

Date: 23/6/21

Experiment no. 10

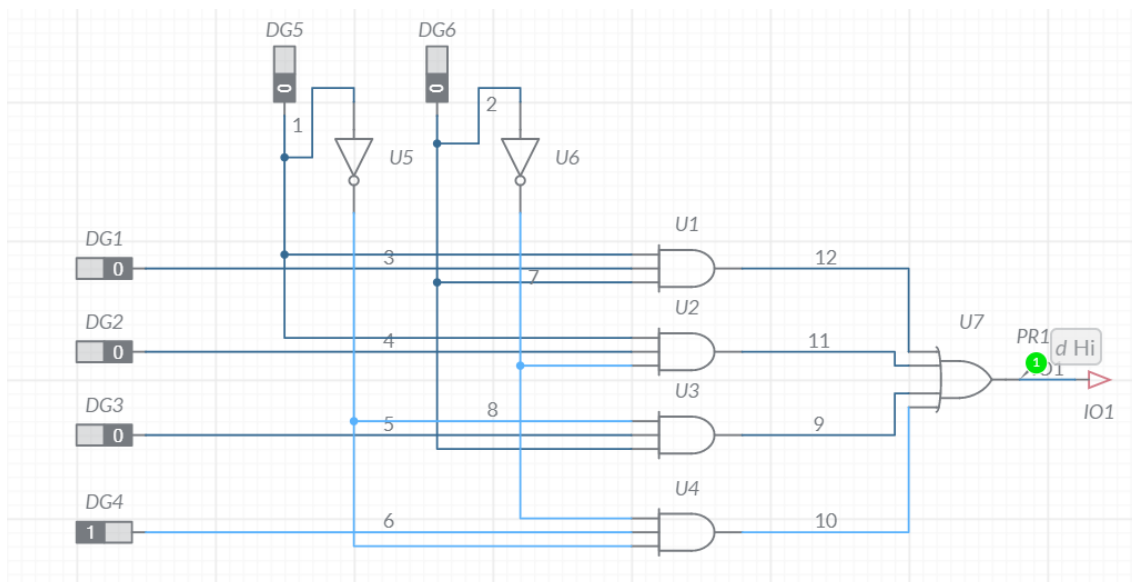
Objective: To study the design of Multiplexer and Demultiplexer using logic gates

