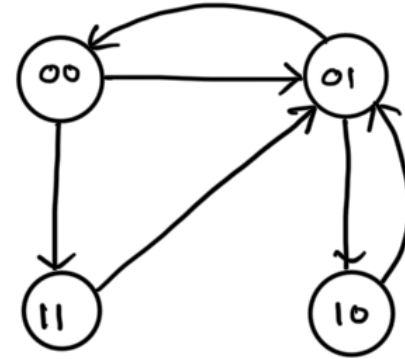


Quiz-4

* J-K FF

Sleep $\xrightarrow{00}$ Eat $\xrightarrow{01}$ Work $\xrightarrow{10}$ Eat $\xrightarrow{01}$ Sleep $\xrightarrow{00}$ Exercise $\xrightarrow{11}$ Eat $\xrightarrow{01}$ Sleep $\xrightarrow{00}$

Sleep = 00 $\xrightarrow{01, 11}$
 Eat = 01 $\xrightarrow{10, 00}$
 Work = 10 \rightarrow 01
 Exercise = 11 \rightarrow 01



State table :

A	B	x	A+	B+	JA	KA	JB	KB
0	0	0	0	1	0	x	1	x
0	0	1	1	1	1	x	1	x
0	1	0	1	0	1	x	x	1
0	1	1	0	0	0	x	x	1
1	0	0	0	1	x	1	1	x
1	0	1	0	1	x	1	1	x
1	1	0	0	1	x	1	x	0
1	1	1	0	1	x	1	x	0

ET of JK

00	0x
01	1x
10	x1
11	x0

K Map :

• JA

A \ Bx	Bx' = 00	Bx = 01	Bx = 11	Bx' = 10
A' = 0		1		1
A = 1	x	x	x	x

$B'x + Bx' = B \oplus x$

• JB

A \ Bx	Bx' = 00	Bx = 01	Bx = 11	Bx' = 10
A' = 0	1	1	x	x
A = 1	1	1	x	x

1

• KA

A \ Bx	Bx' = 00	Bx = 01	Bx = 11	Bx' = 10
A' = 0	x	x	x	x
A = 1	1	1	1	1

1

• KB

A \ Bx	Bx' = 00	Bx = 01	Bx = 11	Bx' = 10
A' = 0	x	x	1	1
A = 1	x	x		

A'

• JA = $B \oplus x$

• JB = 1

• KA = 1

KB = A'

