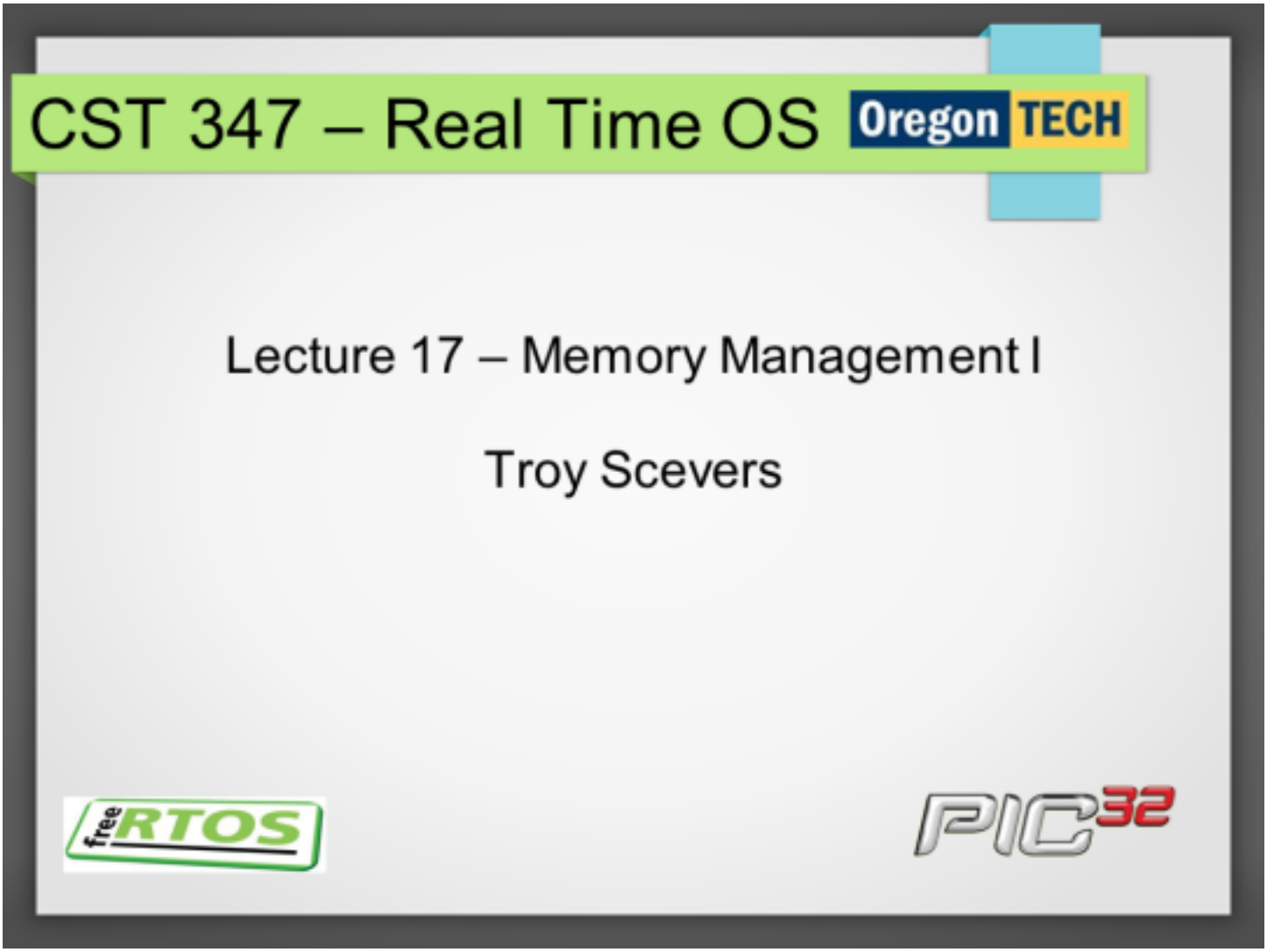
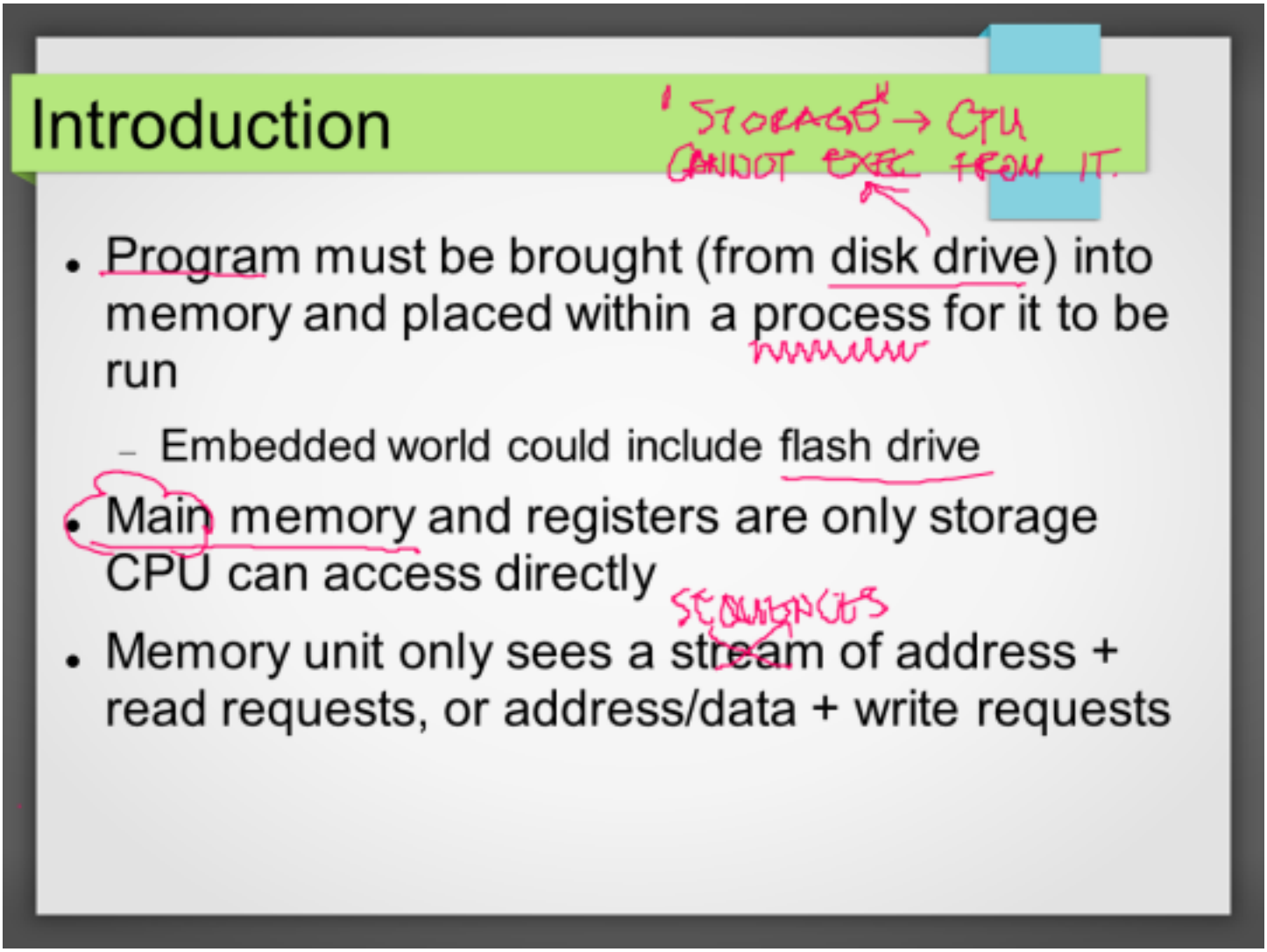
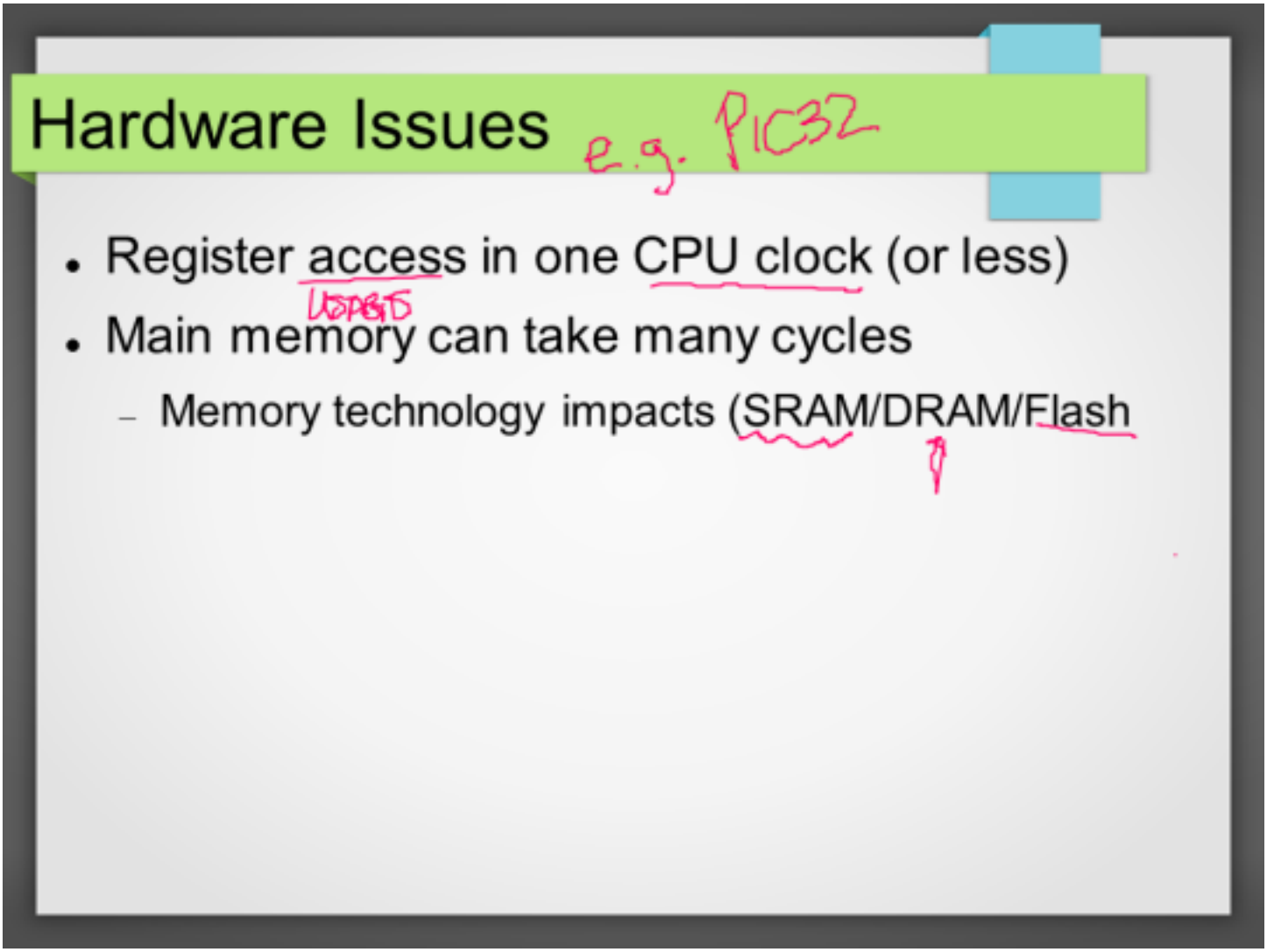
CST 347 ?? Real Time OS