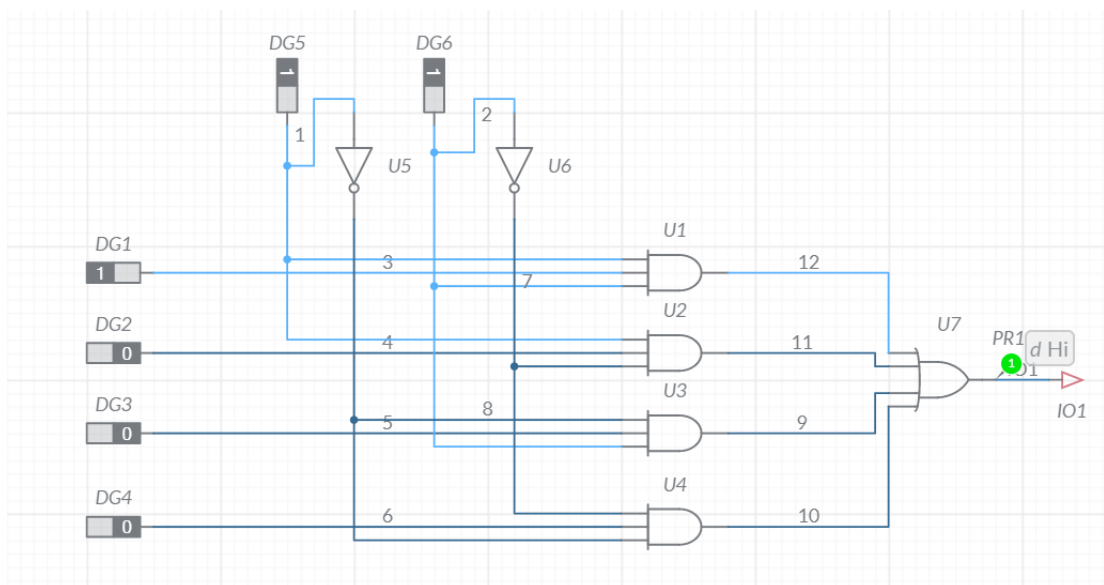
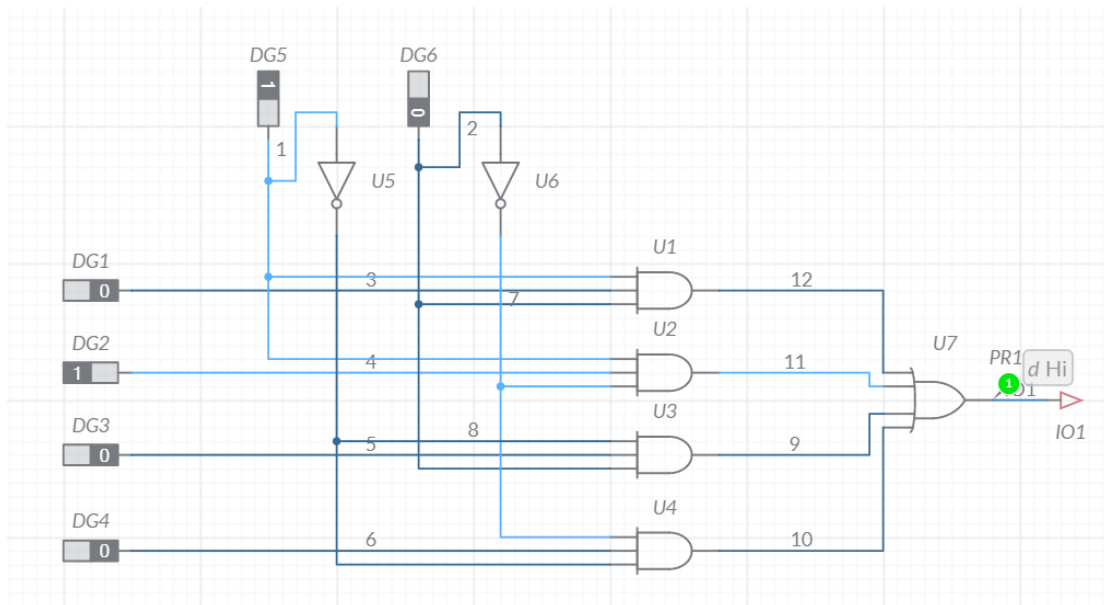
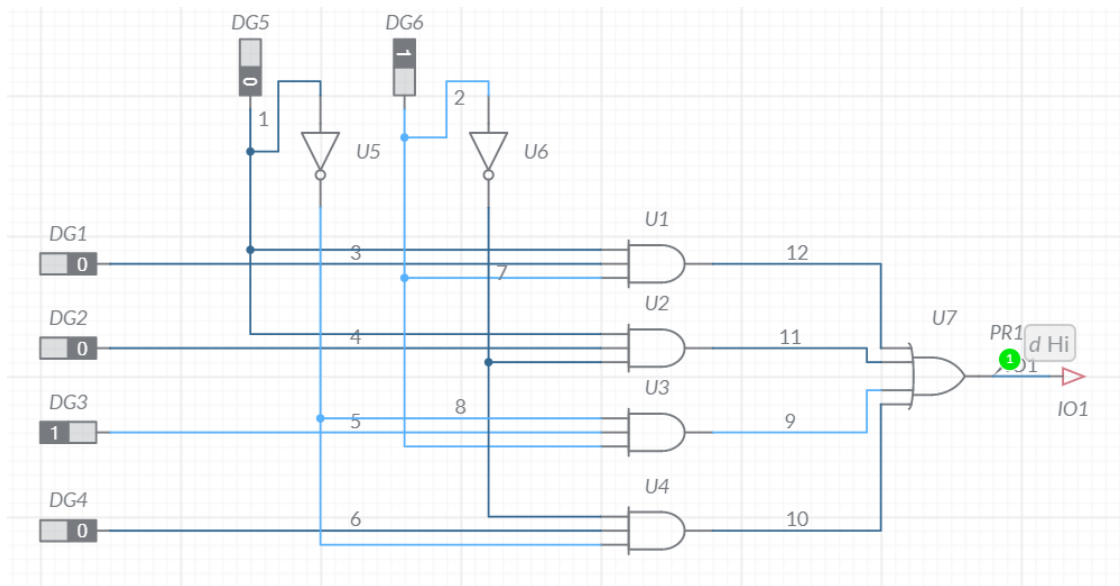
Software used: Multisim Live

Theory: Multiplexer is a data selector which takes several inputs and gives a single output. In multiplexer we have 2^n input lines and 1 output line where n is the number of selection lines. Demultiplexer is a data distributor which takes a single input and gives several outputs. In demultiplexer we have 1 input and 2^n output lines where n is the selection line.

