Class Assignment 08

Complete the class work and attach the screenshots/images at the end.

F.1 Experimental Data: Constructing a Sequential Circuit using T Flip-Flops

Present state		Input	Next state		Output	Flip-flop input functions	
A	B	X	A	B	Y	T_A	T_B
0	0	0	0	1	0	0	1
0	0	1	1	0	1	1	0
0	1	0	0	1	0	0	0
0	1	1	1	0	1	1	1
1	0	0	1	0	0	0	0
1	0	1	0	0	0	1	0
1	1	0	X	X	X	X	X
1	1	1	X	X	X	X	X

Table F.2.1: State Table for circuit using T Flip-Flops

0	1	1	0
0	1	X	X

$T_A = X$

1	0	1	0
0	0	X	X

$T_B = A'B'X'+BX$

0	1	1	0
0	0	X	X

$Y = A'X$

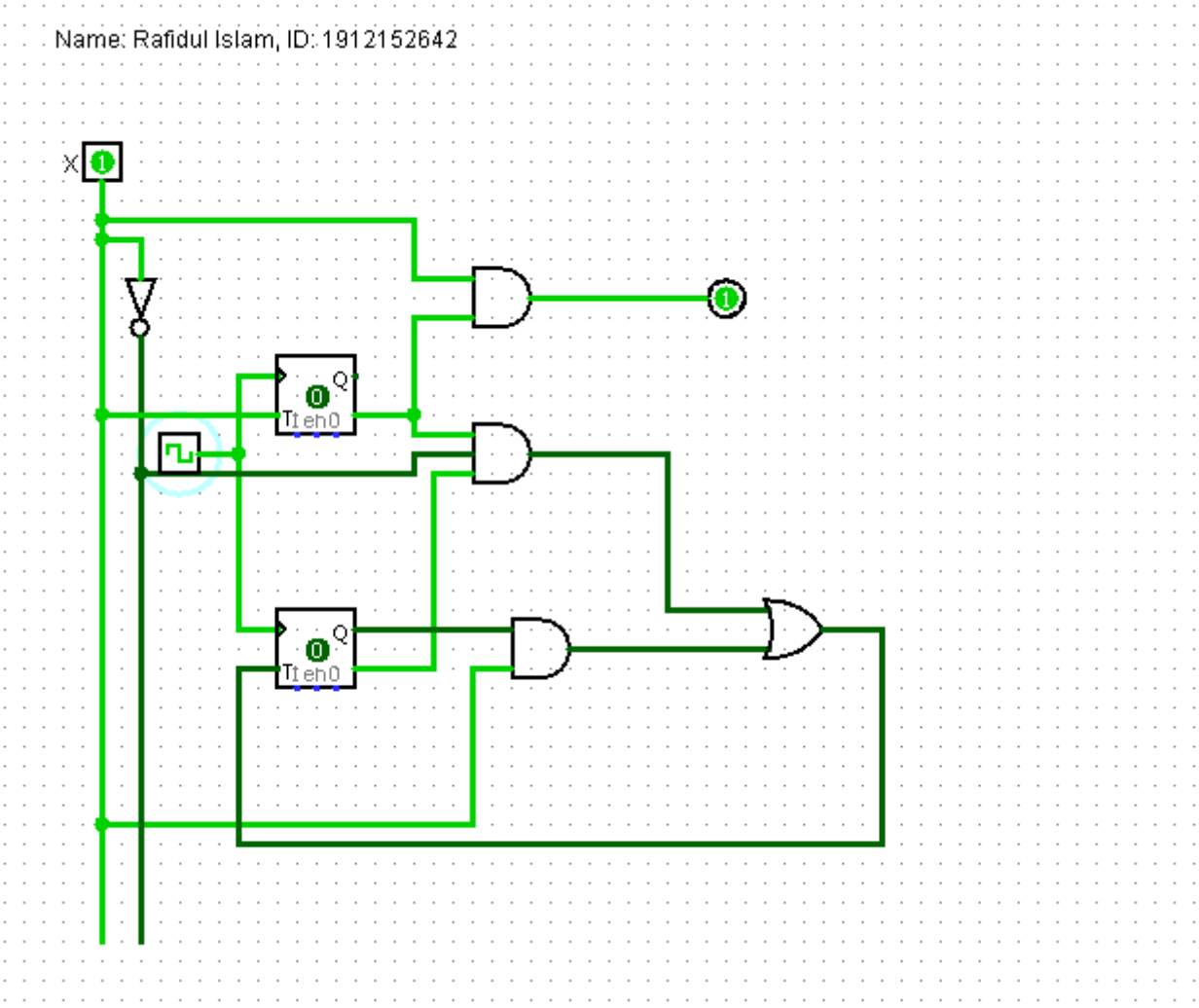

Figure F.2.1: Circuit Diagram

F.2 Experimental Data: Constructing a Sequential Circuit using D Flip-Flops

Present state		Input	Next state		Output	Flip-flop input functions	
A	B	X	A	B	Y	D_A	D_B
0	0	0	1	1	0	1	1
0	0	1	0	1	0	0	1
0	1	0	1	1	0	1	1
0	1	1	0	0	0	0	0
1	0	0	1	0	0	1	0
1	0	1	1	1	1	1	1
1	1	0	1	0	0	1	0
1	1	1	1	0	1	1	0

