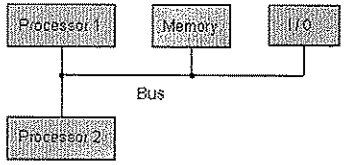
Series and Parallel Systems

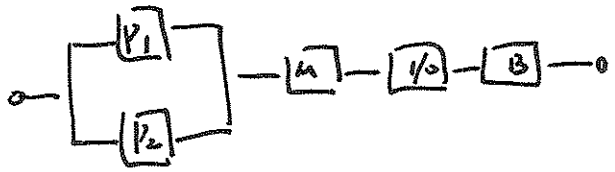
- In practice, many systems are typically combinations of series and parallel structures
- Example:



  - System is operational *iff* 1 processor, memory, I/O and bus are functioning
  - Find RBD?
  - Find the system reliability given that
    - Two processors have the same reliability $R_p(t)$
    - Memory: $R_m(t)$
    - I/O: $R_{IO}(t)$
    - Bus: $R_b(t)$

Lecture #12

△ RBD Model:



$1-(1-R_p(t))^2$

△ $R_{sys} = \left[1-(1-R_p(t))^2\right] \cdot R_m(t) \cdot R_{IO}(t) \cdot R_b(t)$