COMP2240 Assignment 3

Assumptions

- When a process page faults, other processes may execute an instruction in the same clock tick.
- When a process is finished in variable allocation, its frames are considered free to be used by another process that requires a page.
- Fixed allocation will leave empty frames if the processes cannot divide evenly into the maximum allowed frames

Comparisons

LRU vs Clock

For fixed allocation, both LRU and Clock obtained similar results which differed only in a small subset of processes that I tested with clock performing better in these cases.

Variable vs Fixed

Variable allocation tended to perform better then there were processes with more distinct instructions than if they had a lot of repeated instructions. Fixed performed well in situations where instructions were not distinct and the total distinct frames was closer to the number of available frames to that process.

Observations

I noted that variable allocation affected the overall performance the most, regardless of the page replacement algorithm.

As far as implementation goes, LRU seemed to be the least overhead when compared to clock, having a shorter potential run-time.