

Assignment # 02

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17P-6075

CS-B

Write Regular Expression(RE) and draw Deterministic Finite Automata (DFA).

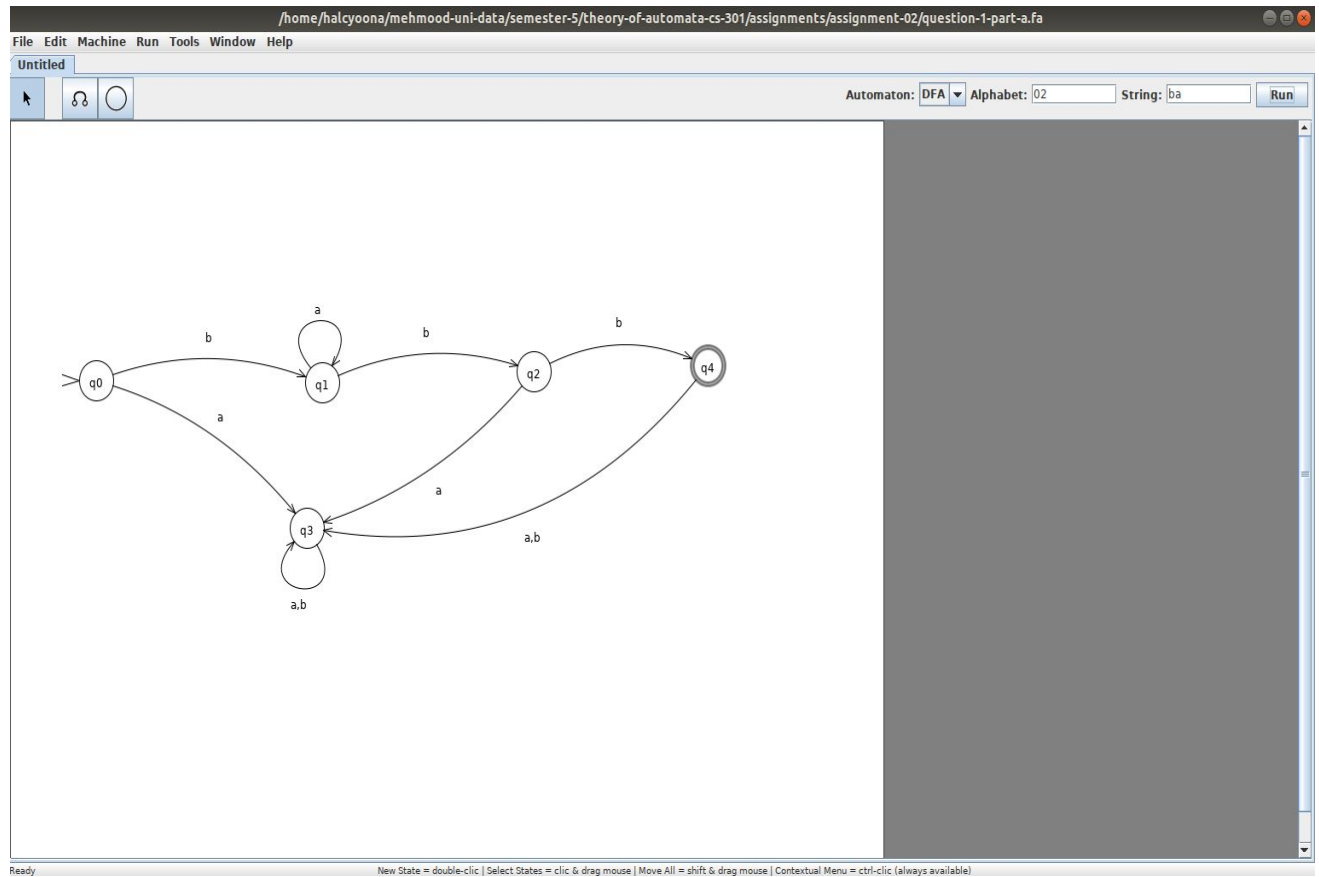
Q1: Three languages that must contain a specific pattern.

