

EXPT NO. 8 :

STUDY OF DEMULTIPLEXER

Objective :

To study the Demultiplexer.

Equipments :

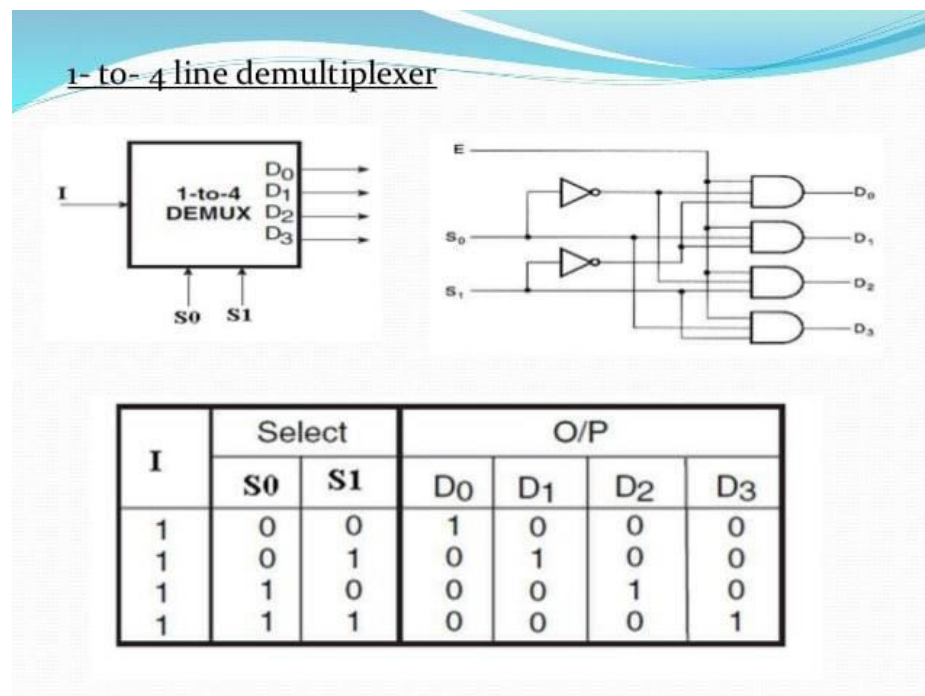
Logic Circuit Simulator Pro.

Theory :

Demultiplexer :

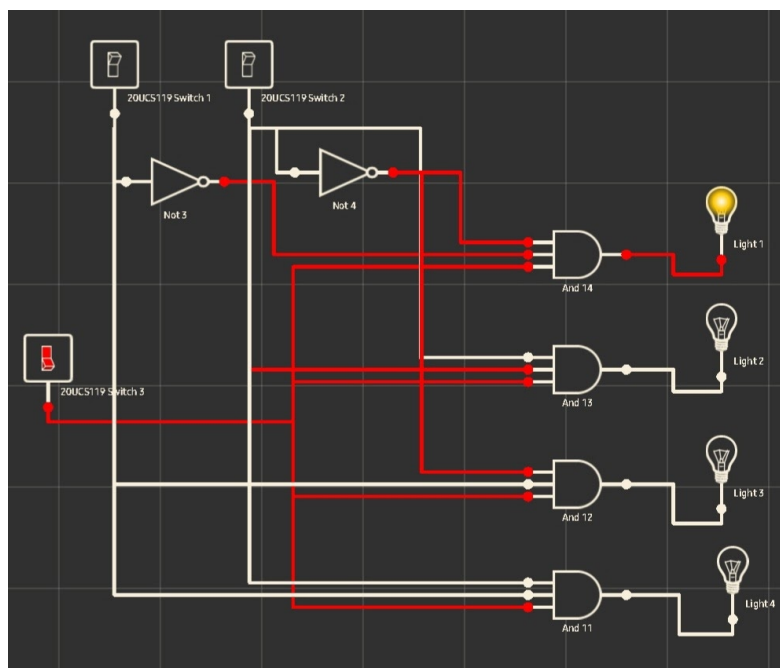
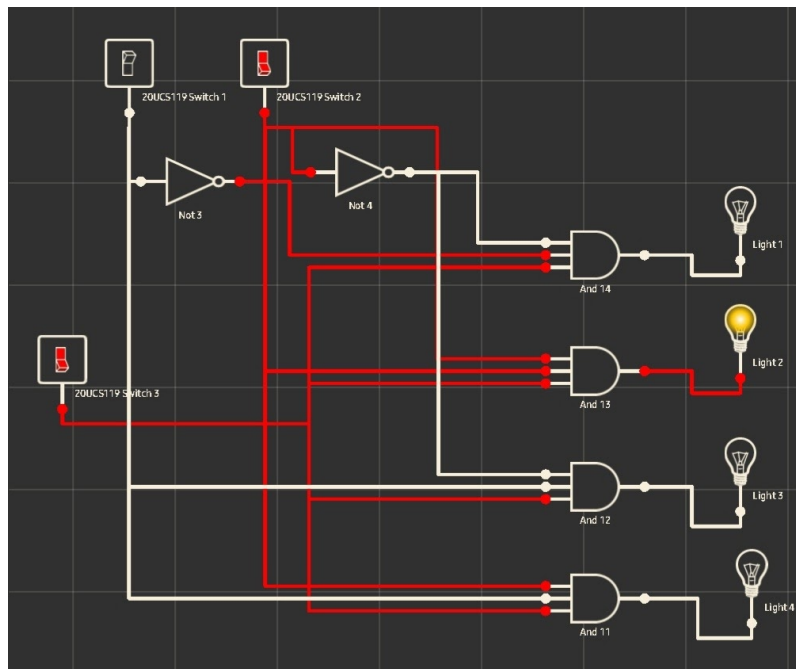
The demultiplexer is a combinational logic circuit having a single input and many outputs. It performs the reverse operation of a multiplexer. It accepts a single input and distributes it to output lines, according to the select lines. For this reason it is also known as a data distributor.

