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Note:

It is intimated that following Lectures will not be repeated and would be part of mid-term& final exam as well.

(Week 6) Lecture 11-12

Objectives: **Learning objectives of this lecture are**

- **Finite State Automata**

Text Book &Resources: Introduction to Computer Theory–2nd Edition - (I. O. Cohen)

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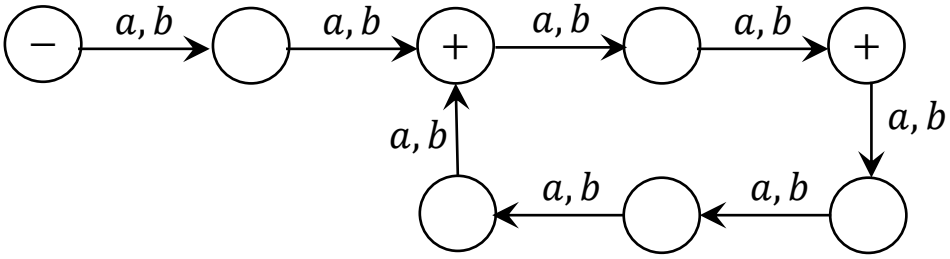
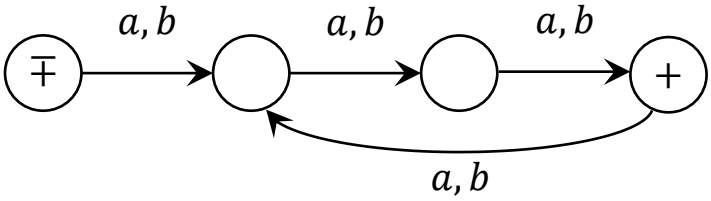
Finite State Automata

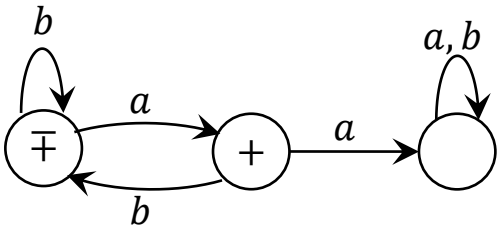
Example11: The Language contain even length of word but not multiple of 3 defined over, ∑={a,b}.



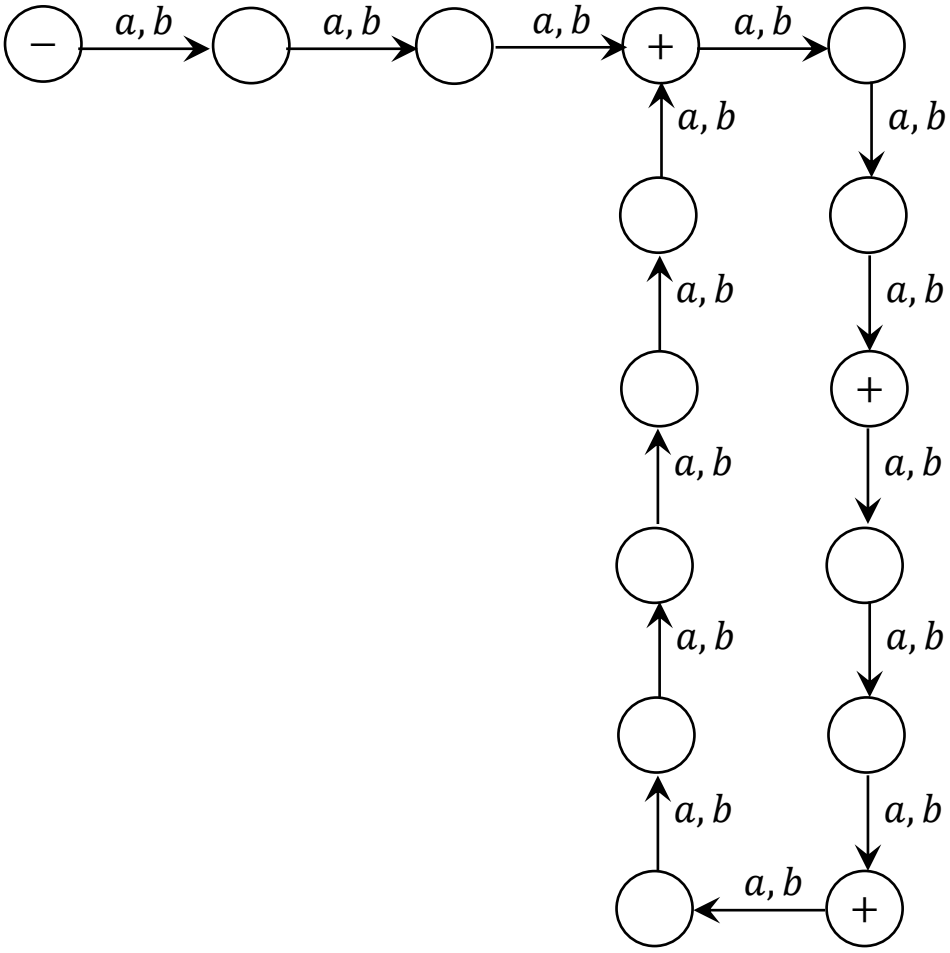
Example12: The language contain word of length multiple of 3 defined over, ∑={a,b}