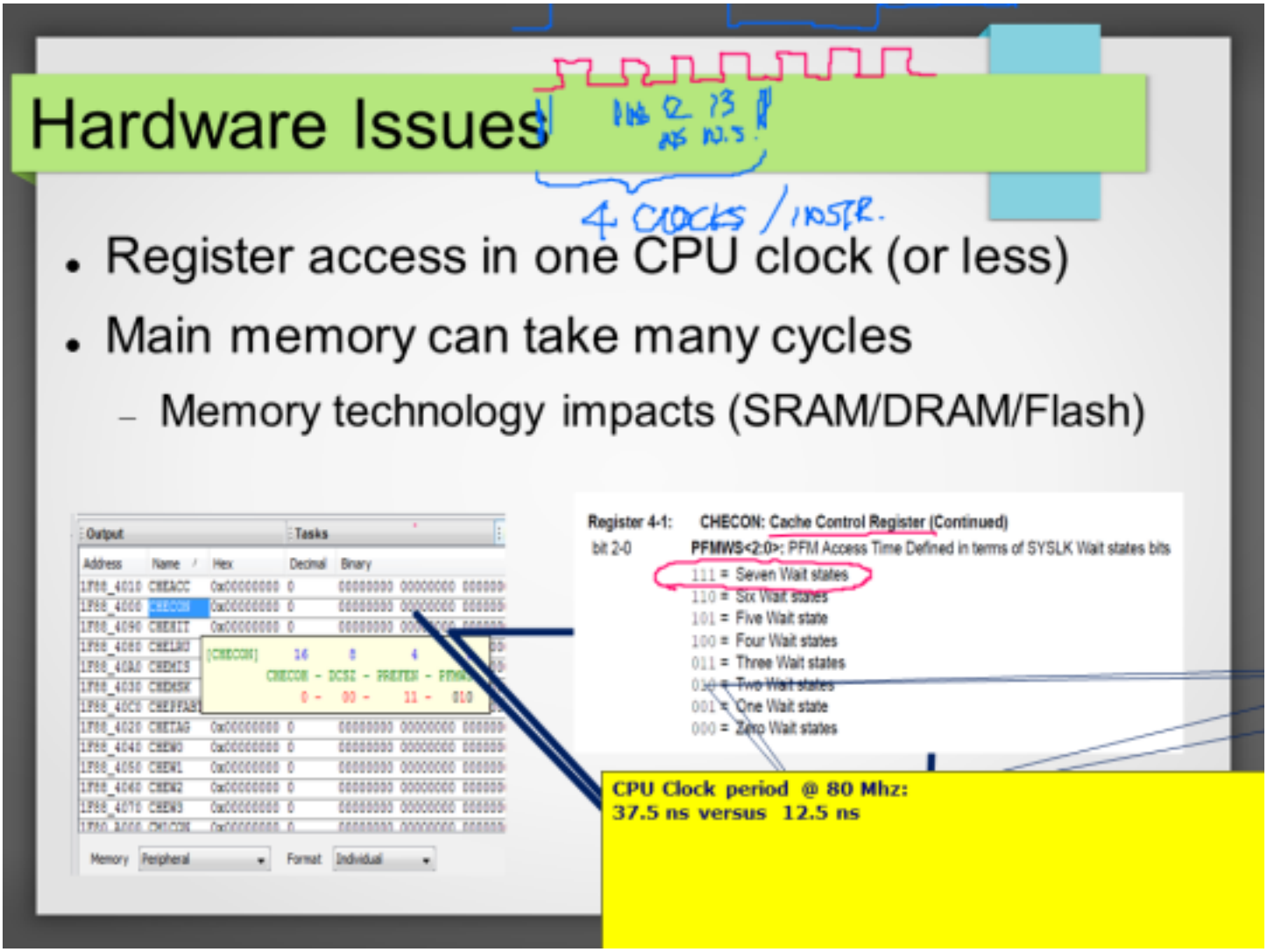
Introduction



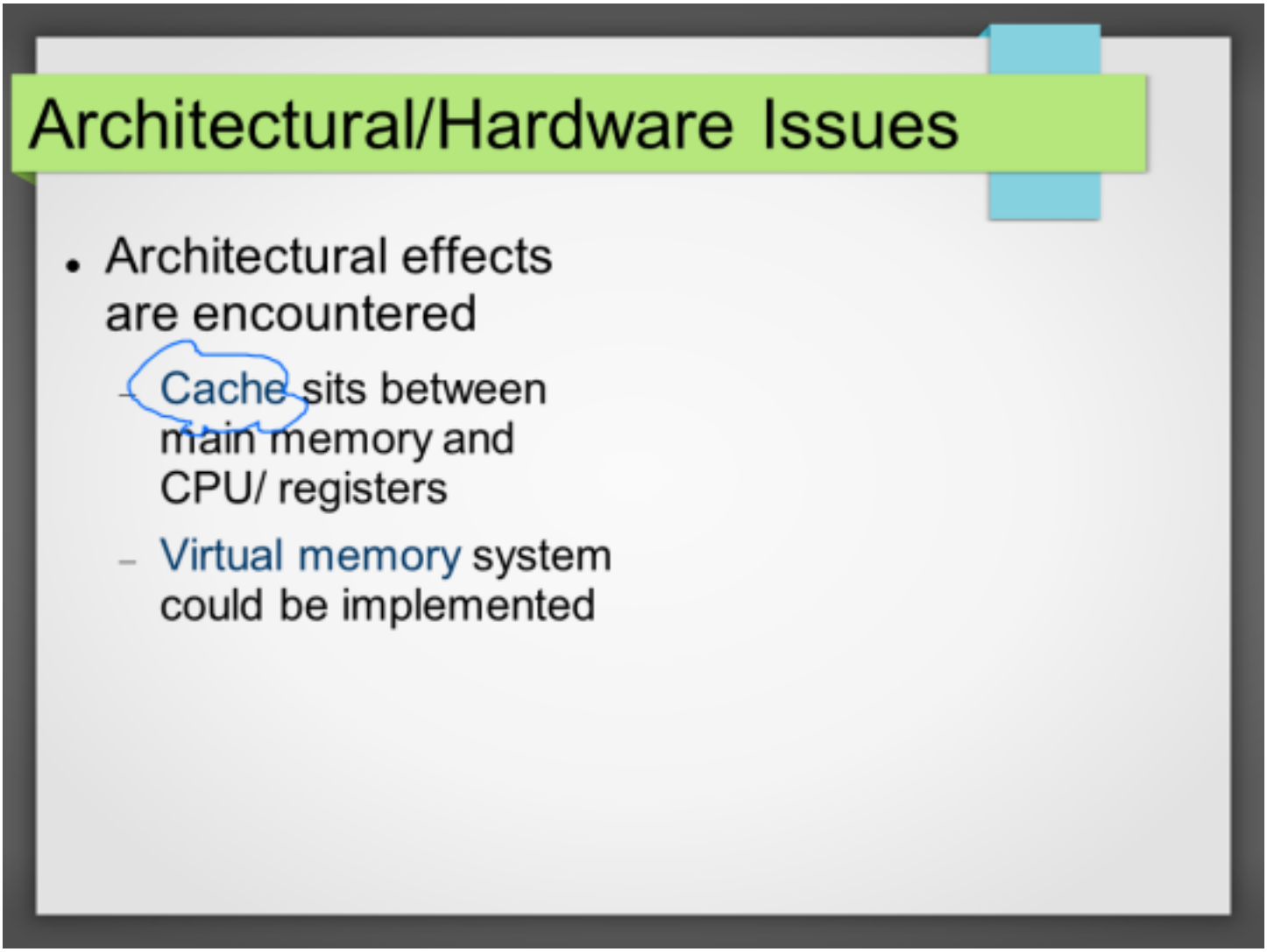
Hardware Issues



Hardware Issues



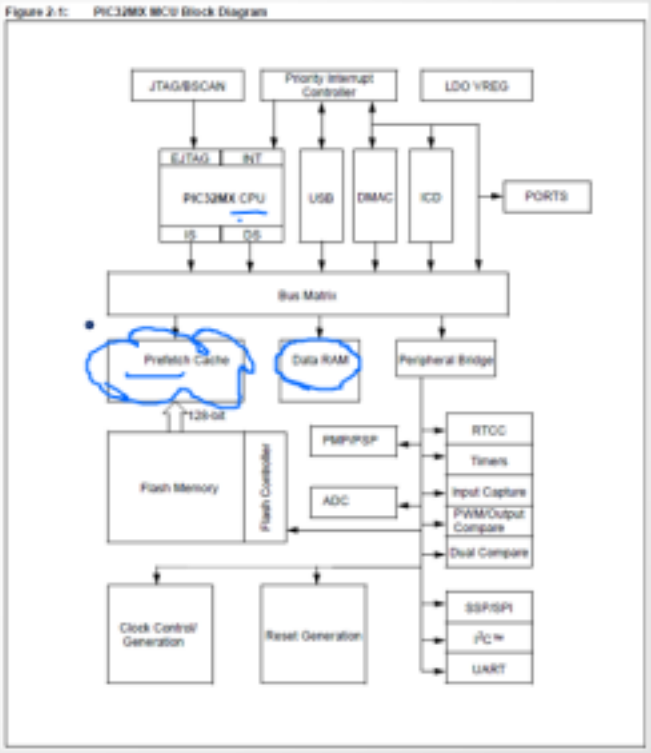
Architectural/Hardware Issues



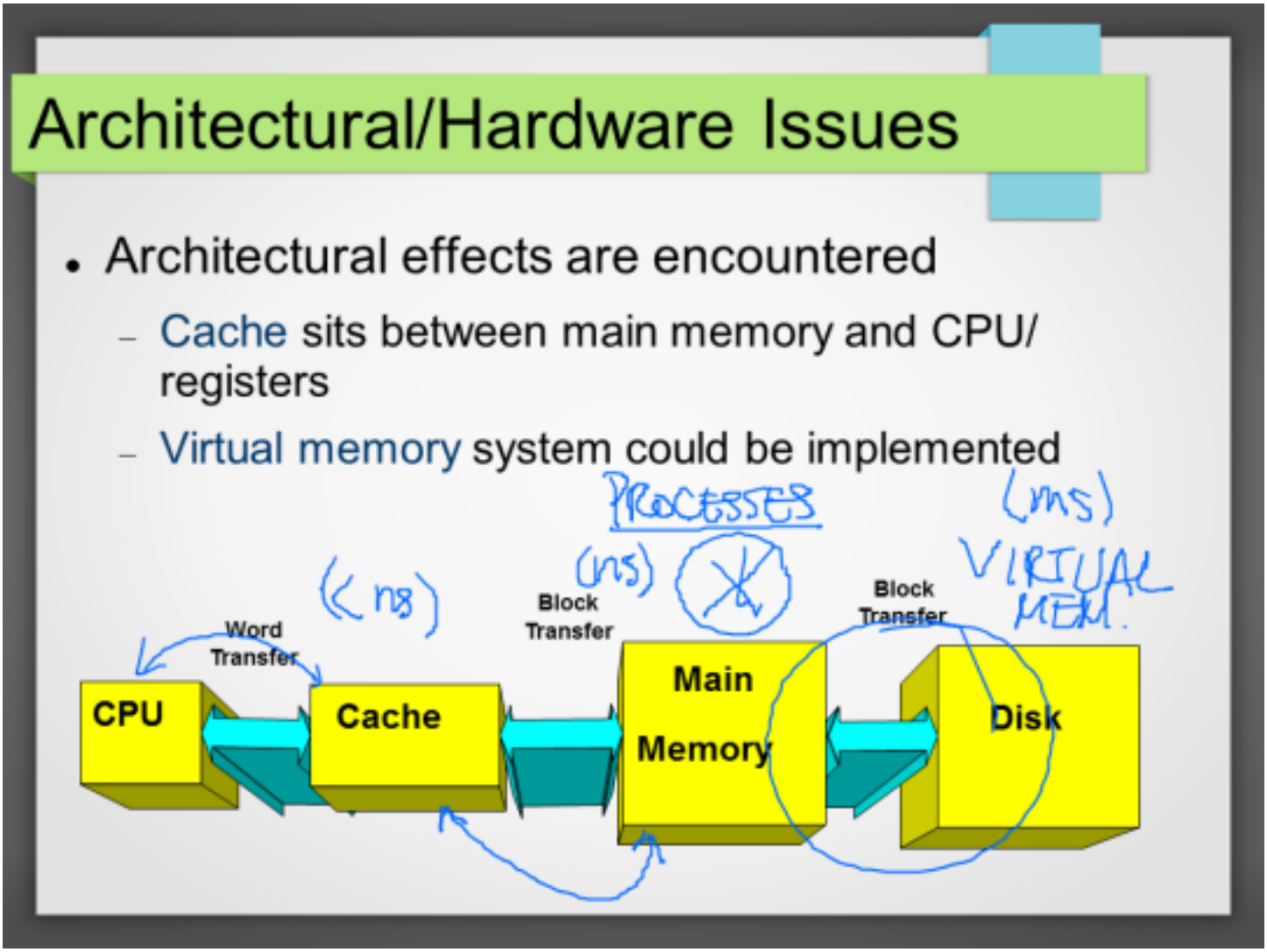
Architectural/Hardware Issues

Architectural/Hardware Issues

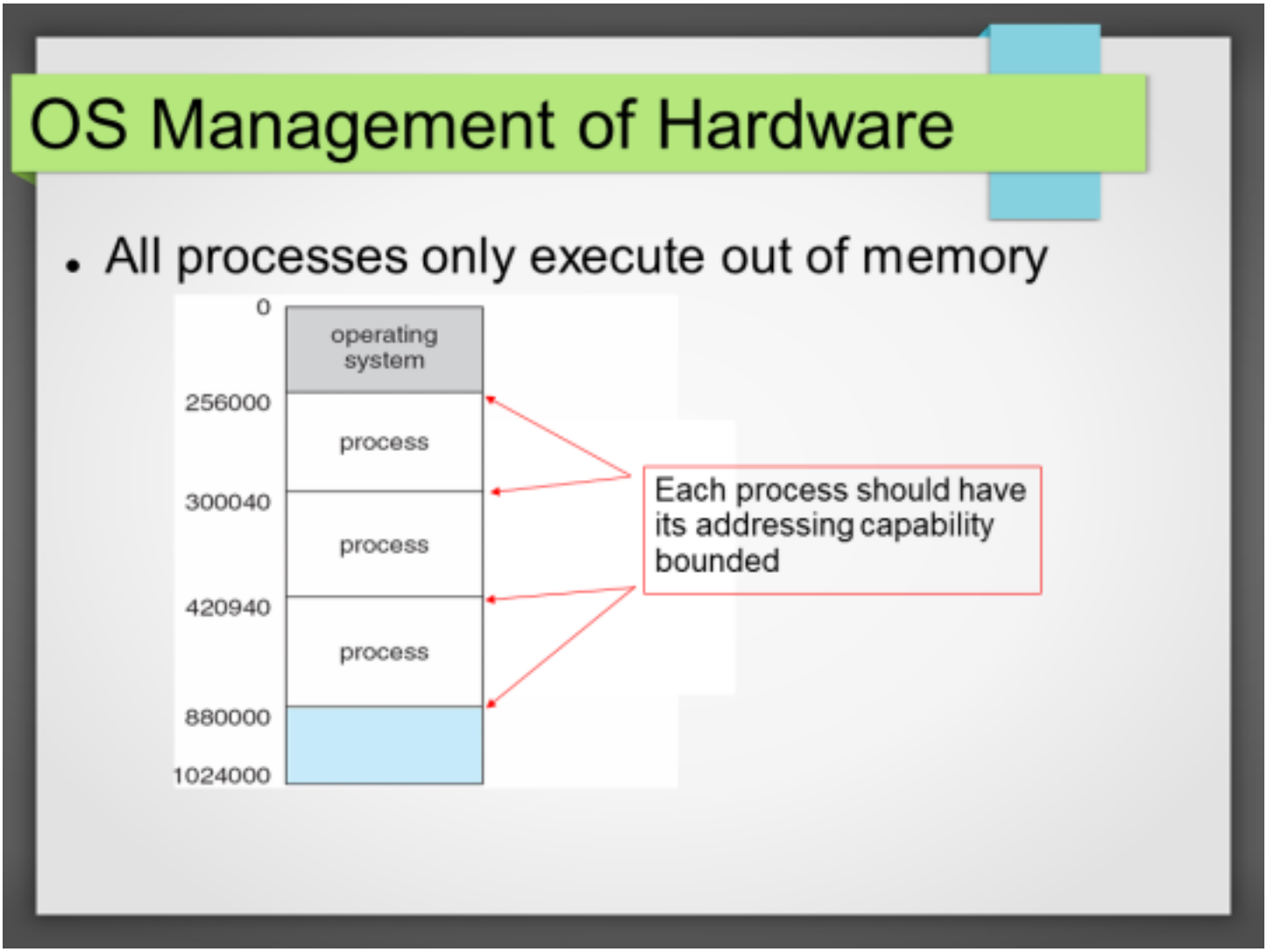
- Architectural effects are encountered
  - Cache sits between main memory and CPU/ registers
  - Virtual memory system could be implemented



