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COURSE: THEORY OF AUTOMATA

ASSIGNMENT NO 02:



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Assignment :- 02

Regular Expression & Finite Automata

- i) One language that must contain specific pattern:

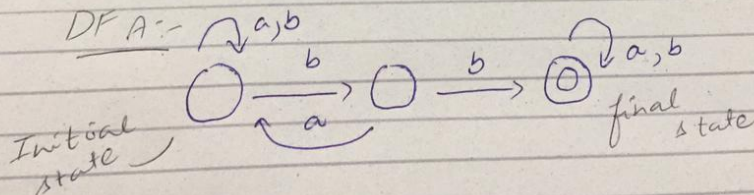
Regular Expression

L : Any thing that contains double b

$\Sigma = \{a, b\}$

$$= (a+b)^* \cdot (bb) \cdot (a+b)^*$$

$L = \{bb, abb, bba, bbb, abba, abbb, bbbb, \dots\}$



- ii) One language that contain pattern but only once. e.g double letter only once.

Regular Expression:

$$L \rightarrow b \cdot a^* + a^* \cdot b a^* + a^* \cdot b$$

L language that contains b only once where

$$\Sigma = \{a, b\}$$

$$L = \{b, ab, aab, aba, \dots\}$$

DFA:

