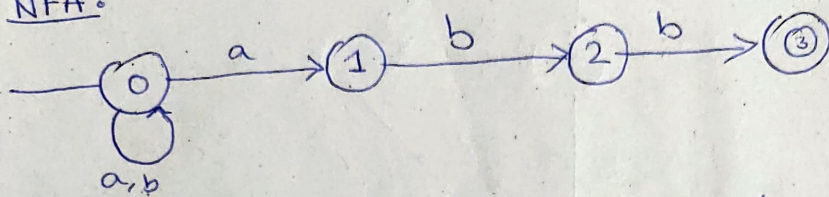


NAME : RAJ SHAH

ROLL : 2021CSB065

HOME TASK 4 TOL

① a) ~~NFA~~ NFA:



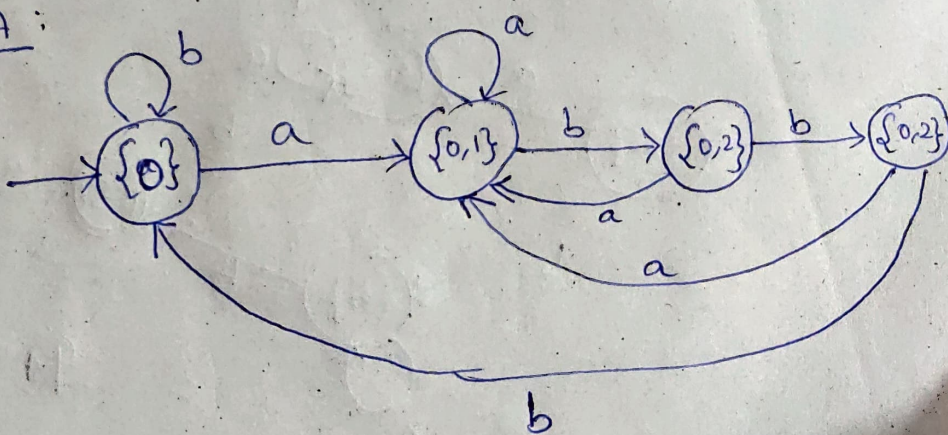
Language accepted by NFA =  $L_1$

$$L_1 = \{w \in \{a,b\}^* \mid w \text{ ends with symbols "abb"}\}$$

Corresponding DFA :

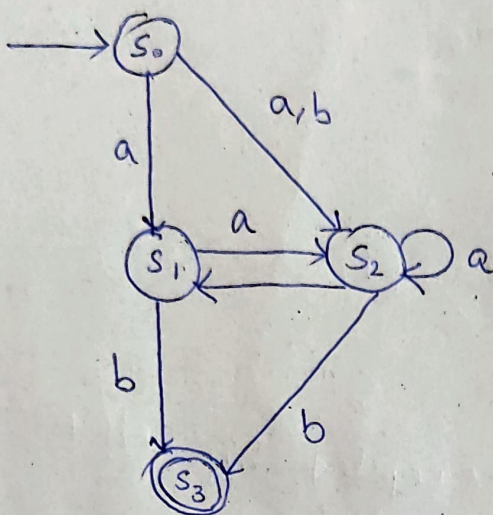
state	a	b
$\{0\}$	$\{0,1\}$	$\{0\}$
$\{0,1\}$	$\{0,1\}$	$\{0,2\}$
$\{0,2\}$	$\{0,1\}$	$\{0,3\}$
$\{0,3\}$	$\{0,1\}$	$\{0\}$

DFA :





(b)

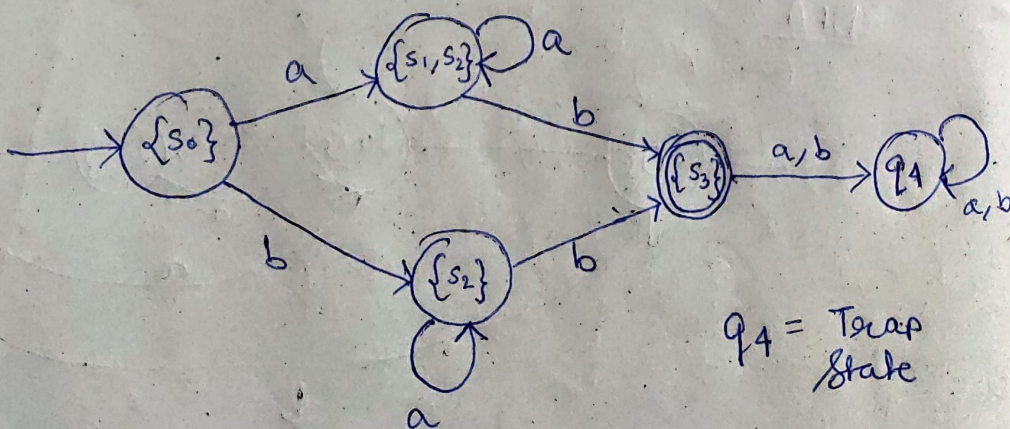
NFA:

$$L_2 = \{ w \in \{a,b\}^* \mid w = b^p a^q b \text{ where}$$

$$p = \{0, 1\}, q = \{1, 2, 3, \dots\}$$

Corresponding DFA

State	a	b
$\{s_0\}$	$\{s_1, s_2\}$	$\{s_2\}$
$\{s_1, s_2\}$	$\{s_1, s_2\}$	$\{s_3\}$
$\{s_2\}$	$\{s_1, s_2\}$	$\{s_3\}$
Final State $\leftarrow \{s_3\}$	about	about



$q_4 = \text{Trap State}$