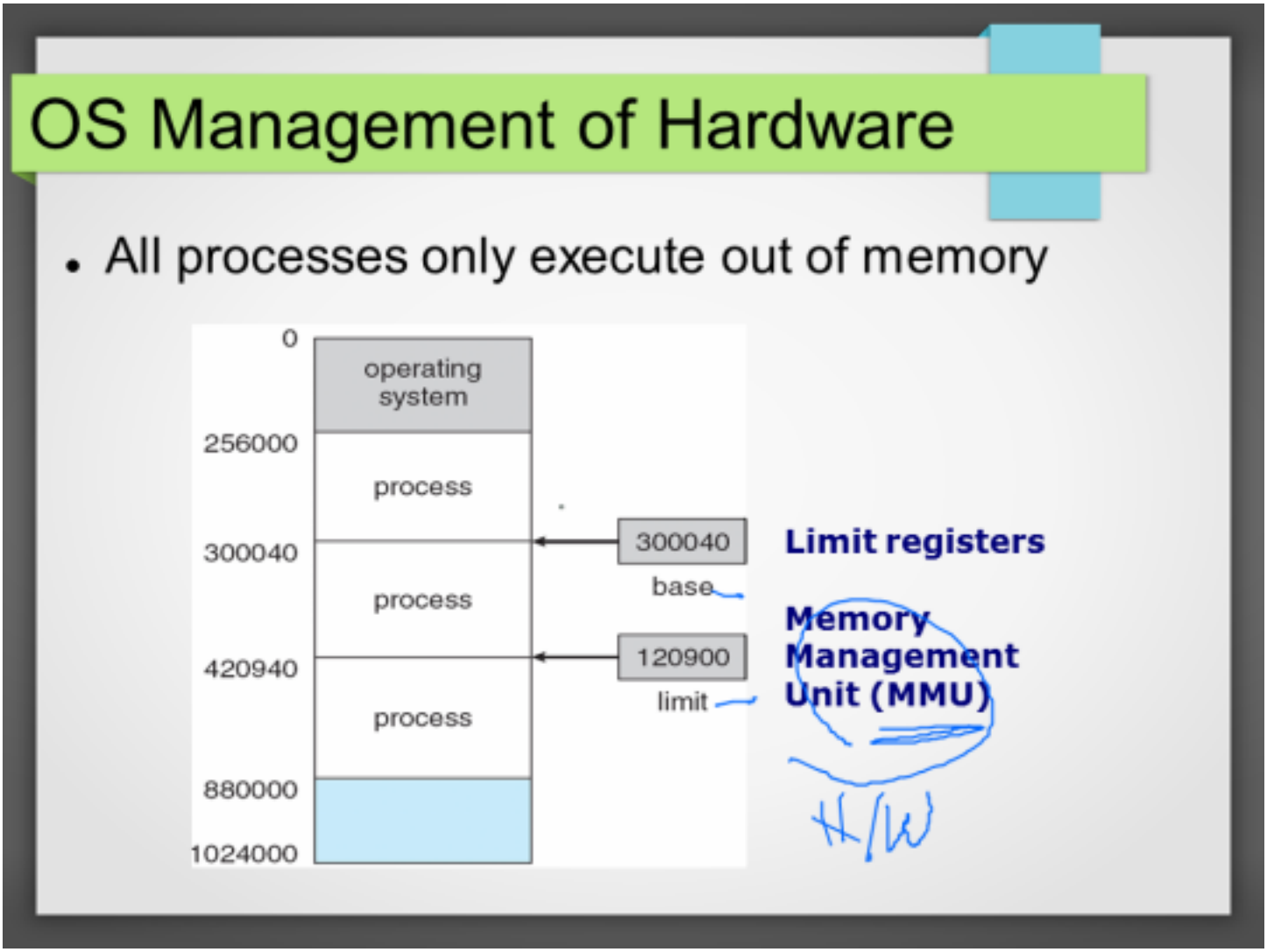
Architectural/Hardware Issues



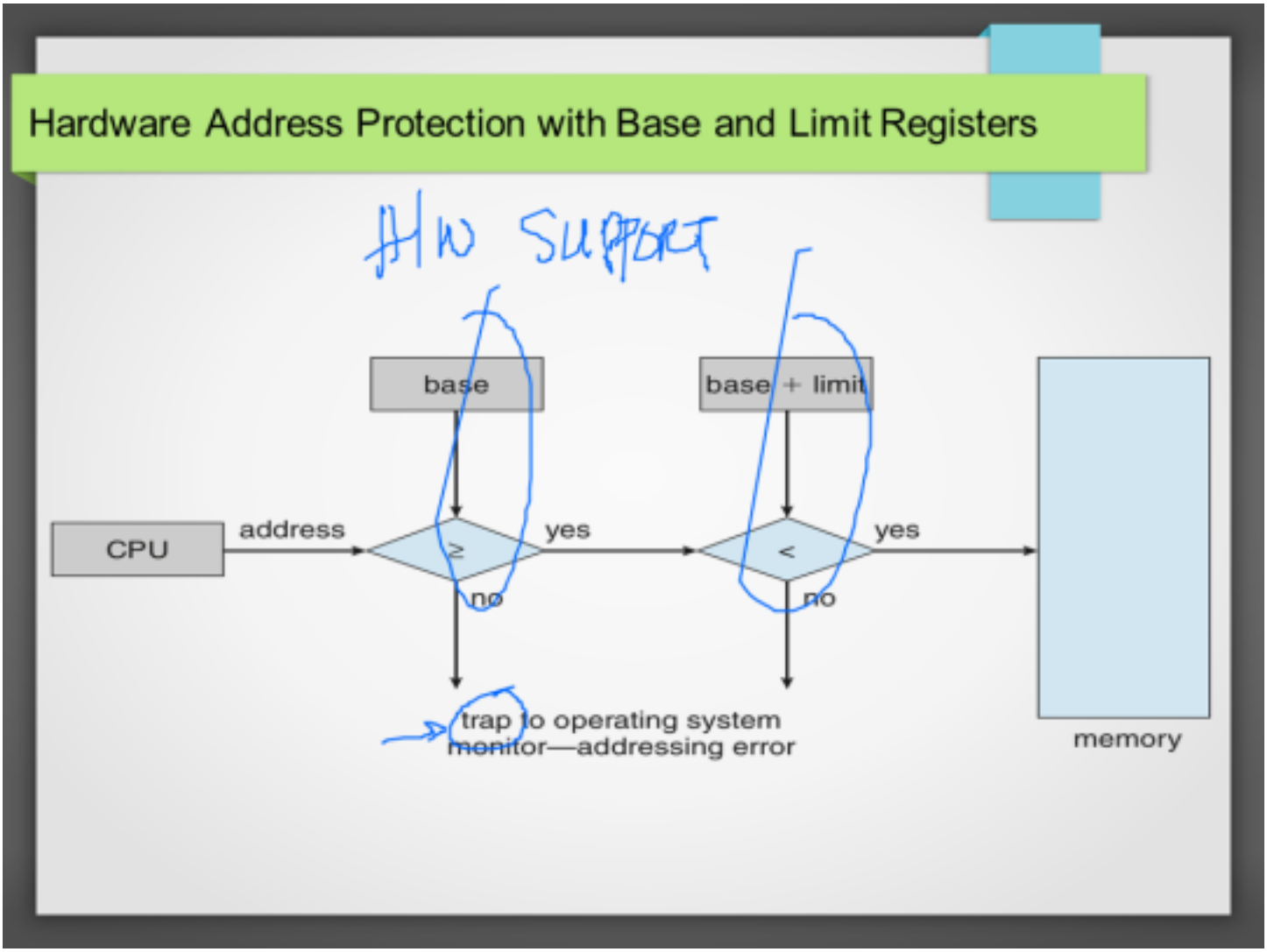
OS Management of Hardware



