CSC369 Week 6 Notes

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1 Virtual Memory & Page Replacement

- Recap

    - Solves **internal fragmentation** and **external fragmentation**
    - Stores and retrieves data from **secondary storage** for use in **main memory** [1]
        * Secondary storage → Hard Drive
        * Main memory → RAM
    - Is an important part of **virtual memory** management in modern OS [1]
    - Partitions memory into equal, fixed-size chunks
        * Are called **page frames** or **frames**
    - Divide processes' memory into chunks of the same size
        * These are called **pages**
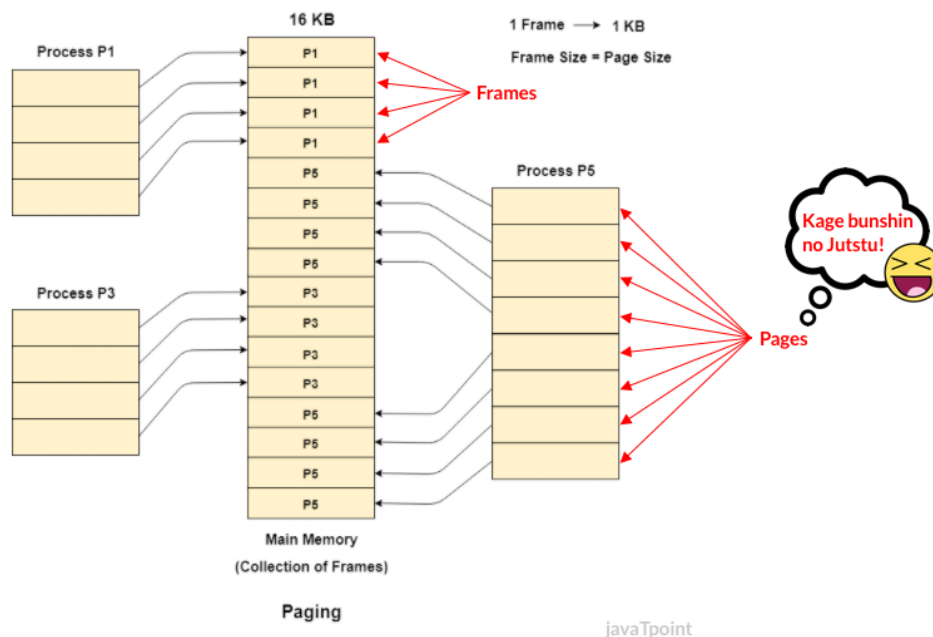
Paging

Refernces:

    1) Wikipedia: Paging, link

    2) JavaTPoint: Paging with Example, link

- Summary so far: Paging

  - Is the process in which we convert the entire process in to equal sized **pages** [1]

    1) GeeksForGeeks: Two Level Paging and Multi Level Paging in OS, link

- Two-Level Page Tables

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- Inverted Page Tables (Read the book)

- Page Faults

- Demand Paging

- Prepaging (aka Prefetching)

- Belady's Algorithm

- Page Table Entries(PTE)

- Not-Recently-Used (NRU)

- First-In First-Out (FIFO)

- Second-Chance

- Least Recently Used (LRU)

- Counting-based Replacement

- Page Fault Frequench(PFF)

- Thrashing