Combrinational Circuits - Circuit whose output depends only on the imput, not stored values

- Constructional Circuits cannot implement memory

Multiplexer

- Circuit with 2" data inputs, a control inputs, and one output - Control inputs select one of the data inputs to route to the output - Uses
 - Parallel to series conversion - Apply the data inputs and then cycle through the control input patterns to send each bit one at a time to the output F ß C A - Compute orbitrary Boolean functions 0 \mathcal{O} Ω - Buslean function of 3 Vanithes 001 \mathcal{O} - 3 control bits, 3 data bits (2 | 1 | 1)- Each data bit represents a now Ũ 100 from the truth table - Each control lait represents a vanishe

Ofter combinational circuits - Comparators (equals, less than, etc) - Shifters - Addes These can be combined to build ALUS