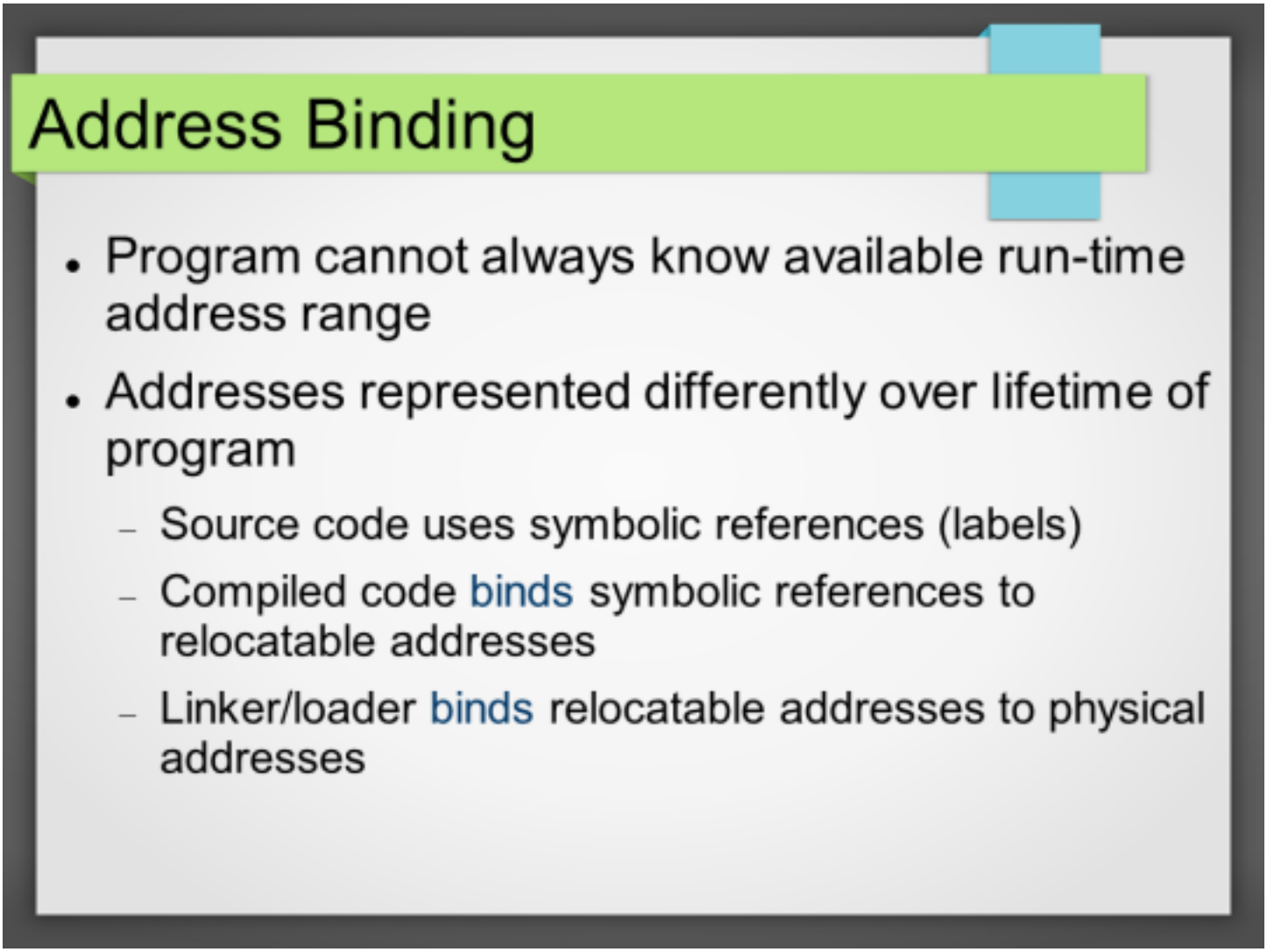
OS Management of Hardware



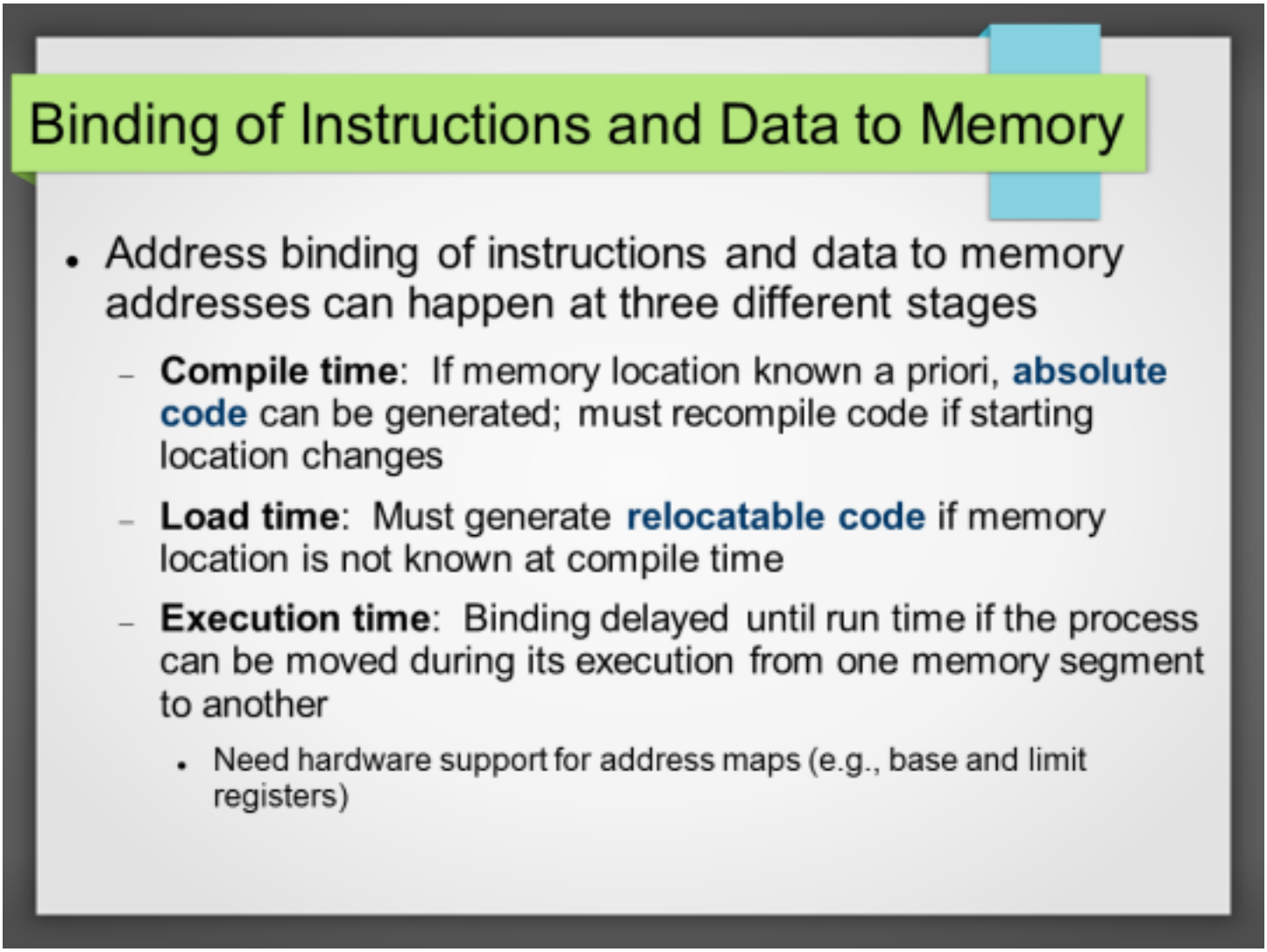
Hardware Address Protection with Base and Limit Registers



