Debates/Discussions – Week 12

1. Explain the following terms: **valid/invalid bit, modify (dirty) bit, reference bit.**
2. Explain how **page fault** is handled by the OS.
3. Assume we use **demand paging** and **LRU page-replacement**. There are 8 pages and 4 physical frames. The initial free frame list is {3, 2, 0, 1}.
   - Process reads pages **0, 1, 2, 4** then writes pages **0, 3, 4, 2, 5**
   - The right shows the current page table and physical memory after the first read (**0**)
   - How many page-faults occur?
   - How many page-replacements occur?
     - How many disk transfers are needed for each page replacement?
   - What are the values of the final page table entries?
4. What is thrashing? Explain two methods to solve thrashing.