Classes

1. PageTable
    - Attributes
        - entries: an array of tuples. The index of the array corresponds to page number. The value is a tuple, representing (frame number, loaded bit)
            - Has fixed size of 256 according to spec
    - Methods (self-explanatory)
        - idx()
        - update_entry()

2. TLB
    - Attributes
        - entries: an array of tuples representing (page number, frame number)
            - Has fixed size of 16 according to spec
        - fifoQueue: a fifo queue to keep track of elements put in and taken out of entries in fifo order
    - Methods (self-explanatory)
        - idx()
        - add_entry()
        - remove_entry()

3. PhysicalMemory
    - Attributes
        - frames: array of tuples (content, pageNumber)
        - numFrames
        - pageOrderQueue (used in FIFO PRA; load_page_fifo())
        - lruCache (used in LRU PRA; load_page_lru())
    - Important methods (includes PRU methods)
        - find_free()
        - load_page_fifo()
        - load_page_lru()
        - load_page_opt()
        - record_access()
            - Relevant for LRU

4. BackingStore
    - Attributes
        - filePath: string with relative path to file
        - data: the data read in from the file
    - Methods (self-explanatory)
        - load()
        - get_page()

Main program flow

- Parse inputs
- Read in reference sequence
- Init MMU structures (Classes above)
- For each reference in the sequence
    - Check TLB
    - Check page table
    - Load page if necessary (also use a PRA if necessary)
    - Print required info

Some helper functions

1. get_reference_seq()
    - Reads and returns array from input file assumed to have list of addresses
2. split_virtual()
    - Splits the virtual address into a page number and frame offset. Works assuming the first 8 bits are the page number and the final 8 bits are the frame offset (according to spec)
3. format_byte_arr()
    - Formats the data of a page to be printed as expected