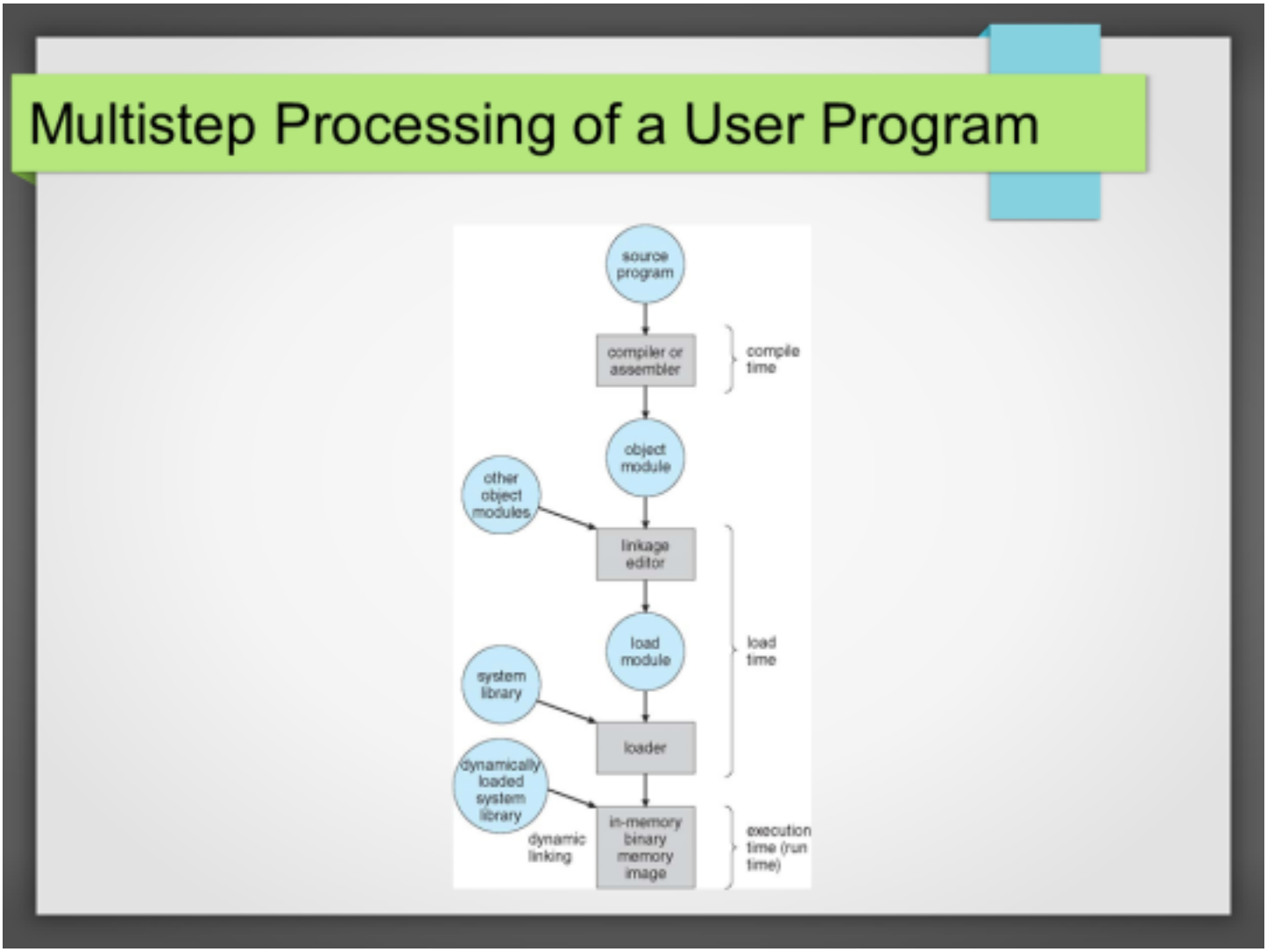
Address Binding



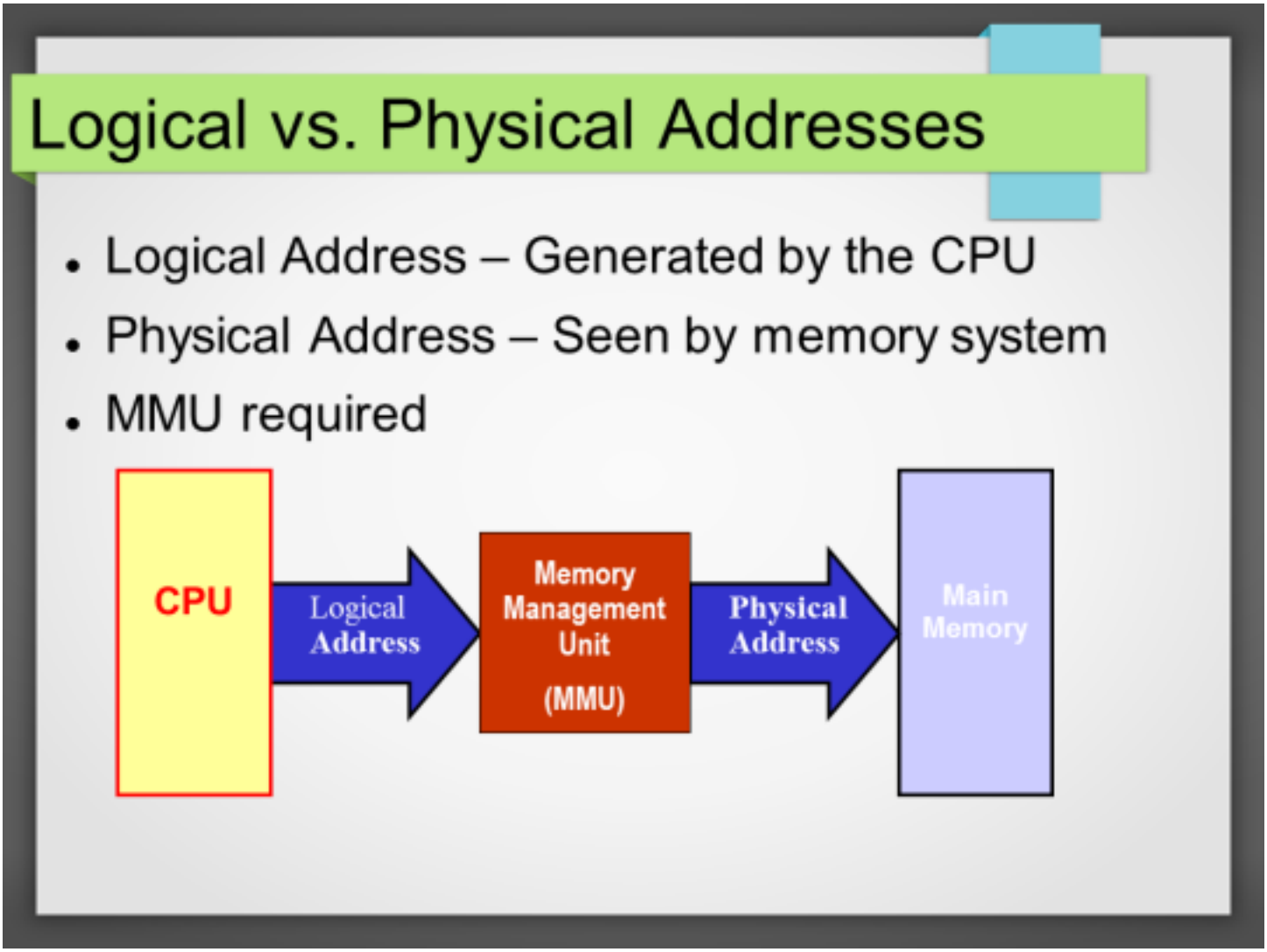
Binding of Instructions and Data to Memory



