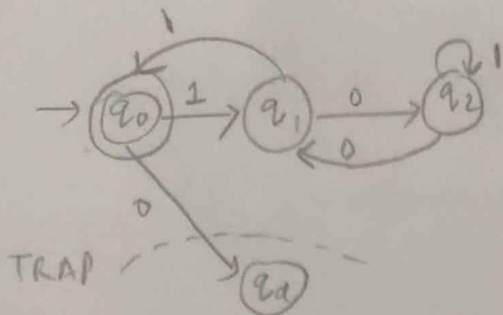


1.



$q_0 =$ remainder 0 (final, initial)
 $q_1 =$ remainder 1
 $q_2 =$ remainder 2

2.

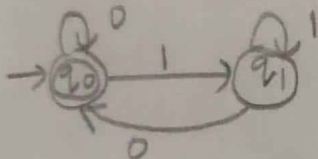
Divisible by 2 but not 3

let A:- divisible by 2

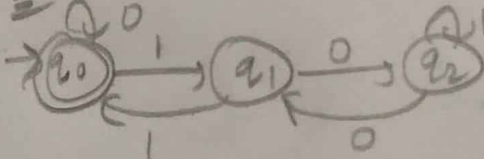
B:- divisible by 3 $B' =$ not divisible by 3

$A \times B' =$ divisible by 2 but not 3

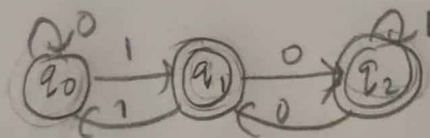
A



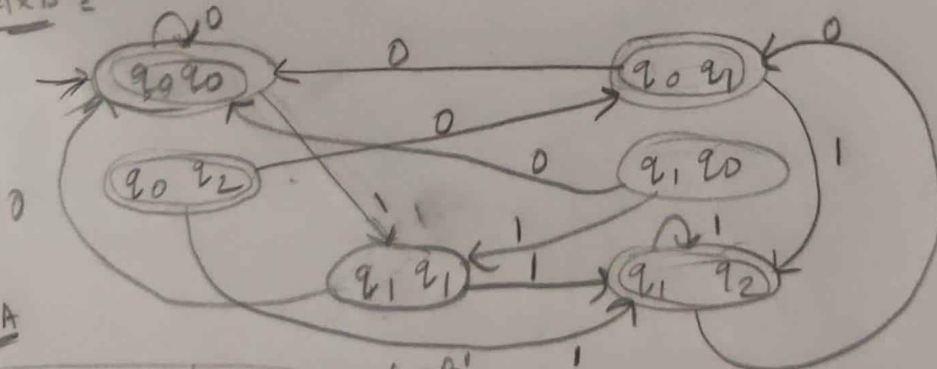
B



B'



$A \times B'$



for A

δ	0	1
q_0	q_0	q_1
q_1	q_0	q_1

for B'

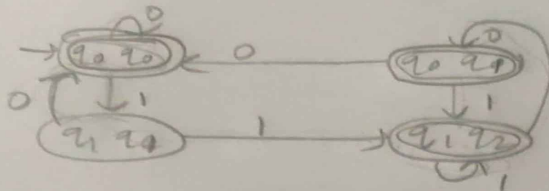
δ	0	1
q_0	q_0	q_1
q_1	q_0	q_2
q_2	q_1	q_2

for $A \times B'$
 $q_0 q_0$
 $q_0 q_1$
 $q_1 q_0$
 $q_1 q_1$
 $q_1 q_2$
 $q_2 q_0$
 $q_2 q_1$
 $q_2 q_2$

Date - 9/3/23

AFL NAME - ASSIGNMENT

Page :- (2)



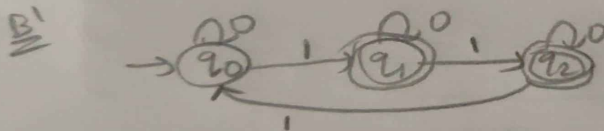
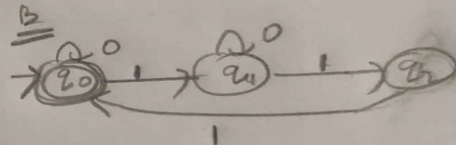
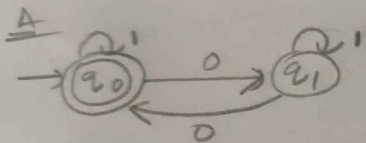
3. Number of 0's even and number of 1's not divisible by 3.

Let A :- no. of 0's even

Let B :- no. of 1's divisible by 3

B' :- no. of 1's not divisible by 3

A x B' :- no. of 0's even and no. of 1's is not divisible by 3.



for A

S	0	1
q0	q0	q1
q1	q0	q1

for B'

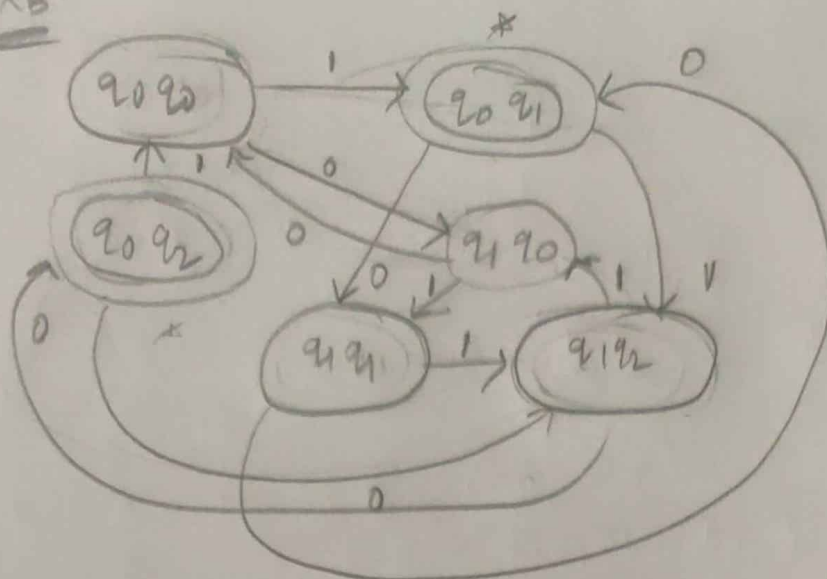
S	0	1
q0	q0	q1
q1	q1	q2
q2	q2	q0

Date - 9/3/23

AFL HOME - ASSIGNMENT

Page :- (3)

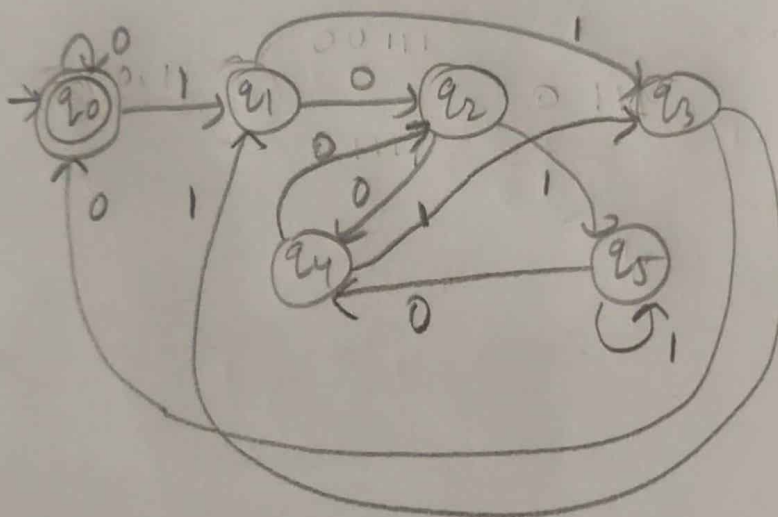
AxB'



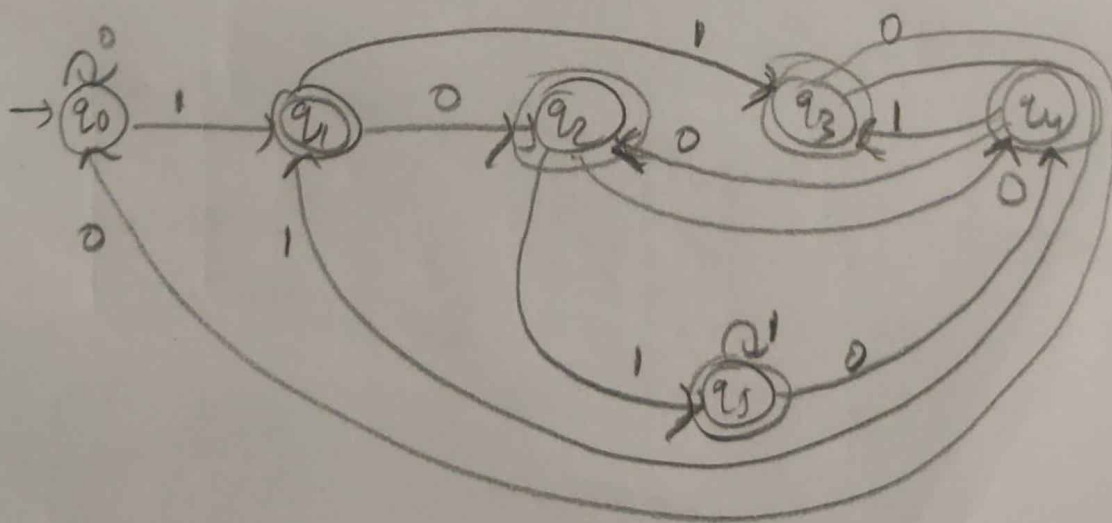
Q:-

let A :- Divisible by 6

A



A'

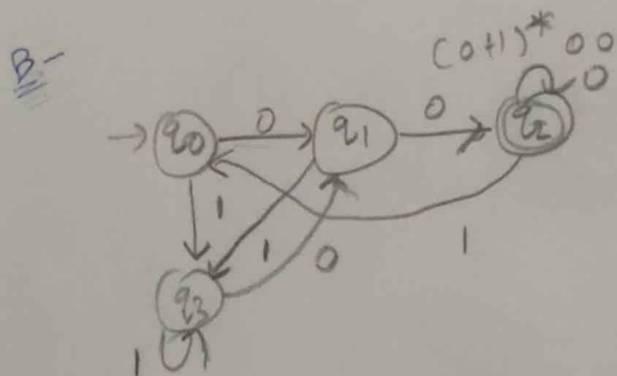
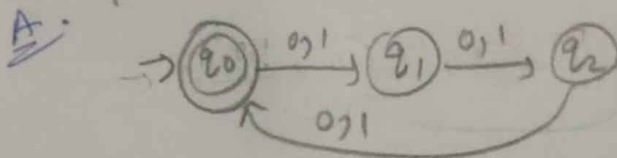


5. Let

$A = |w|$ divisible by 3

$B = w$ ends with 00

$A \times B = |w|$ divisible by 3 or end with 0.



$A \times B$ (or)

for A

δ	0	1
q_0	q_1	q_1
q_1	q_2	q_2
q_2	q_0	q_0

for B

δ	0	1
q_0	q_1	q_3
q_1	q_2	q_3
q_2	q_2	q_0
q_3	q_1	q_3

