1.
    a. Paging is implemented with a paging table which is stored directly into registers with memory addresses for frames.
    b. Because TLB's search the entire table in parallel, and so if a page number exists its corresponding frame number will be found immediately.
    c. Illegal addresses are trapped using a bit which checks for validity which is attached to each entry in the page table.
    d. Segmentation is when the so-called "segments" (i.e stack, heap, and code) are given their own memory spaces with segment numbers. Paging allows for the processes memory to be disjointed and in different parts of the physical memory.
2.
    a. The difference between the two is that a demand-paging system will not swap a page into memory unless it will be needed.
    b. TLB's can be extended with the number of entries and with increased page size.