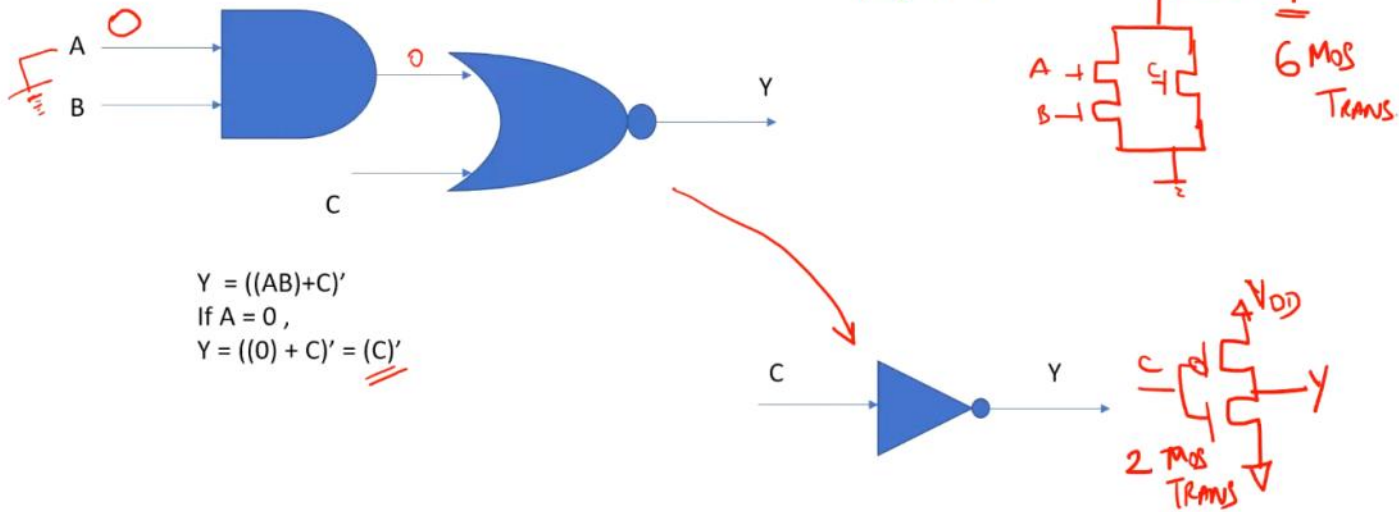


Introduction to Logic Optimisations

Combinational Logic Optimisation

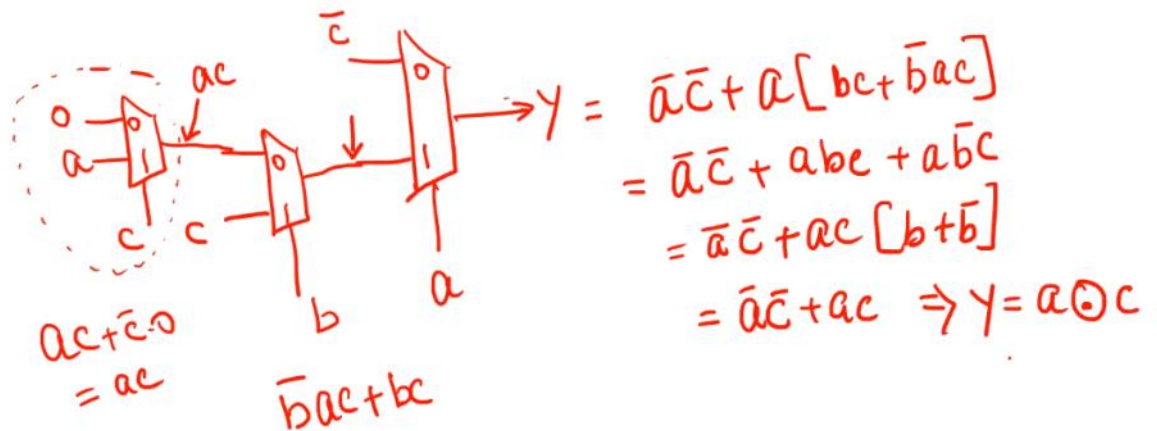
- Squeezing the logic to get the most optimised design
 - Area and Power savings
- Constant Propagation
 - Direct Optimisation
- Boolean Logic Optimisation
 - K-Map
 - Quine McCluskey

Constant Propagation : Example



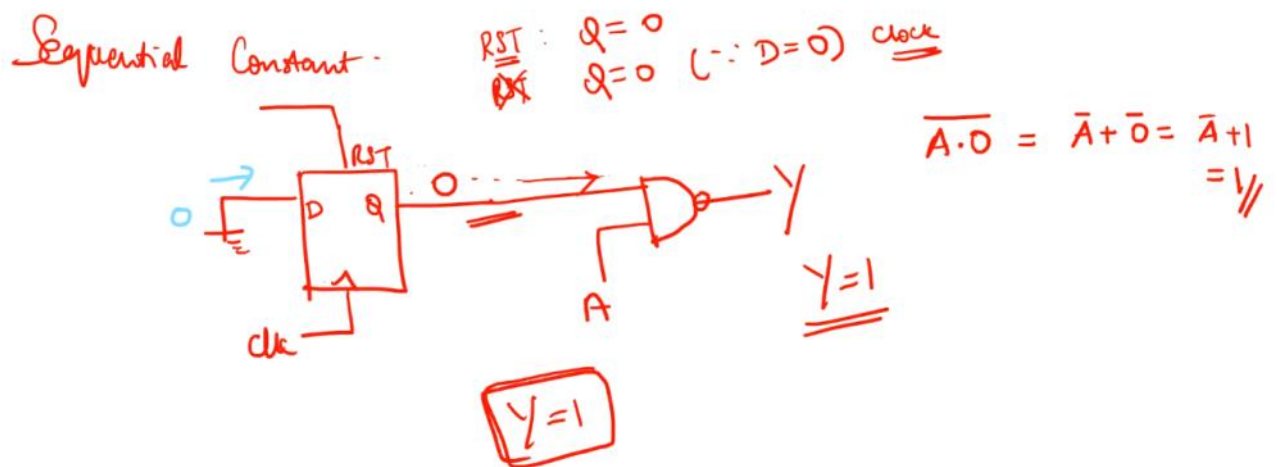
Boolean Logic Optimisation

assign y = a?(b?c:(c?a:0)):(!c)



Sequential Logic Optimisations

- Basic
 - Sequential Constant propagation
- Advanced [Not covered as part of Lab]
 - State optimisation
 - Retiming
 - Sequential Logic Cloning (Floor Plan Aware Synthesis)



State opt → Optimisation of Unused States

Cloning [Physical aware]

