K L University
Department of Computer Science and Engineering
III B.Tech-Odd Semester AY 2017-18

Theory of Computation(15-CS3109)

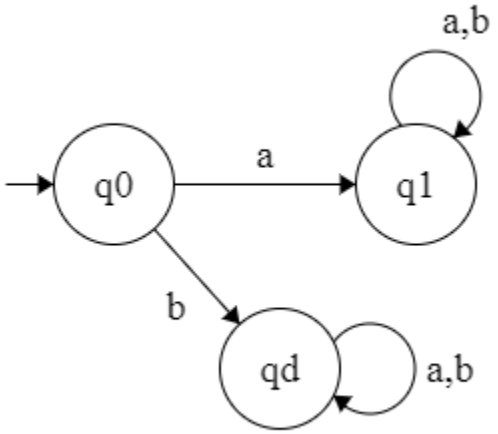
Section:S11 **Faculty:K.Yellaswamy**

Date:17 July 2017

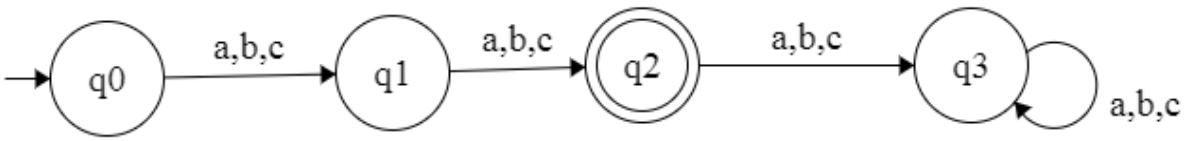
ALM – CRACK DFA – CROSS WORD PUZZLE Solutions

Design the DFA for the following Languages and complete the Cross word Puzzle given below

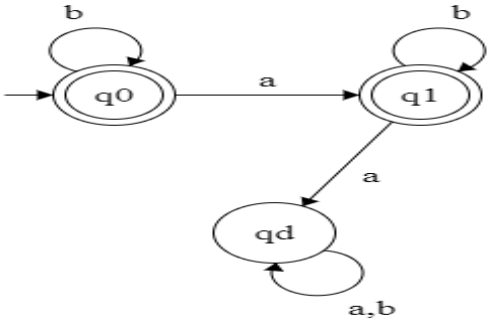
1. L={w| w starts with 'a' where Σ={a,b} }



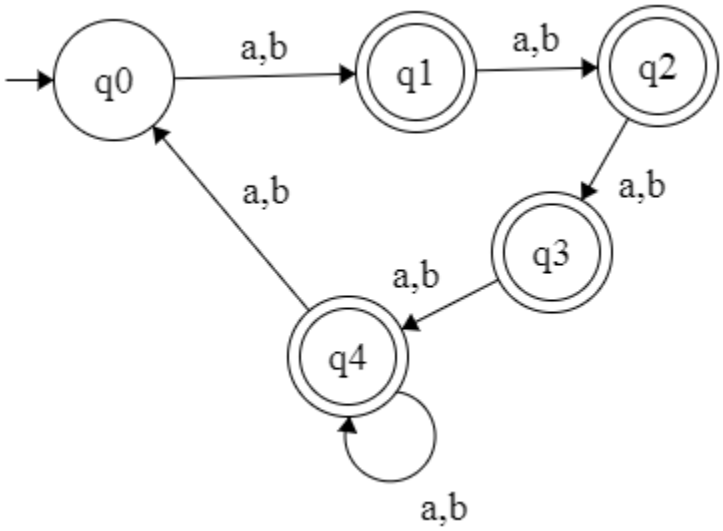
2. L={w| |w|=2 over input alphabet Σ={a,b,c} ; |w| indicates length of string}



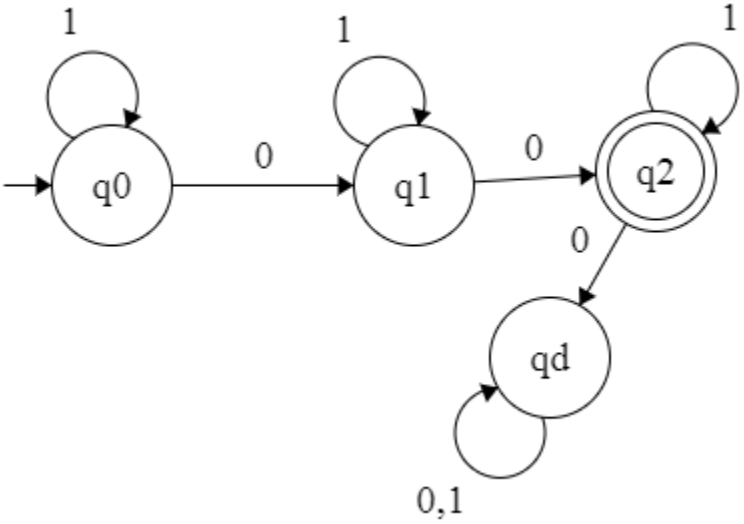
3. L={w| w contains at most one 'a' only where Σ={a,b} }



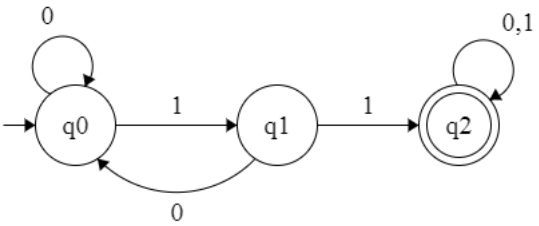
4. L={w| |w| mod 5 !=0 over input alphabet Σ={a, b} ; |w| indicates length of string; 'mod' gives remainder}



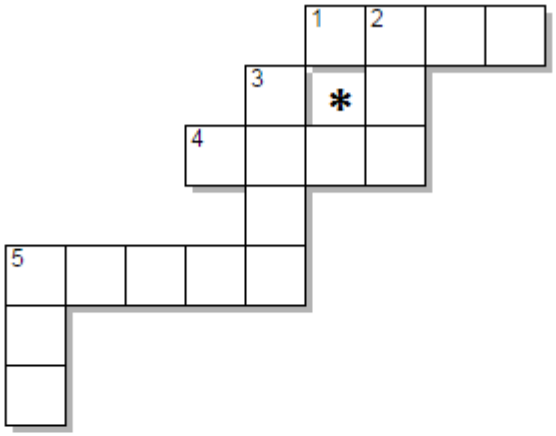
5. L={w| w contains exactly two 0's over input alphabet Σ={0, 1} }



6. L={w| w contains '11' as a substring where Σ={0, 1} }



CRACK DFA



ACROSS

1 NUMBER OF SELF LOOPS REQUIRED IN DFA 5
4 MINIMAL NUMBER OF STATES IN DFA 4
5 MINIMAL NUMBER OF STATES IN DFA 6

DOWN

2 NUMBER OF DEAD STATES IN DFA 1
3 NUMBER OF STRINGS ACCEDPTED BY DFA 2
5 NUMBER OF FINAL STATES IN DFA 3

Solution: