

Name: Ibrar

Roll no: 19P-0104

Assignment #2

Theory of automata

⇒ One language that must contain a specific pattern.

e.g. even/odd length double

Regular expression

Anything that contains double (b) where.

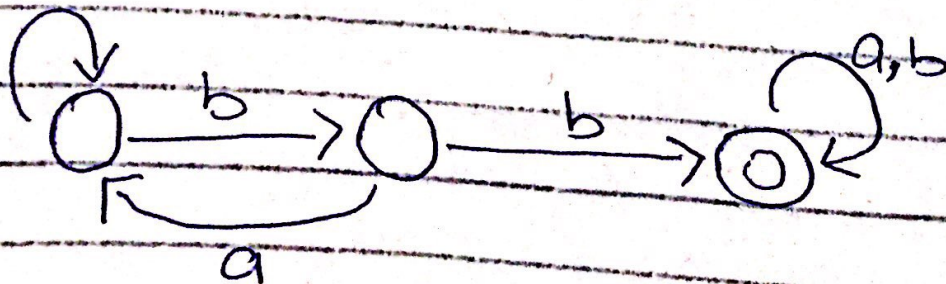
$$\Sigma = \{a, b\}$$

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

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

1 Determine finite Automata.

a, b





$\Rightarrow$  Language that contain a letter but only once e.g. contain double letter only once -

Regular Expression:

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

language contains (b) only once where

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

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

Determine finite Automata DFA