A)

Regular Expression = ba^*bb

Contains = b at the start and bb at the end

DFA is given below

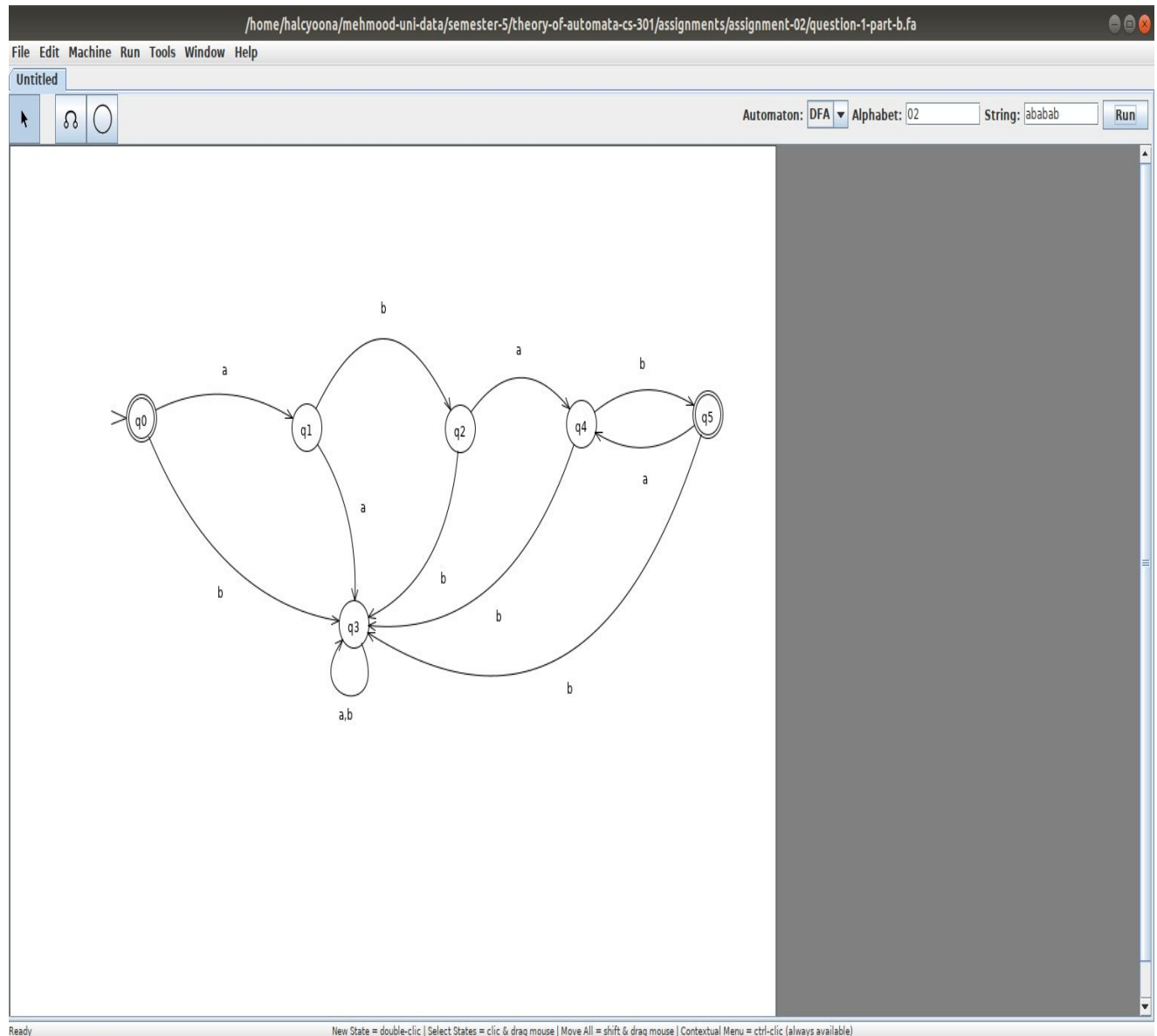


B)