Table F.3.1: State Table for circuit using D Flip-Flops

1	0	0	1
1	1	1	1

$D_A = x'+A$

1	1	0	1
0	1	0	0

$D_B = A'x'+B'x$

0	0	0	0
0	1	1	0

$Y = Ax$

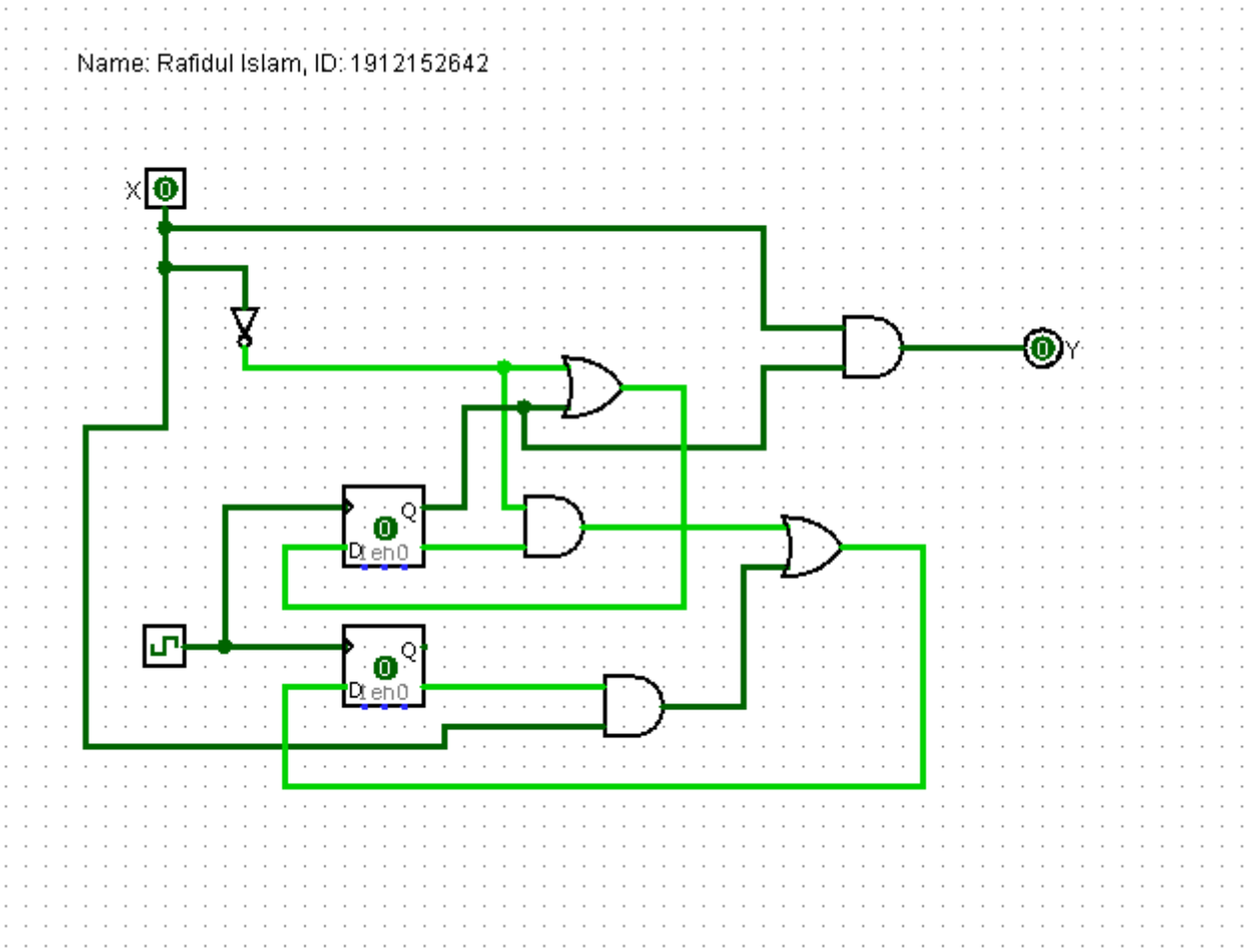

Figure F.3.1: Circuit Diagram