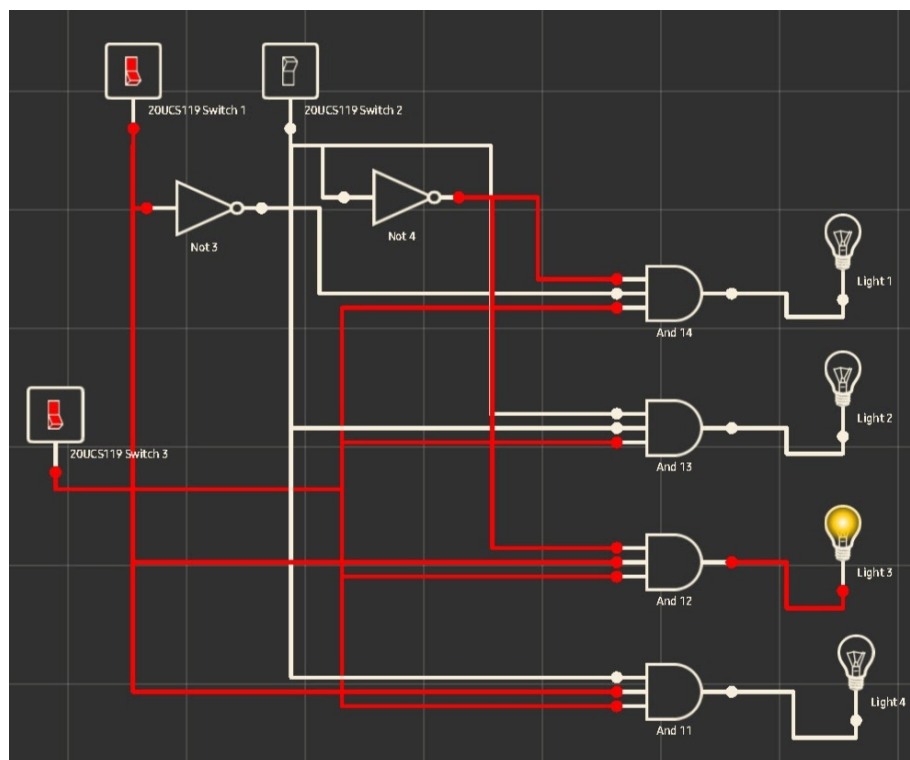
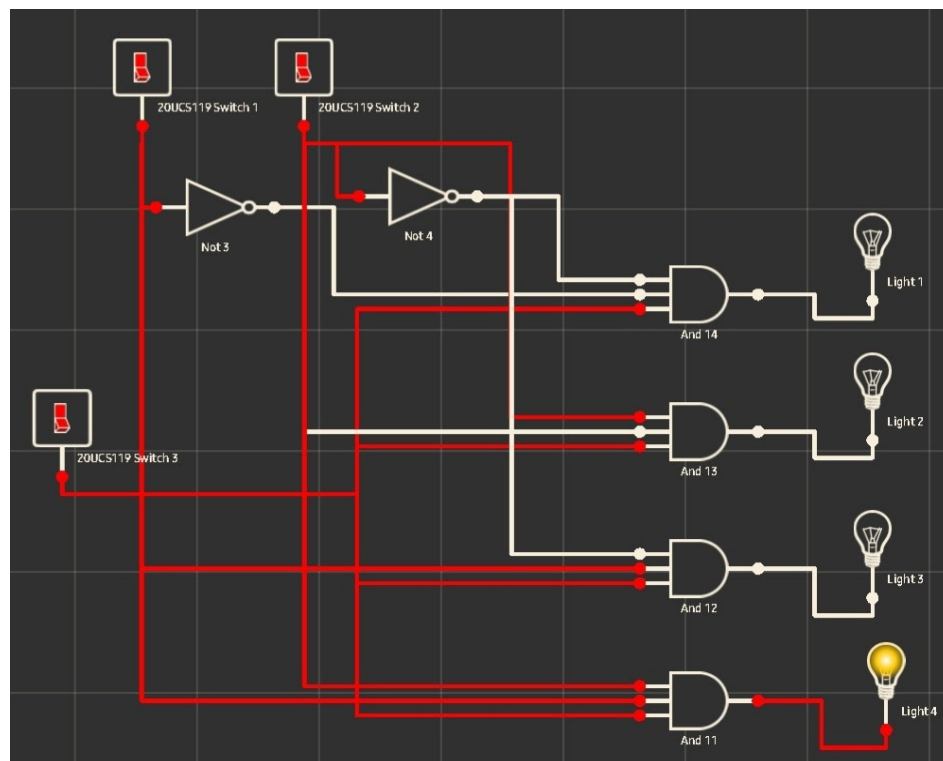
Decoder can also be used as a demultiplexer.



Procedure :

- Do the connections as shown and switch on the power supply.
- Apply proper logic inputs on the demultiplexer and observe the output on LEDs.
- Verify the function table of demultiplexer in both the cases.





TRUTH TABLE :

Data Input	Select Inputs		Outputs			
D	S ₁	S ₀	Y ₃	Y ₂	Y ₁	Y ₀
D	0	0	0	0	0	D
D	0	1	0	0	D	0
D	1	0	0	D	0	0
D	1	1	D	0	0	0

Conclusion :

Hence the functionality of Demultiplexer is verified.