Regular expression = $abab(ab)^*$

Contains = ababa

DFA is given below

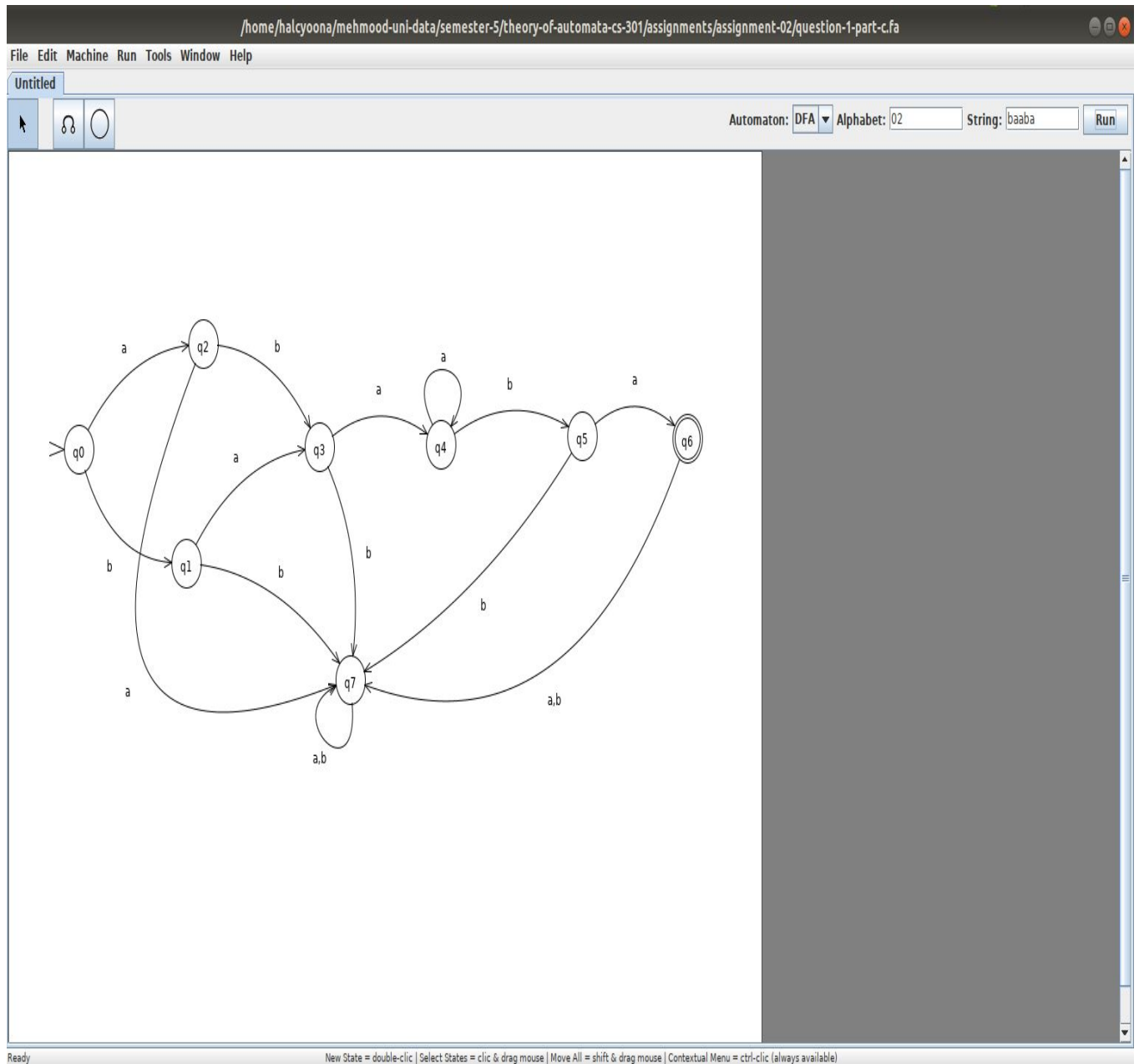


C)