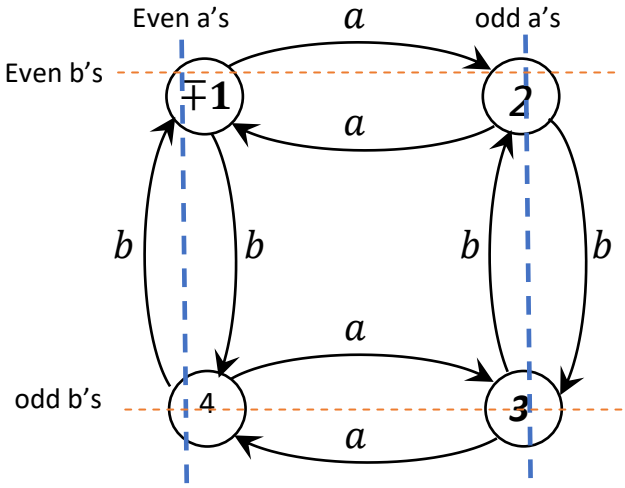
Example13: The language cannot contain substring 'aa' defined over, ∑={a,b}



Example14: The Language contain length of multiple of 3 but not multiple of 4 defined over, ∑={a,b}

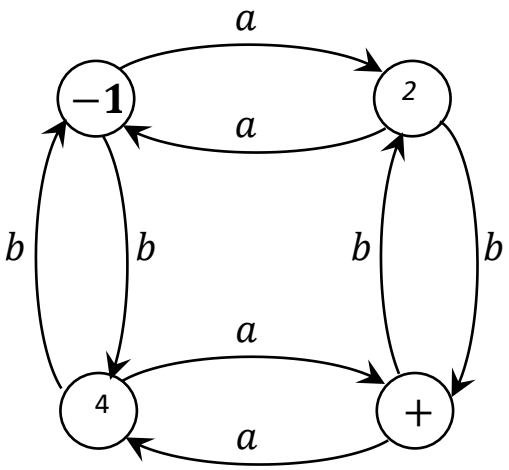


Example15: Language of all words having even number of a's and b's

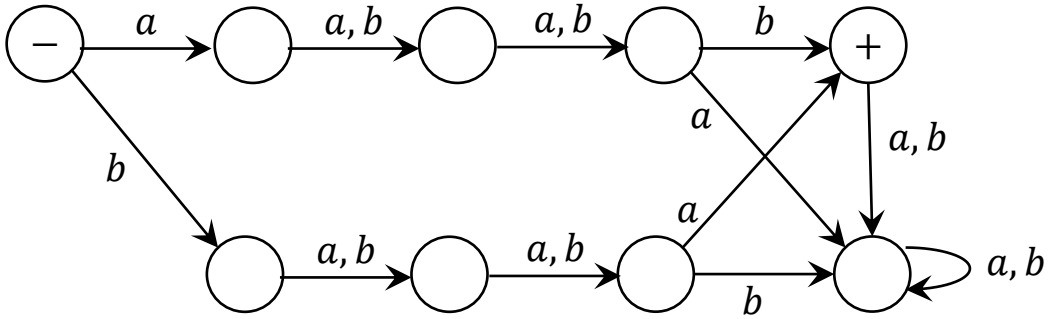


R.E= (aa+bb+(ab+ba)(aa+bb)* (ab+ba))*

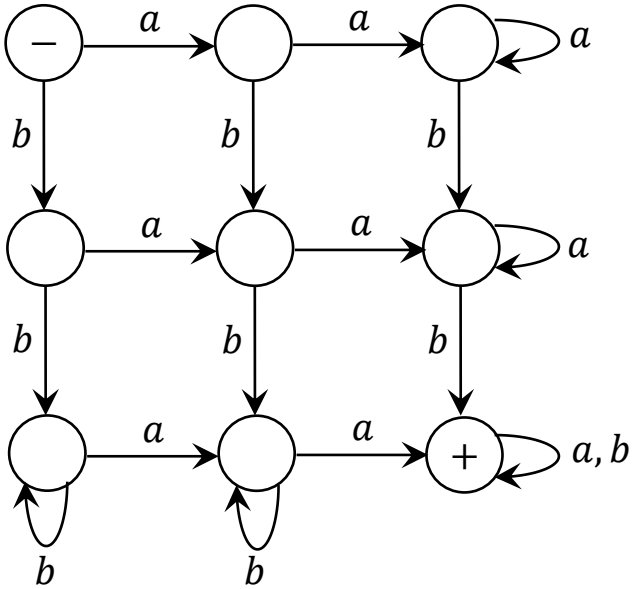
Example16: Language which contain odd number of a's and b's



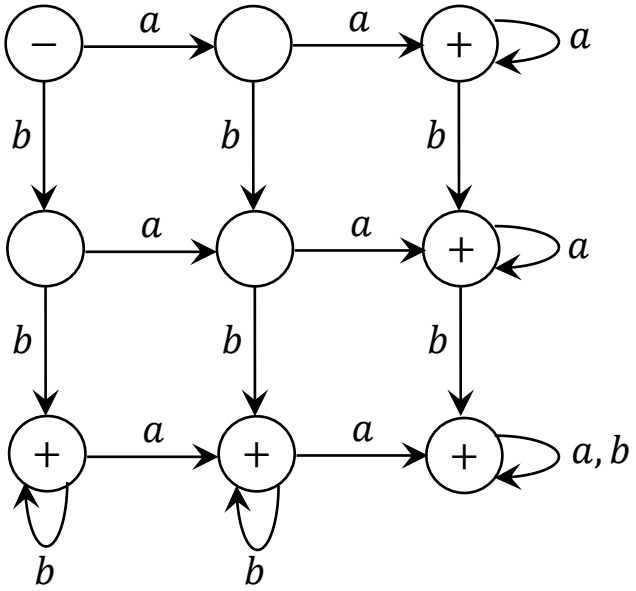
Example17: Language which has length 4 and start and end with different letters



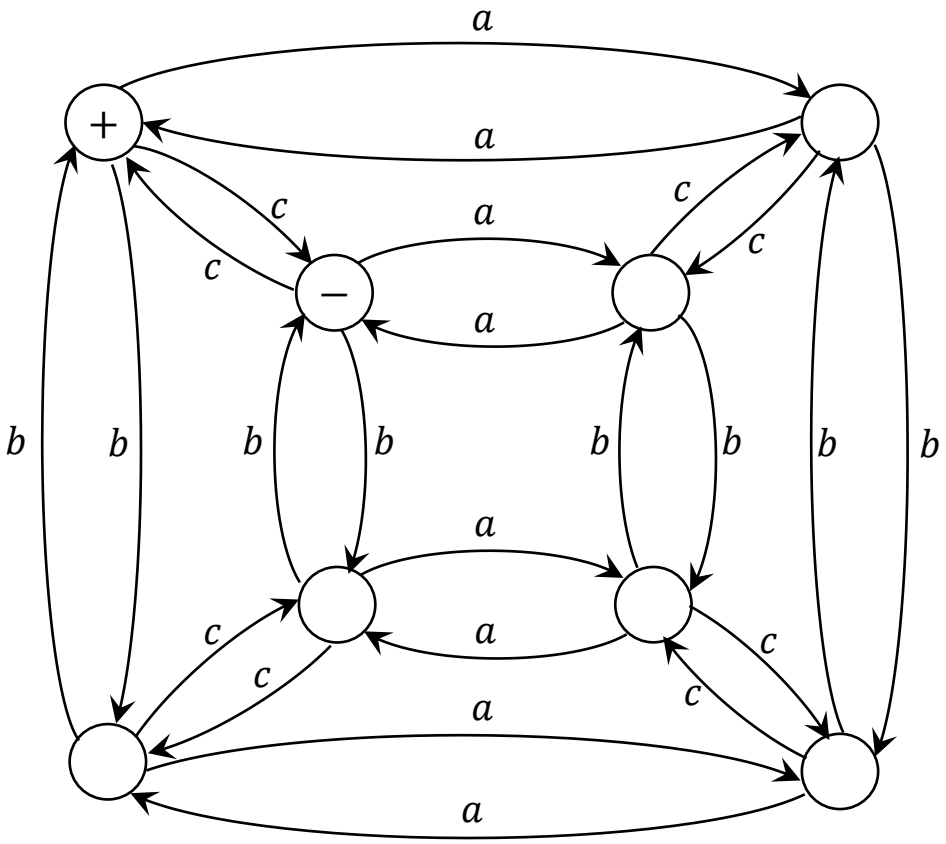
Example18: Language of all strings which has at least $2a's$ and 2 $b's$.



Example19: Language of all strings which has at least $2a's$ or 2 $b's$.



Example20: Language which contain even number of a's, even number of b's and odd number of c's



Example21: Language which contain exact one double letter.$\Sigma = \{a, b\}$