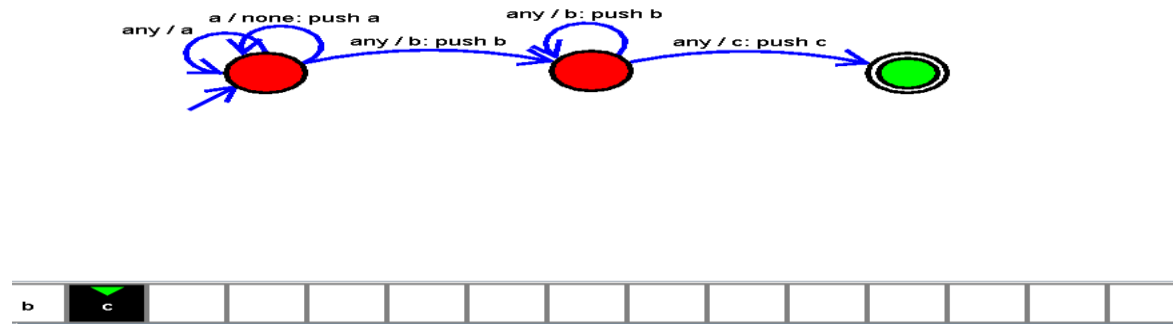
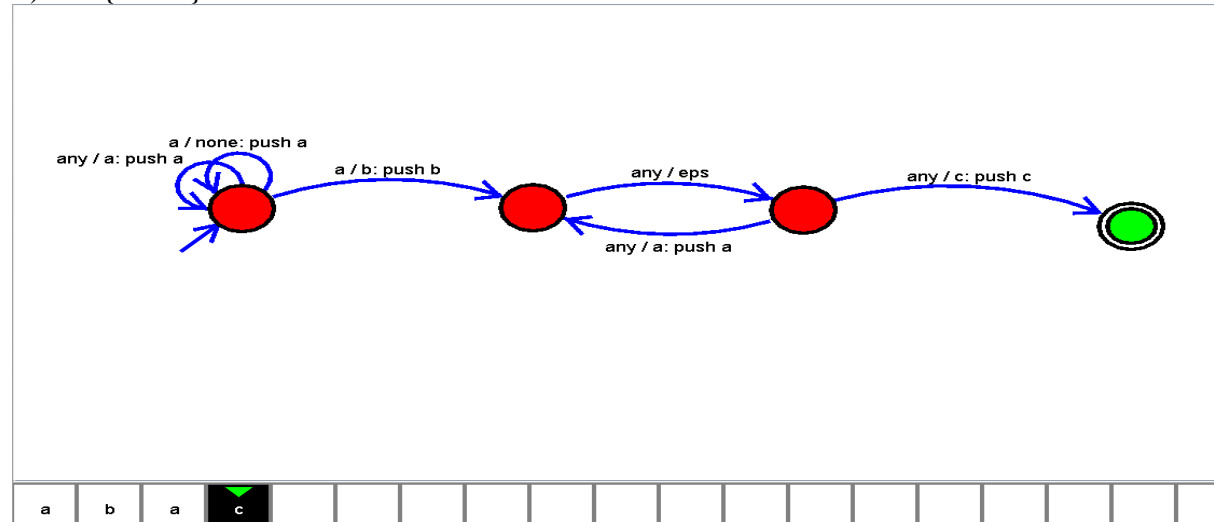


**Design a PDA for the following languages**

i)  $L = \{a^n b^n\}$

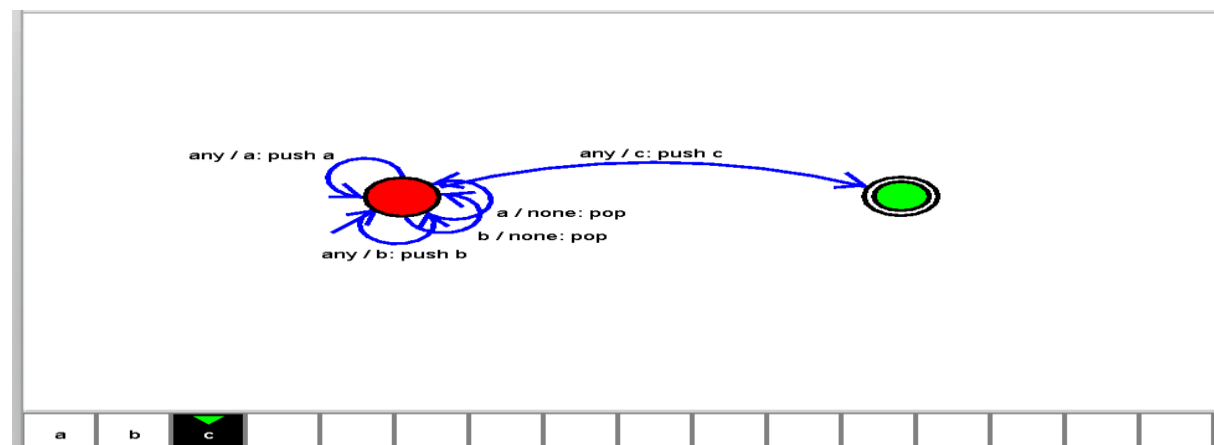


ii)  $L = \{a^n b^{2n}\}$



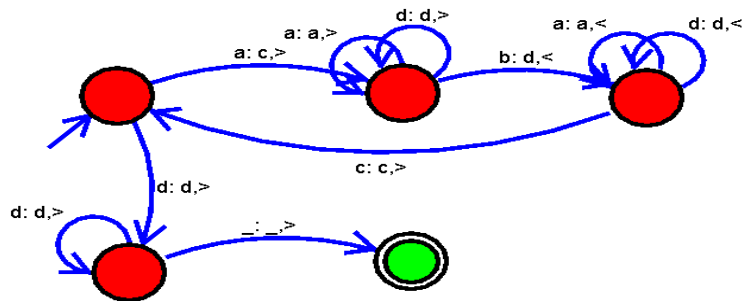
**Design a PDA that accepts by empty stack for**

$L = \{w \mid w \in (a+b)^* \text{ and } n_a(w) > n_b(w) \}$



**Design a TM** for the languages given below:

i)  $L = \{0^n 1^n \mid n \geq 1\}$



ii)  $L = \{0^n 1^n 2^n \mid n \geq 1\}$

