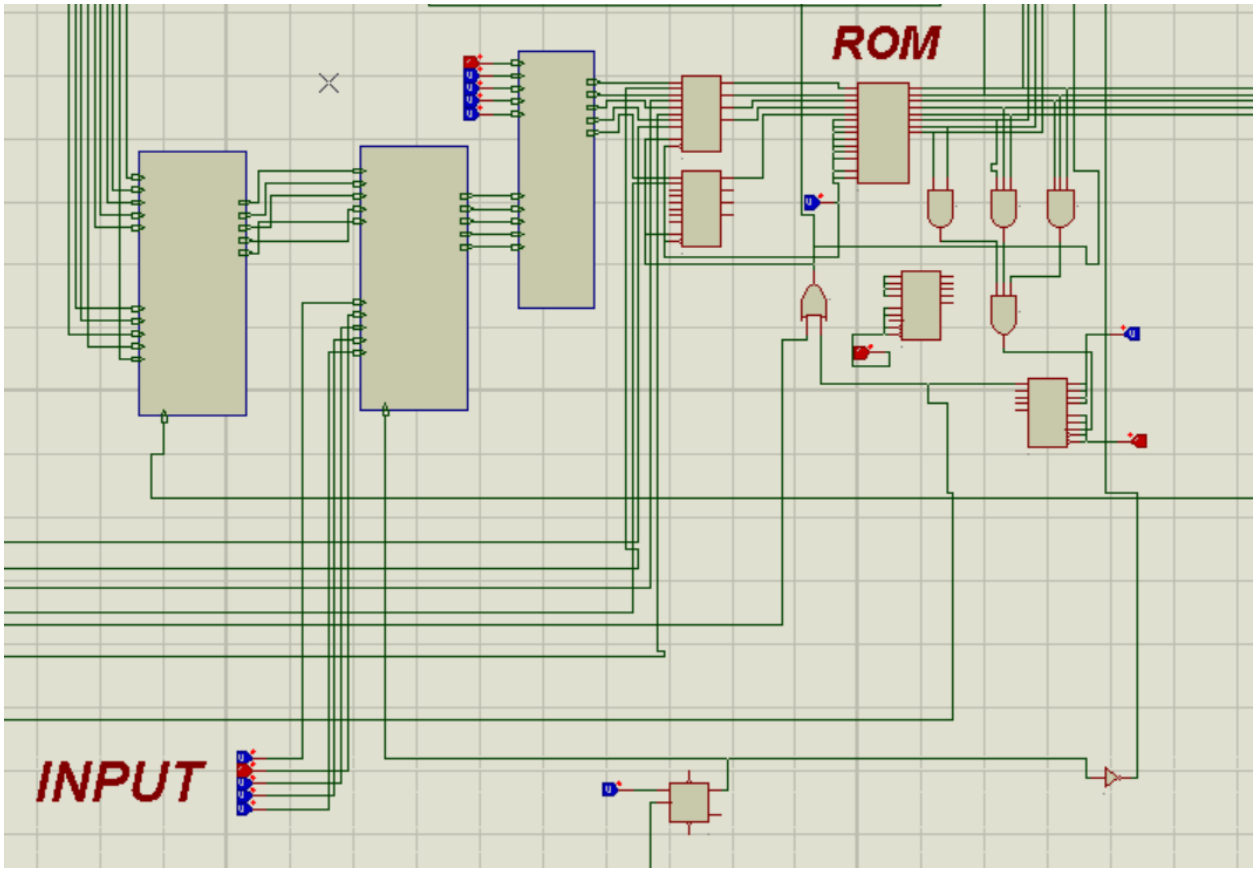
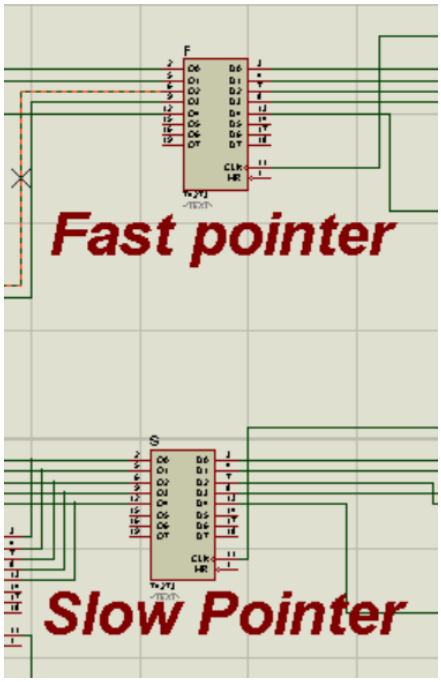
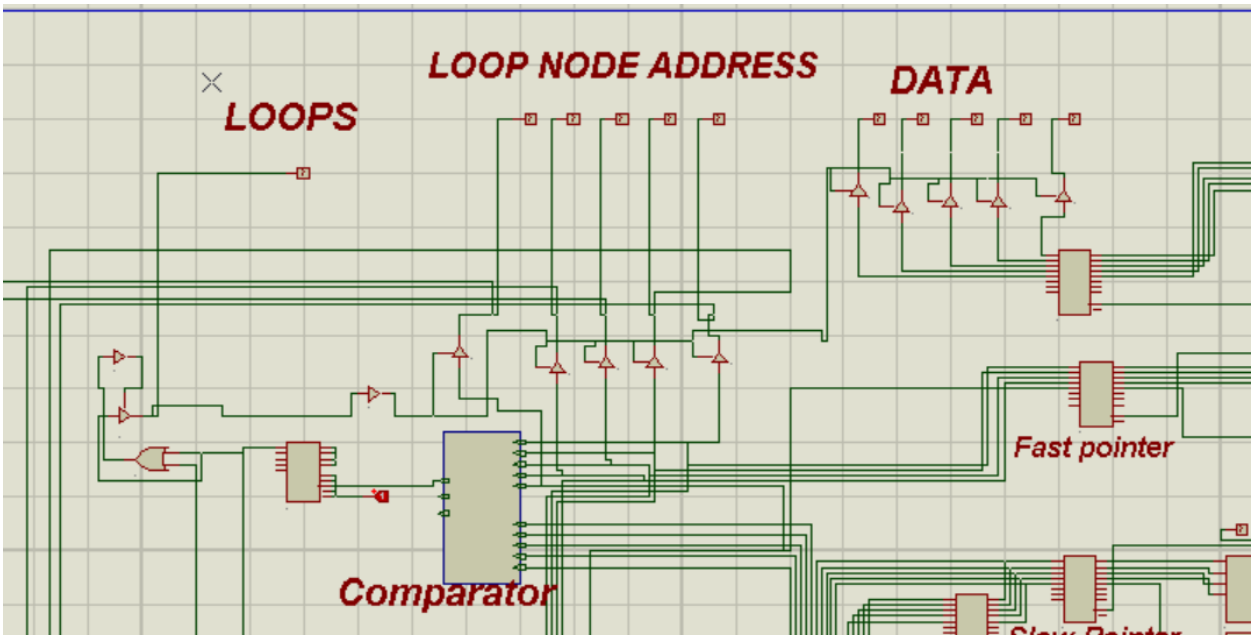
Initially, The input is given to the system. Then one is added to it….and then this input is given to rom .
This gives the addres of next node.



There are 2 types of Registers used here. (Fast Pointer and Slow Pointer).



Fast pointer Register travels 2 nodes in a half clock cycle whereas slow pointer register travels 2 node in a half clock cycle.
at every moment, The addresses of fast pointer register and slow pointer register are compared and if fast pointer register's address is less then that of slow pointer's, then we can say that it has a Loop and 1 is given as output with the address of looped node and data at that node. And if not, 0 is gives as output.



	Round-2 PS		
	Components	**Quantity**	**COST**
Selector3	Logic Gates	16	1.6
Selector4	Logic Gates	16	1.6
Sub_Adde	Logic Gates	18	1.8
	MUX	8	16
	rom	1	75
	74161	3	6
	74273	4	16
	7485	2	4
CLOCKS	CLOCK	1	40
	Logic Gates	6	0.6
	74LS109	3	3
	Logic Gates	16	1.6
	74LS109	1	1
	3_input Logic g	3	0.6
		TOTAL	**168.8**