PR 3 TBFO

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Ex. 2.5.1

	ε	a	b	c
→ p	∅	{p}	{q}	{r}
q	{p}	{q}	{r}	∅
*r	{q}	{r}	∅	{p}

a.) ε-closure of each state

p → {p}
q → {p, q}
r → {p, q, r}

b.) length 1 : c

length 2 : ac, bb, bc, ca, cb, cc.

length 3 : Semua string dengan maksimal 1 "a". Dan string dengan maksimal 2 "c" dan 1 "a".

c.) Misal, A = {p}
B = {p, q}
C = {p, q, r}

	a	b	c
→ A	A	B	C
B	B	C	C
*C	C	C	C

Ex. 2.5.2

	ε	a	b	c
→ p	{q, r}	∅	{q}	{r}
q	∅	{p}	{r}	{p, q}
*r	∅	∅	∅	∅

a.) ε-closure of each state

p → {p, q, r}
q → {q}
r → {r}

b.) length 1 : a, b, c

length 2 : Semua set string dengan panjang 2

length 3 : Semua set string dengan panjang 3, kecuali string yang dimulai dengan bb. {bba, bbb, bbc}

c.) NFA

	a	b	c
→ p	{p, q, r}	{q, r}	{p, q, r}
q	{p, q, r}	{r}	{p, q, r}
*r	∅	∅	∅

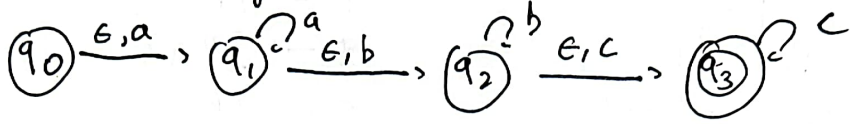
DFA

	a	b	c
→ *{p, q, r}	{p, q, r}	{q, r}	{p, q, r}
*{q, r}	{p, q, r}	{r}	{p, q, r}
*{r}	∅	∅	∅
∅	∅	∅	∅

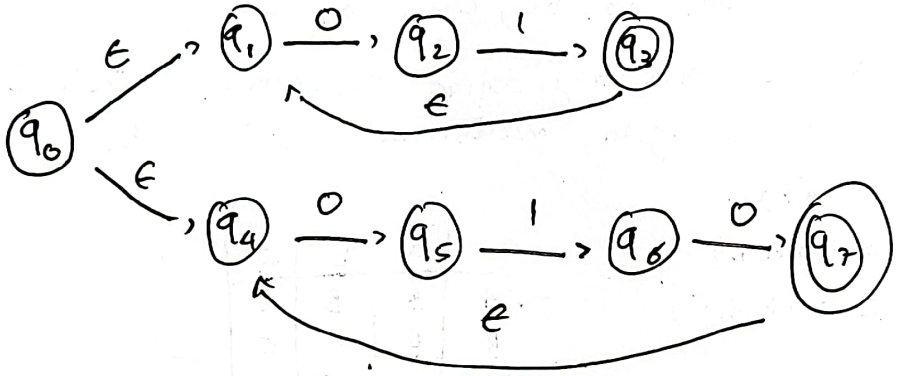
Ex. 2.5.3

Design ϵ-NFA's for:

a.) Set of strings consisting zero or more a's followed by zero or more b's, followed by zero or more c's.



b.) Set of strings that consist of either 01 repeated one or more times or 010 repeated one or more times.



c.) Set of strings of 0's and 1's such that at least one of the last ten position is a 1.