States	(input buttons)	
	DOWN	UP
1	2	2
2	1	1

States	(input buttons)			
	U1	U2	D2	D3
1	2	2	2	3
2	1	3	1	3
3	1	2	2	2

δ	(input Σ)	
States	1	2
a	c	b
b	a	a
c	c	b

δ	(input Σ)			
States	1	2	3	4
a	a	d	a	c
b	a	a	c	c
c	c	b	e	e
d	c	c	d	d
e	c	b	b	b

Even/Even	Even/Odd
Odd/Even	Odd/Odd

1

δ	(input Σ)		
States	1	2	3
a	{a,b}	{a,c}	{d}
b	{b,d}	$\emptyset$	{b}
c	{c}	{c}	{c}
d	$\emptyset$	$\emptyset$	{c}

δ	(input Σ)		
States	1	2	3
a	{b,c}	$\emptyset$	{a}
b	$\emptyset$	{e}	{b}
c	$\emptyset$	{b}	$\emptyset$
d	$\emptyset$	{e}	{c,e}
e	{f}	{c}	{d}
f	{e}	$\emptyset$	$\emptyset$

regular expression	regular language
a	$\{a\}$
ab	$\{ab\}$
$a\|bb$	$\{a, bb\}$
$(a\|b)c$	$\{ac, bc\}$
c^*	$\{\epsilon, c, cc, ccc, \ldots\}$
$(a\|b\|c)cba$	$\{acba, bcba, ccba\}$
$a^*\|b^*\|c^*$	$\{\epsilon, a, b, c, aa, bb, cc, aaa, bbb, ccc, \ldots\}$
$(a\|c^*)c(c^*)$	$\{ac, acc, accc, \ldots, c, cc, ccc, \ldots, bc, bcc, bbccc, \ldots\}$