Regular expression = $(ab+ba)aa^*(ba)$

Contains = a

DFA is given below

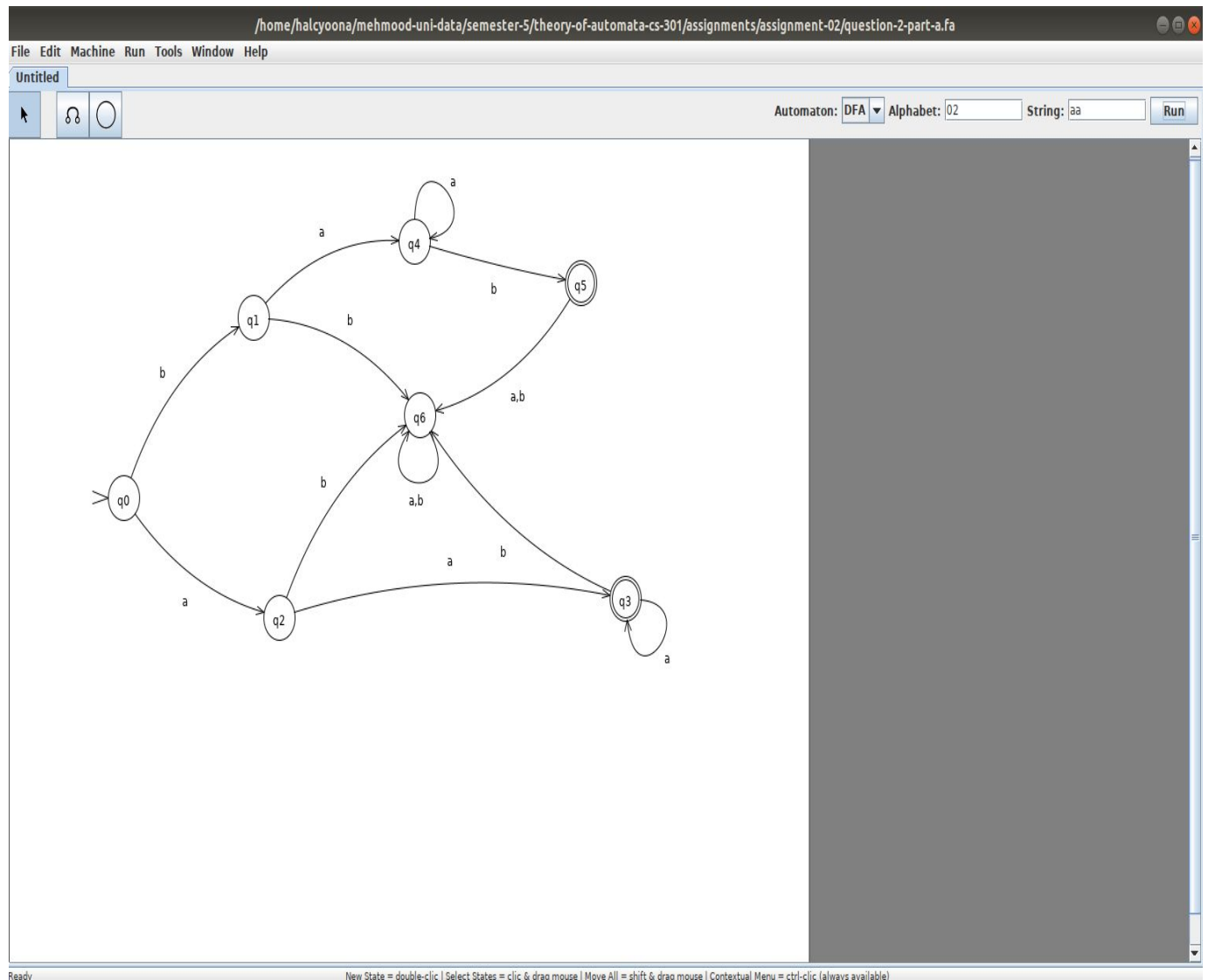


Q2: Three languages that does not contain a specific pattern,

A):