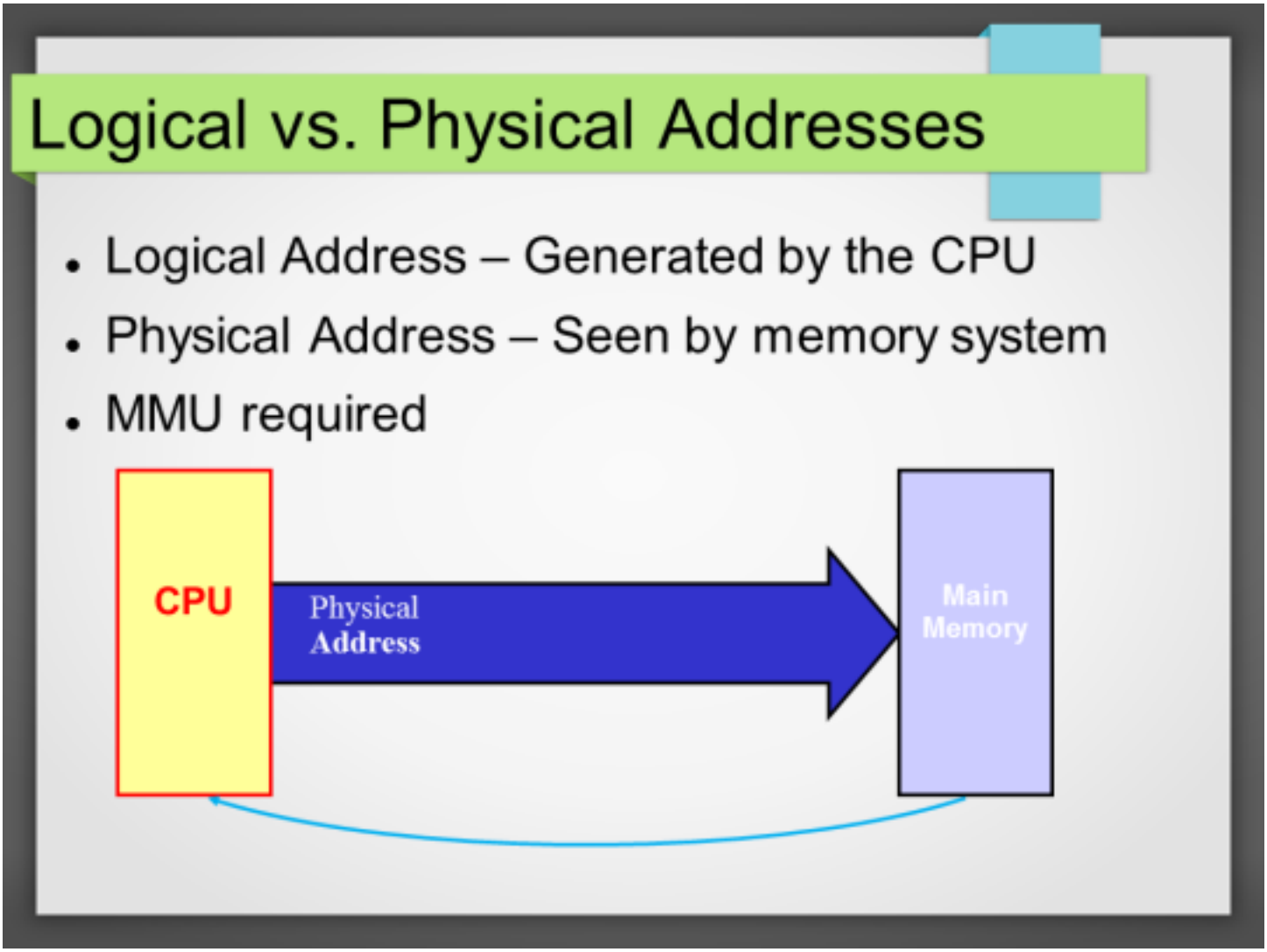
Multistep Processing of a User Program



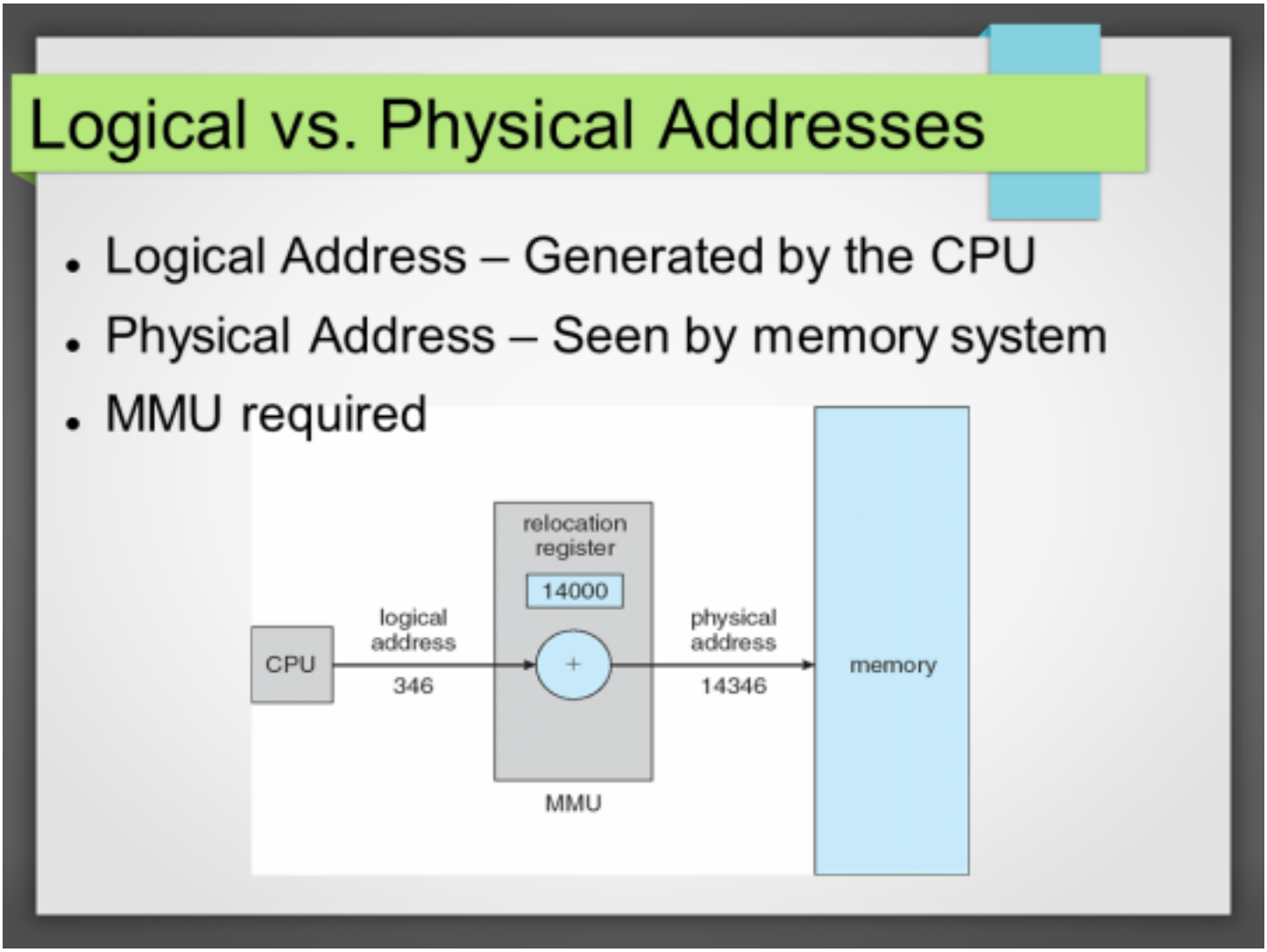
Logical vs. Physical Addresses



Logical vs. Physical Addresses



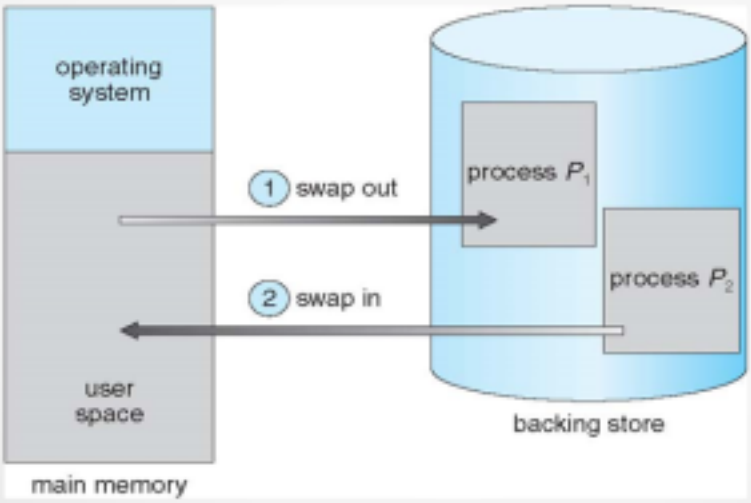
Logical vs. Physical Addresses



Swapping

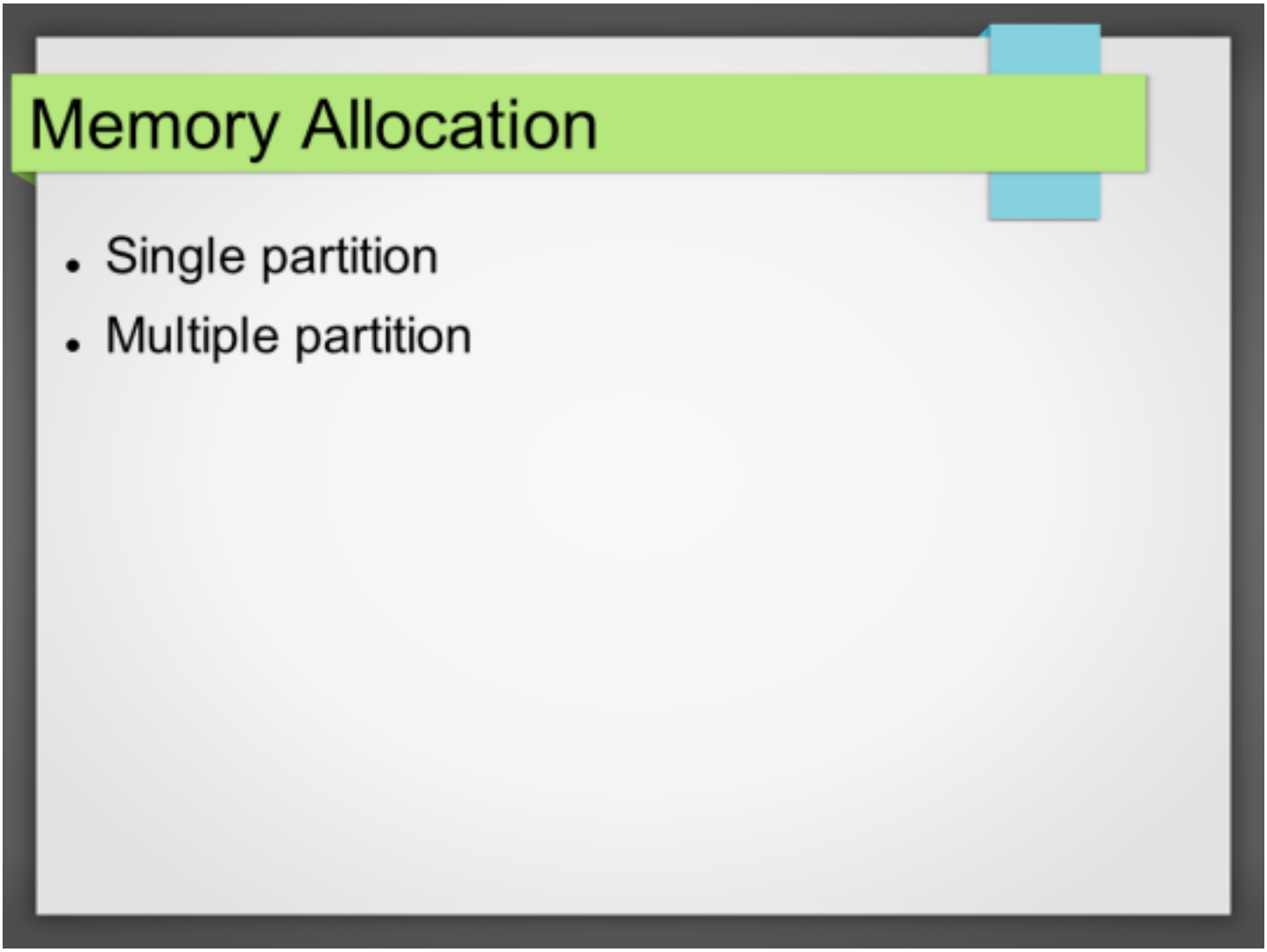
Swapping