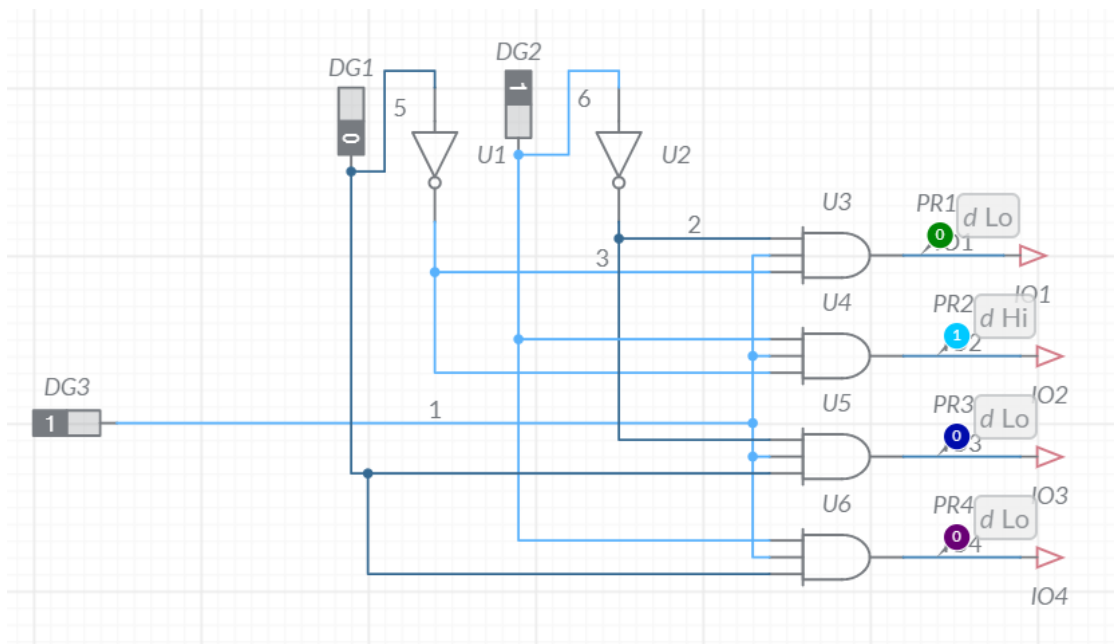
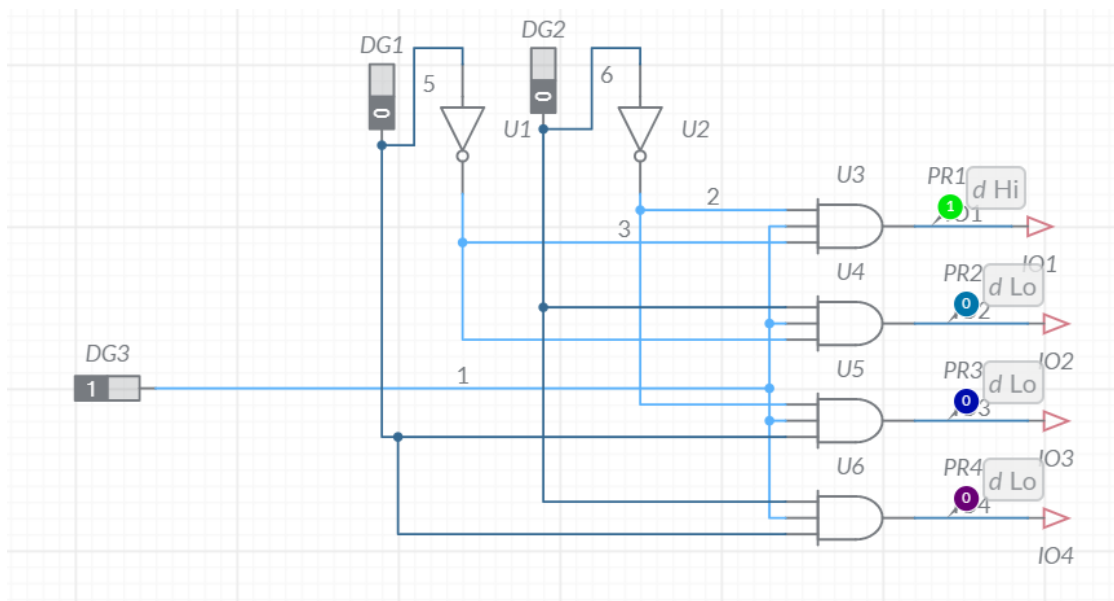
Circuit diagram:

