

## LAB 2

### ❖ Design Following Circuits using Structured Modeling

1. 4x1 Multiplexer using 2x1 Multiplexer.
2. 1x4 Demultiplexer using 1x2 Demultiplexer.
3. (i) 2x4 Decoder using component of 3 input AND gate  
(ii) 3x8 Decoder using 2x4 Decoder
4. Half Adder using components of logic gates.
5. Full Adder using component of Half Adder.
6. 4-bit Full Adder using component of Full adder.
7. Gray Code Detector with two inputs A and B each of 3-bits.
8. Magnitude Comparator with two inputs A and B each of 2-bits.