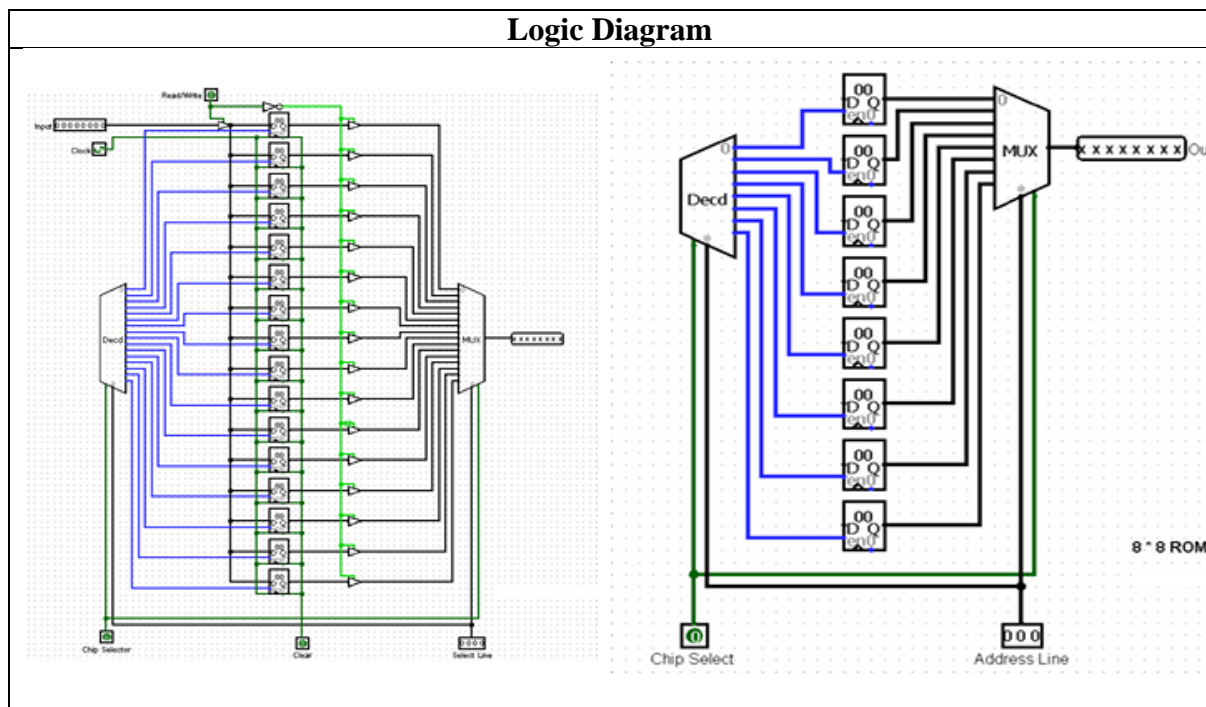


EXPERIMENT-8

Aim: Design of ROM and RAM using in-built block of register..

Exercise-1: Design 8×8 ROM (convert Fig. 1) and 16x8 RAM (convert to Fig. 2) using in-built block of register. Perform Write/Read operation in the memories using following in instructions:

Contents of ROM			Contents of RAM		
Address	Symbol	Hex Code	Address	Symbol	Hex Code
1	CIR	78	0	LDA	20
3	CIL	7F	3	ADD	13
4	HLT	70	A	CLA	78
6	BUN	5B	D	STA	3A
7	AND	04	E	INC	7D



Exercise-2: Design 56×8 memory system as shown in block diagram using sub-circuits of RAM and ROM chips designed in Exercise#1. Find the address maps of each memory chip and perform Write/Read operation in the memories using instructions given in the table:

Contents of Memory			
Chip Select bits	Address bits	Symbol	Hex Code
00	0101	LDA	20
00	1101	ADD	13
01	1001	CLA	78
01	0101	STA	3A
10	1110	INC	7D
10	0000	BUN	5B
11	X111	CIL	7F
11	X100	HLT	70

X = don't care condition

