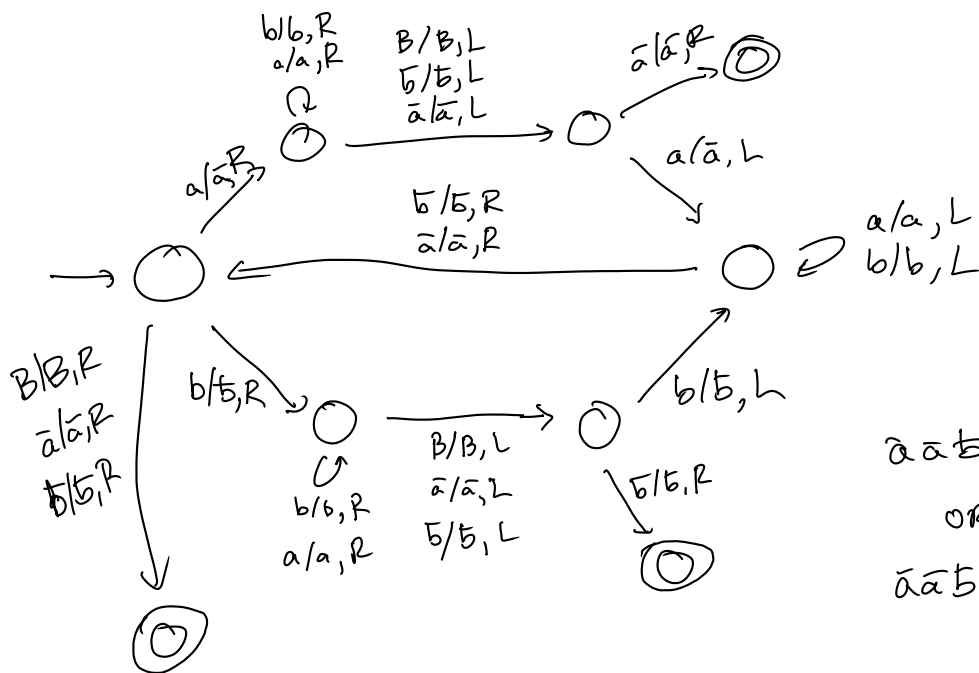
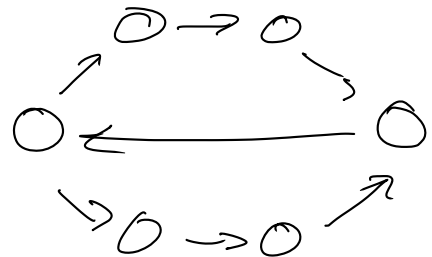


A TM for $\{x \in \{a,b\}^* \mid x = x^R\}$

$abbabba$
 $\bar{a}bbabba$
 $\bar{a}bbab\bar{b}\bar{a}$
 $\bar{a}\bar{b}babba$
 $\bar{a}\bar{b}bab\bar{b}\bar{a}$
 $\vdots$

Mark 1st letter,
 move R all the way,
 if it matches, mark it.

Branching parallel paths!



$\bar{a}\bar{a}\bar{b}ab\bar{a}\bar{a}$
 OR
 $\bar{a}\bar{a}\bar{b}ab\bar{a}\bar{a}$