Demand Paging

- 1. **True or False:** Adding more RAM reduces the number of page faults that occur in a system.
- 2. **True or False:** Compulsory misses in a cache can be reduced with prefetching.
- 3. **True or False:** The Clock Algorithm requires hardware support for a "use" bit in the PTE.
- 4. **True or False:** The Clock Algorithm swaps the oldest page to disk on a page fault.
- 5. **True or False:** LRU swaps the oldest to disk on a page fault (age is defined by amount of time in RAM).
- 6. **True or False:** One advantage of software TLB is that the same hardware platform can support both forward and inverse page tables.

Fill in the following tables. Each column represents a time-step. If there is no page fault during that time-step, leave the column blank. For each policy:

Briefly describe how it works. List a disadvantage. Compute how many page faults there are.

FIFO Policy:

| | The Tolley. | | | | | | | | | | | | | | |
|-----|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Р | Α | В | С | D | D | Е | Е | С | В | Α | D | E | С | В | Α |
| hys | | | | | | | | | | | | | | | |
| 1 | Α | | | | | | | | | | | | | | |
| 2 | | В | | | | | | | | | | | | | |
| 3 | | | С | | | | | | | | | | | | |

MIN Policy:

| P hys | Α | В | С | D | D | E | E | С | В | Α | D | E | С | В | Α |
|----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Α | | | | | | | | | | | | | | |
| 2 | | В | | | | | | | | | | | | | |
| 3 | | | С | | | | | | | | | | | | |

LRU Policy:

| P hys | Α | В | С | D | D | E | E | С | В | Α | D | E | С | В | А |
|----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Α | | | | | | | | | | | | | | |
| 2 | | В | | | | | | | | | | | | | |
| 3 | | | С | | | | | | | | | | | | |

Clock Policy:

| P hys | А | U | В | D | В | Α | E | F | В | F | Α | G | E | F | Α |
|----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Α | | | | | | | | | | | | | | |
| 2 | | В | | | | | | | | | | | | | |
| 3 | | | С | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | |