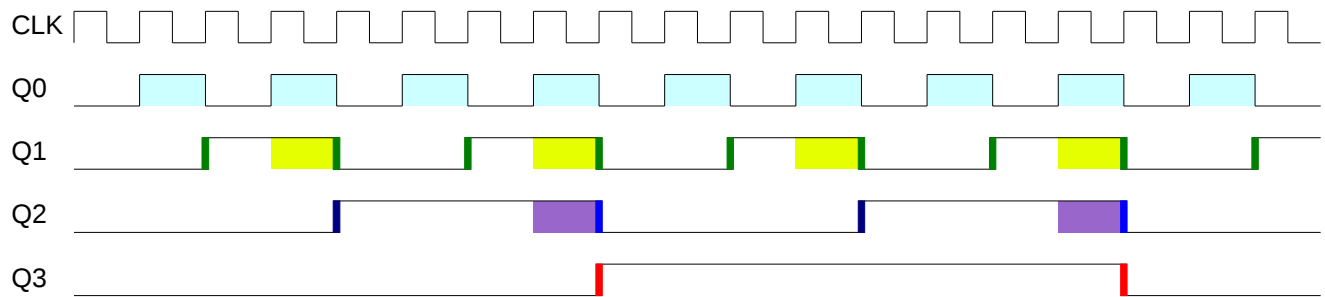
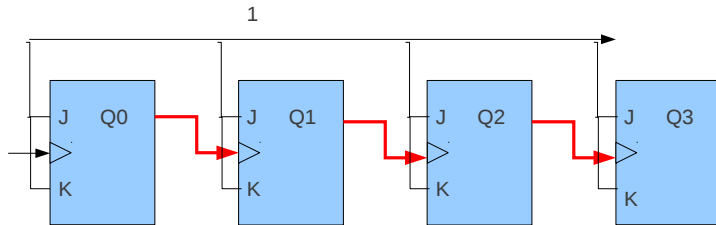
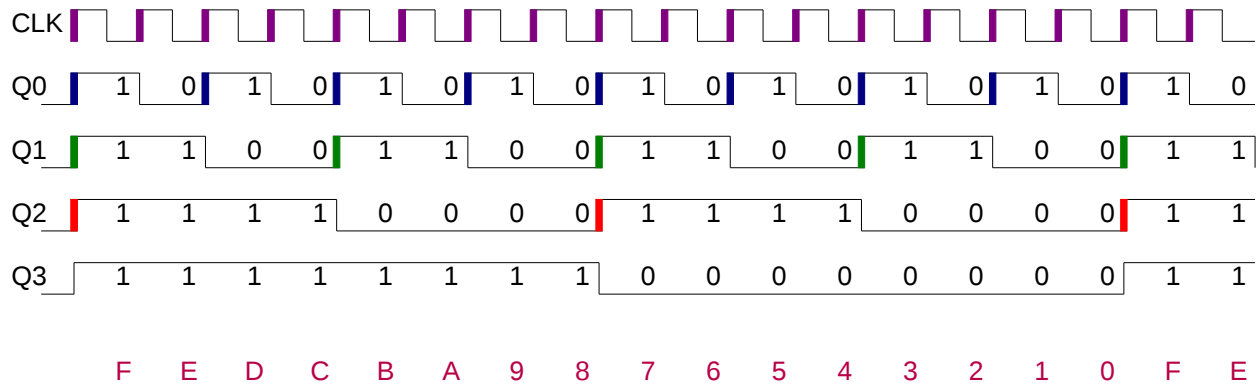
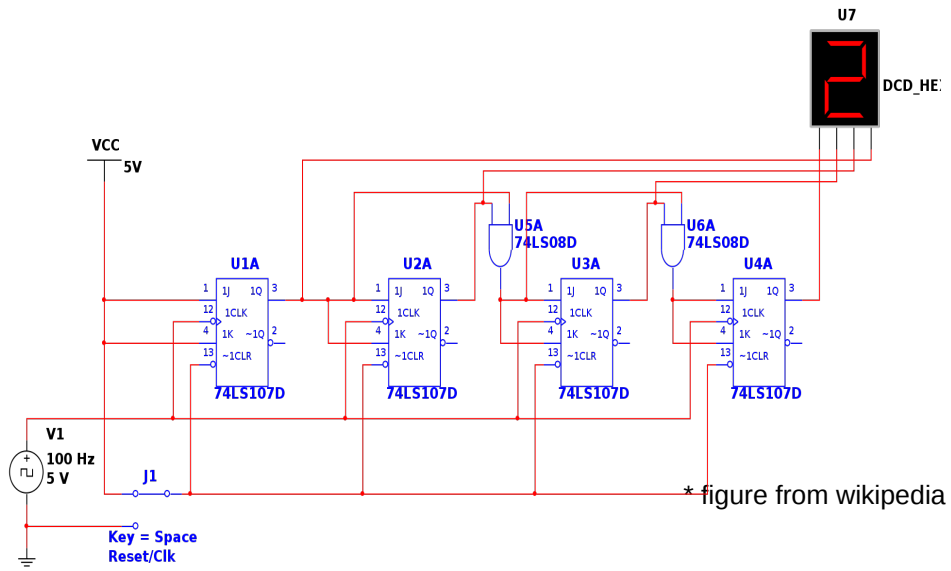
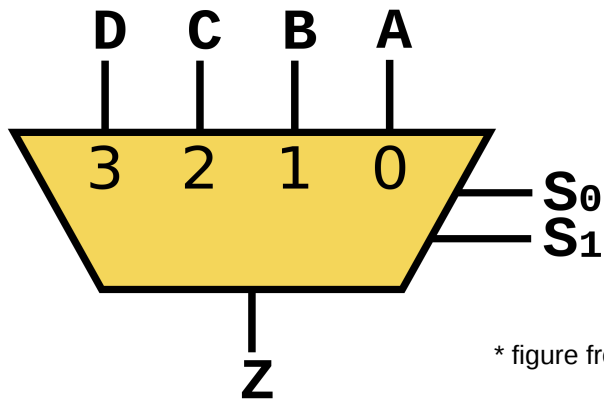


## Binary Ripple Counter (Down Counter)



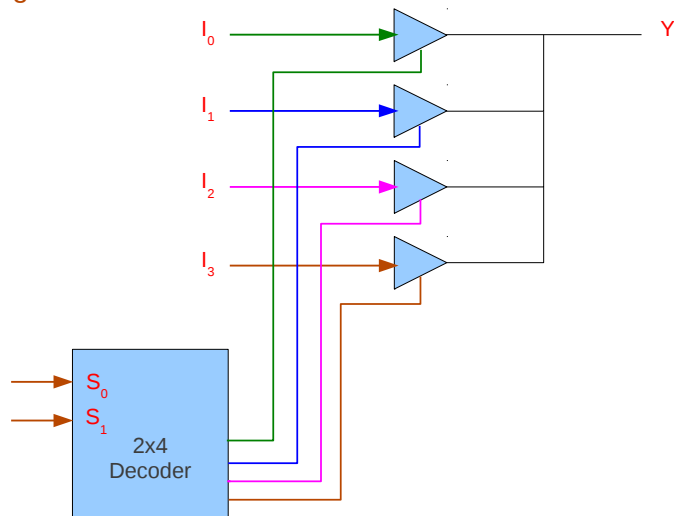
Sheet1



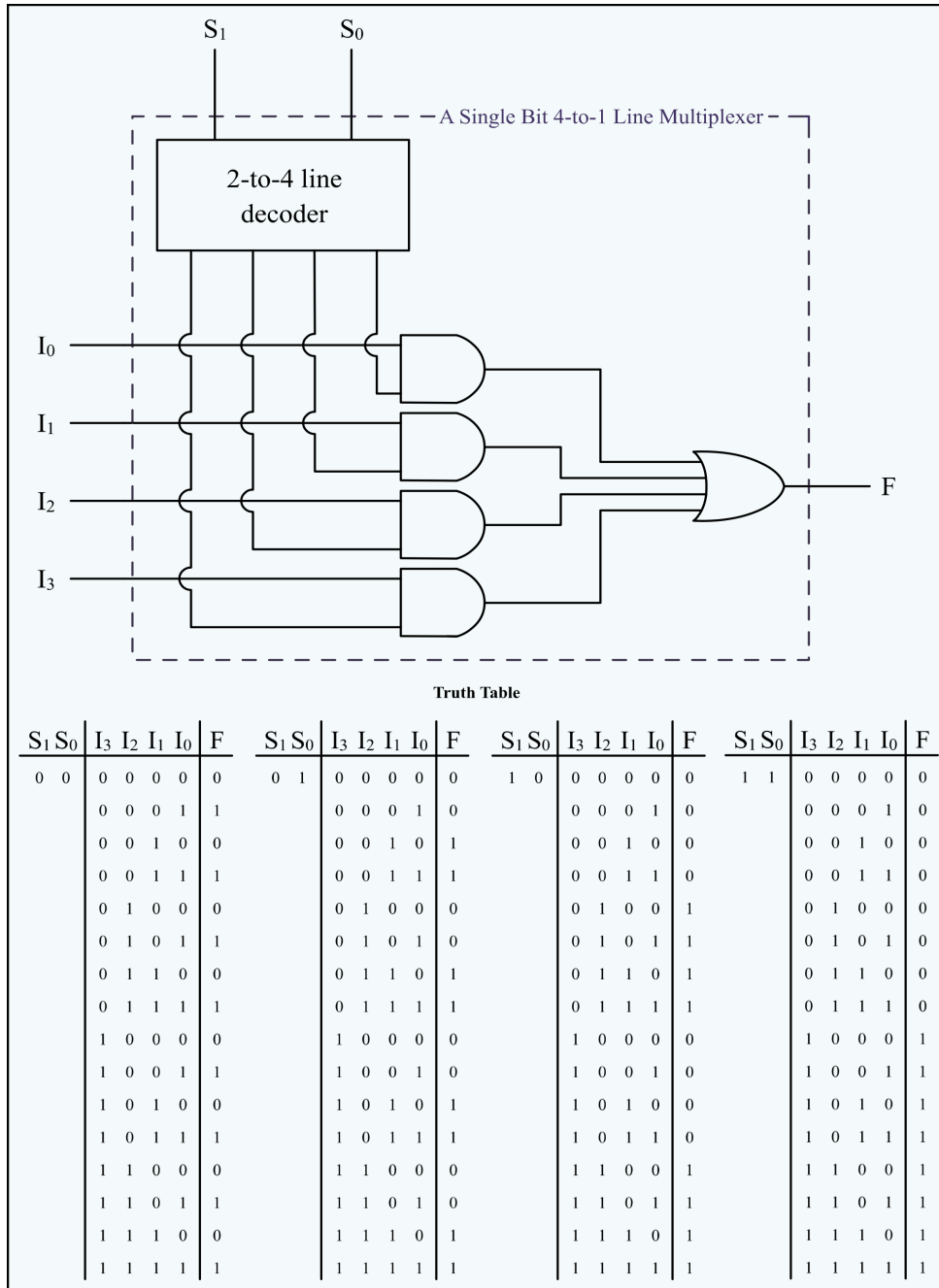


\* figure from wikipedia

4 to 1 Multiplexer  
using Tri-state Buffer

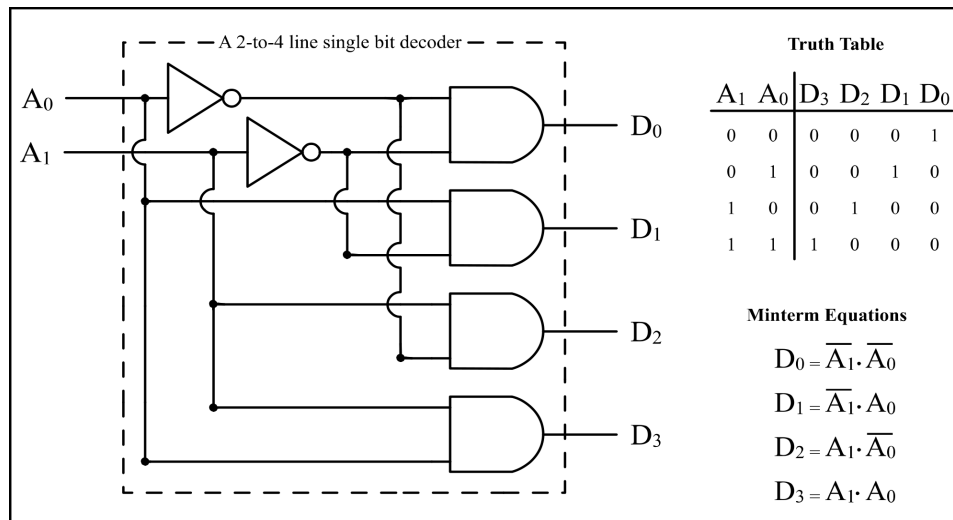


## 4 to 1 Multiplexer using AND and OR gates



\* figure from wikipedia

## Decoder Circuit



\* figure from wikipedia

# Address Decoder in Memory System

