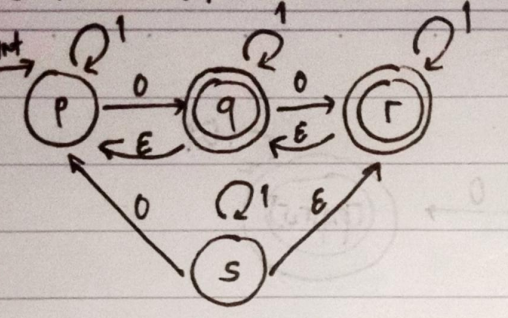
Nama : FERZA REYALDI
NIM : 09021281924060

No.
Date :

4 REG A - UTS TEORI BAHASA OTOMATA

1) a.



$ECLOSE(P) = \delta(p,\varepsilon) \cup \{p\} = \emptyset \cup \{p\} = \{p\}$

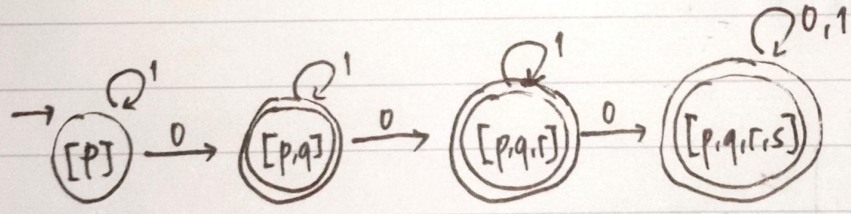
$ECLOSE(q) = \delta(q,\varepsilon) \cup \{q\} = \{p,q\}$

$ECLOSE(r) = \delta(r,\varepsilon) \cup \{r\} = \{q,r\}$

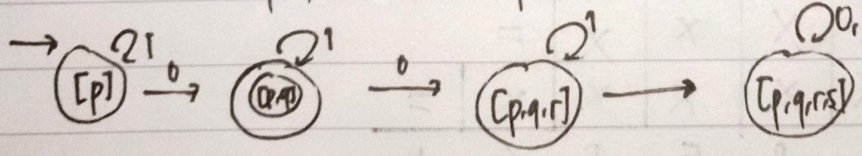
$ECLOSE(s) = \delta(s,\varepsilon) \cup \{s\} = \{r,s\}$

b.

Q_D	0	1
→ [p]	[p,q]	[p]
* [p,q]	[p,q,r]	[p,q]
* [p,q,r]	[p,q,r,s]	[p,q,r]
* [p,q,r,s]	[p,q,r,s]	[p,q,r,s]

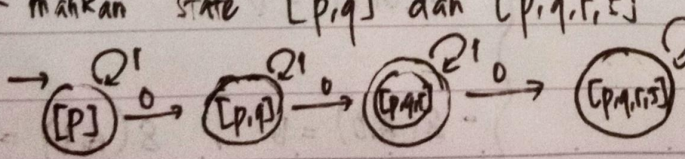


c. - tnahkan state [p,q,r] dan [p,q,r,s]



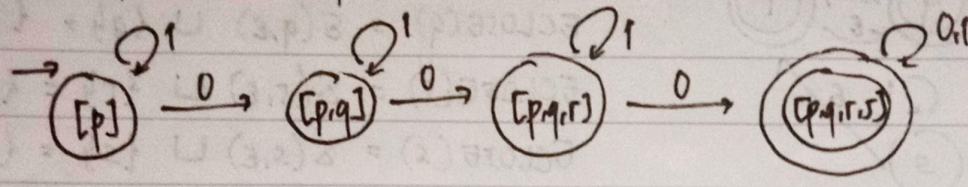
$L_1 = 1^*01^*$

- mahkan state [p,q] dan [p,q,r,s]



$L_2 = 1^*01^*01^*$

- matikan [p,q] dan [p,q,r].



$L_3 = 1^*01^*01^*0(0+1)^*$

Jadi $L = L_1 + L_2 + L_3$

$= 1^*01^* + 1^*01^*01^* + 1^*01^*01^*0(0+1)^*$

$= 1^*01^*(\varepsilon + 01^* + 01^*0(0+1)^*)$

$= 1^*01^*(\varepsilon + 01^*(\varepsilon + 0(0+1)^*))$

(2)

	A	B	C	D	E	F	G	H
A	=							
B	X	=						
C	X	X	=					
D	X	X	X	=				
E	X	X	=	X	=			
F	X	=	X	X	X	=		
G	=	X	X	X	X	X	=	
H	X	X	X	X	X	X	X	=

- $\delta(A,0) = B$, $\delta(A,1) = A$
  $\delta(B,0) = A$ $\delta(B,1) = C$

- $\delta(A,0) = B$ X
  $\delta(C,0) = D$

- $\delta(A,0) = B$
  $\delta(E,0) = D$ X

- $\delta(A,0) = B$, $\delta(A,1) = A$
  $\delta(F,0) = G$, $\delta(F,1) = E$.

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- $\delta(A,0) = B$, $\delta(A,1) = A$
  $\delta(G,0) = F$, $\delta(G,1) = G$

- $\delta(C,0) = D$
  $\delta(F,0) = G$ ×

- $\delta(A,0) = B$, $\delta(A,1) = A$
  $\delta(H,0) = G$, $\delta(H,1) = D$ ×

- $\delta(C,0) = D$ ×
  $\delta(G,0) = F$

- $\delta(B,0) = A$ ×
  $\delta(C,0) = D$

- $\delta(C,0) = D$ ×
  $\delta(H,0) = G$

- $\delta(B,0) = A$ ×
- $\delta(E,0) = D$

- $\delta(E,0) = D$ ×
  $\delta(F,0) = G$, $\delta(G,0) = F$, $\delta(H,0) = G$

= $\delta(B,0) = A$, $\delta(B,1) = C$
  $\delta(F,0) = G$, $\delta(F,1) = E$

- $\delta(F,0) = G$, $\delta(F,1) = E$
  $\delta(G,0) = F$, $\delta(G,1) = G$

- $\delta(B,0) = A$, $\delta(B,1) = C$
  $\delta(G,0) = F$, $\delta(G,1) = G$

- $\delta(F,1) = E$ ×
  $\delta(H,1) = D$

- $\delta(B,1) = C$ ×
  $\delta(H,1) = D$

- $\delta(G,1) = G$ ×
  $\delta(H,1) = D$

- $\delta(C,0) = D$, $\delta(C,1) = B$
  $\delta(E,0) = D$, $\delta(E,1) = F$

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A = G

B = F

C = E

State duplikasi yang dihapus E, F, dan G (tidak bisa dijangkau dari start state)
state lain yang dihapus adalah H (tidak bisa dijangkau dari start state)