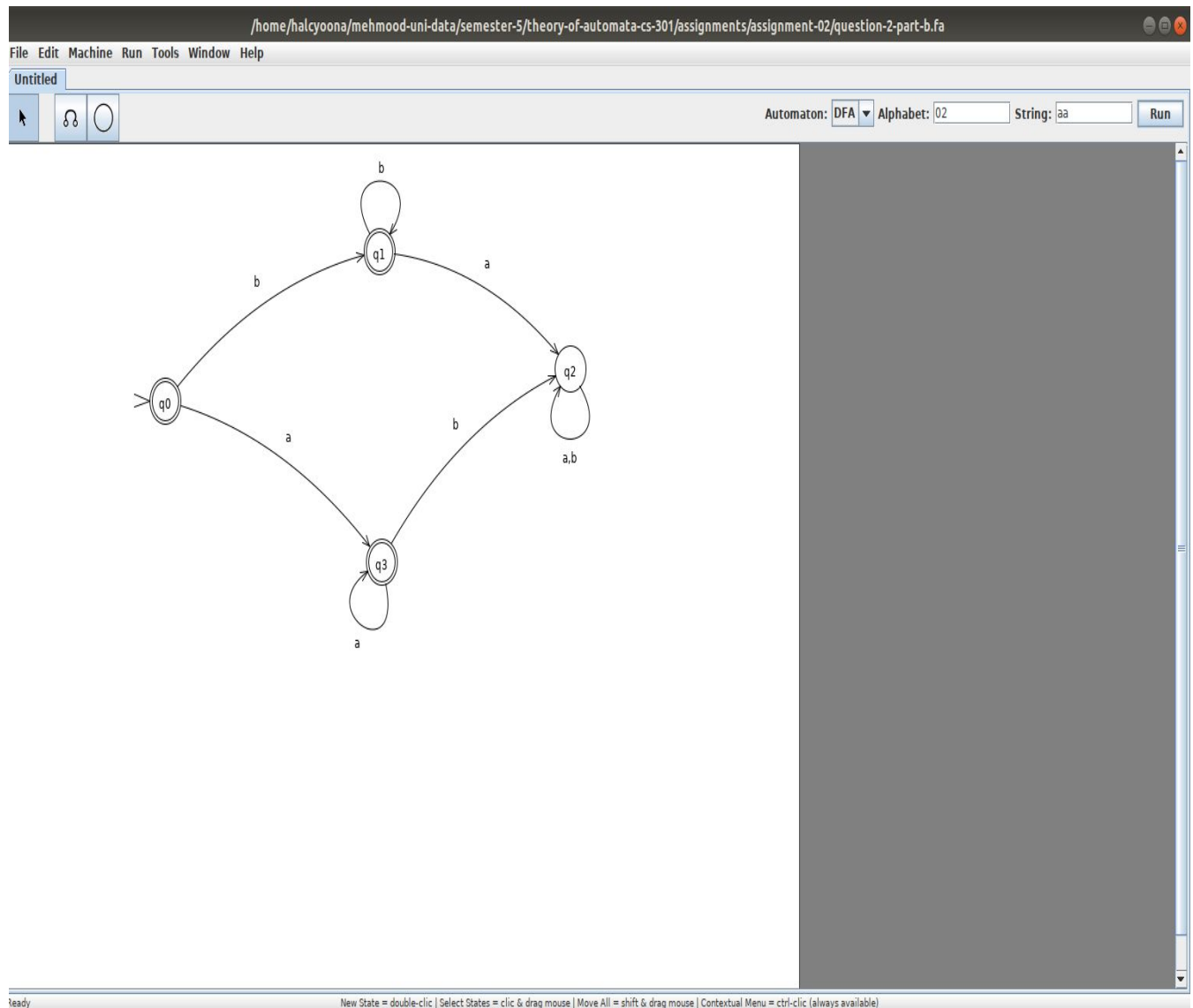
Regular Expression = $aaa^+ + baa^*b$

Does not contain = aab
DFA is given below



B)
Regular expression = $a^*a + b^*b$

Does not contain = bbb
DFA is given below



C)
Regular expression = $a(a+b)bb^*a$
Does not contains = aaa
DFA