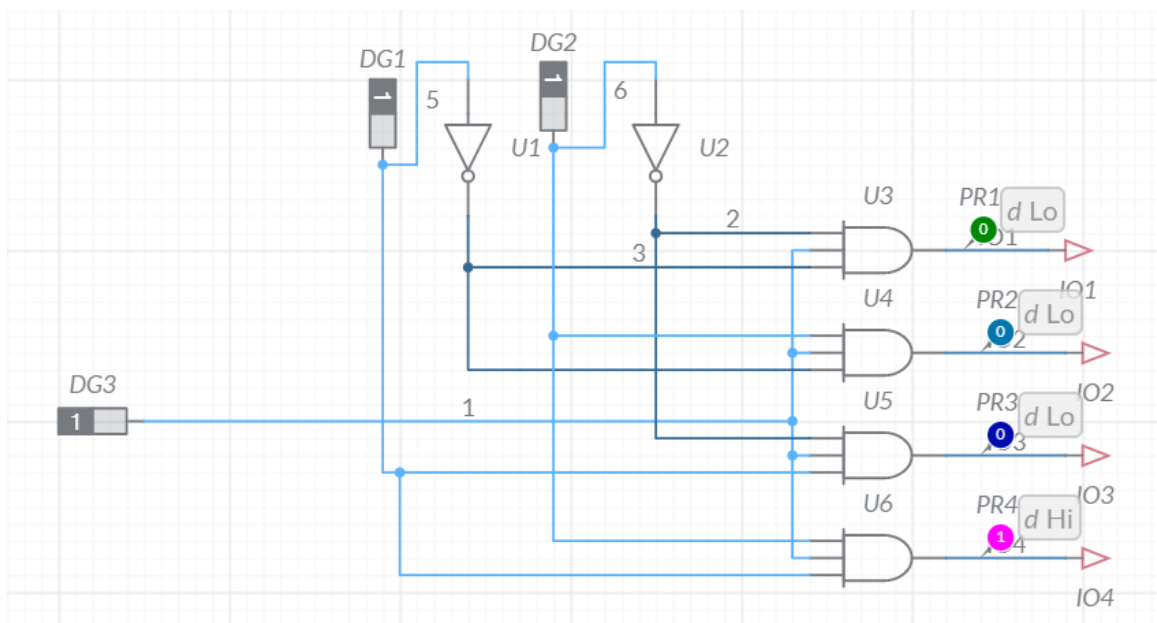
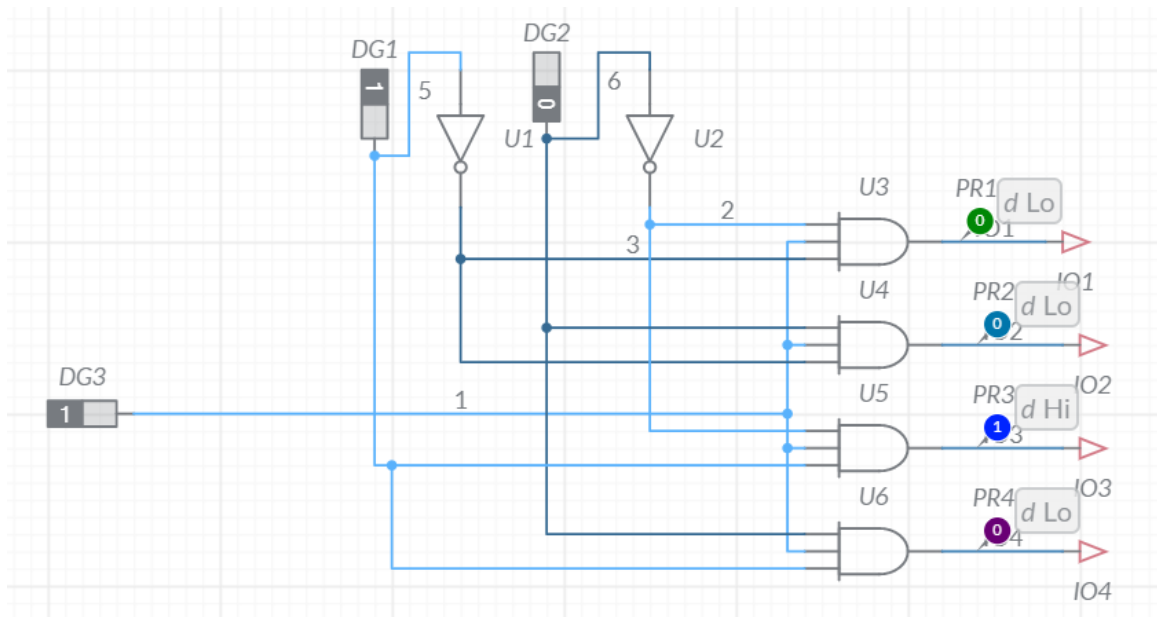
1. Multiplexer circuit (4×1)





2. Demultiplexer circuit (4*1)





Results & observations: By above circuit diagrams we can study the design of Multiplexer and Demultiplexer using logic gates.

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