- Memory requirements exceed physical memory

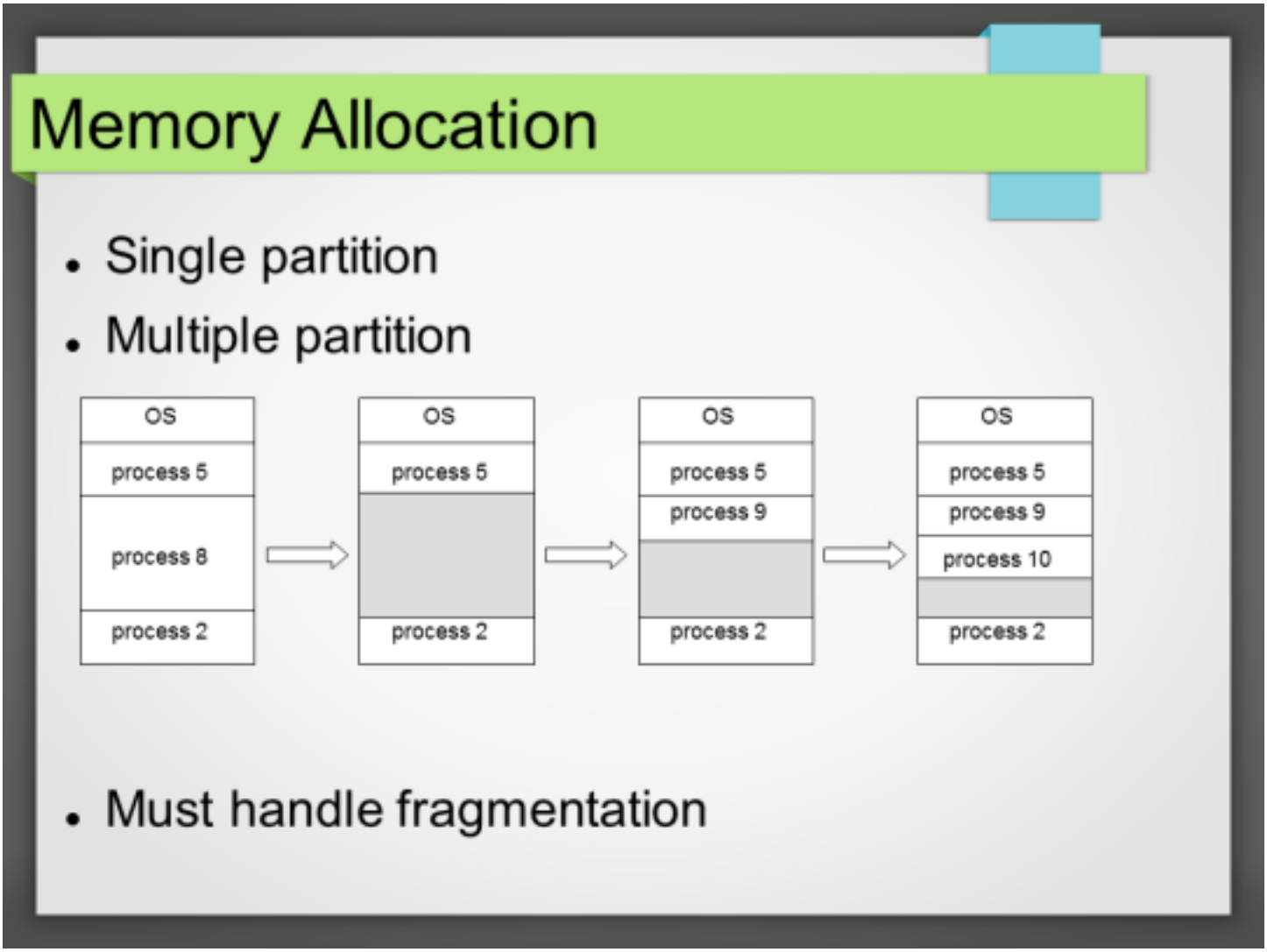


- Time to context switch is very high

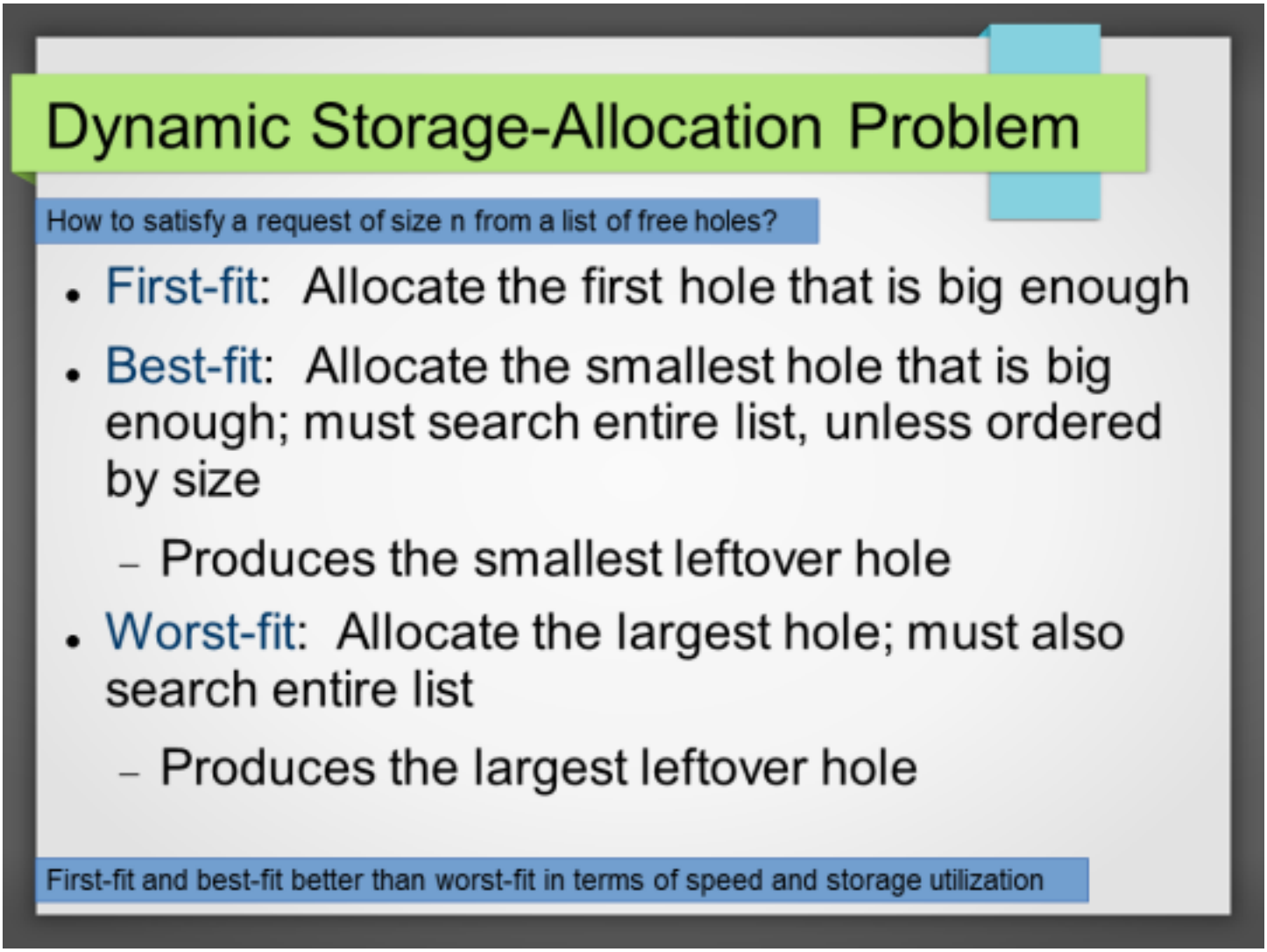
Memory Allocation



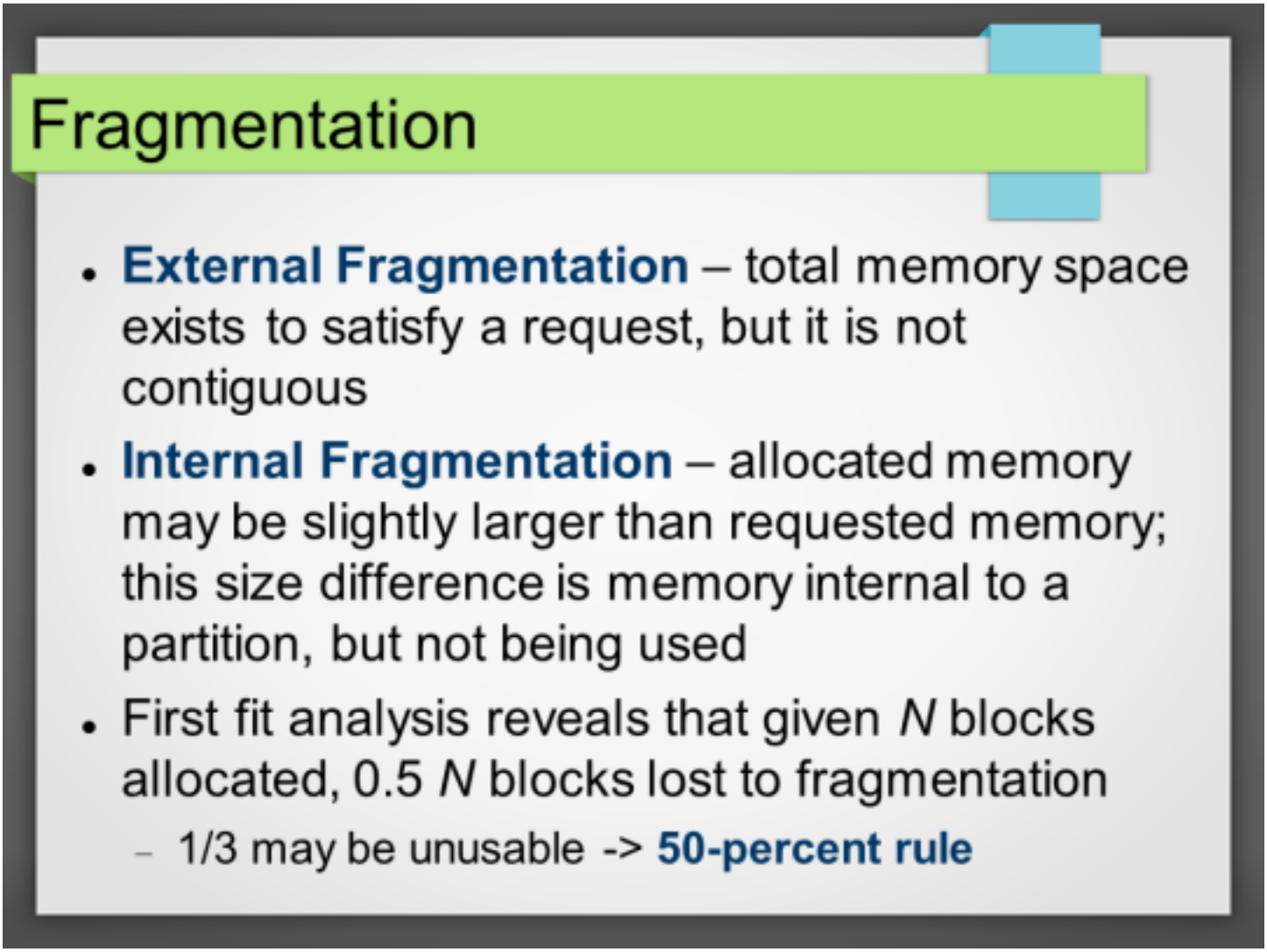
Memory Allocation



Dynamic Storage-Allocation Problem



Fragmentation



Fragmentation (Cont.)