Memory allocation

* Paged memory technique
  + A technique in which processes are divided into fixed-size page and stored in memory frames when loaded
* Frame
  + A fixed-sized portion of main memory that holds a process page
* Page
  + A fixed-size protion of a process that is stored into a memory frame
* <page, offset>
  + Page size 1024
  + 2566/1024 = 2 (page) R 518 (offset)
  + <2, 518>
  + Frame \* page size + offset  
    10 \* 1024 + 518  
    10240 + 518 = 10758 (physical address)
* An address generated by the CPU is commonly referred to as a logical address (virtual address), whereas an address seen by memory unit – that is the one loaded into memory –address register of the memory is commonly referred to as a physical address
* The runtime mapping to physical addresses is done by a hardware device called the memory management unti (MMU)
* Demand paging
* Page swap
* Virtual memory
* Thrashing
* Process management
  + New state – process is being created
  + Ready state – process has no barriers to its execution
  + Running state - currently being executed by the CPU
  + Waiting state- current waiting for resources (other than CPU )
  + Terminated state – computed execution and is no longer active
* Process control block
  + Data structure use by the OS to manage infnornation about a process
* Based register
  + size of the current job
  + has to be less than or equal to the bound
* Bound register
  + max size memory available to the job