Working Set Model

A working set of a process is used to model the dynamic locality of its memory usage

WS(t,w) = {pages P | P was referenced in the time interval (t, t-w)}
t – time, w – working set window (measured in page refs)

➡ A page is in the working set (WS) only if it was referenced in the last w references

Working Set Size

The working set size is the # of unique pages in the working set
i.e the number of pages referenced in the interval (t, t-w)

The working set size changes with program locality

- During periods of poor locality, you reference more pages
- Within that period of time, the working set size is larger

Intuitively, want the working set to be the set of pages a process needs in memory to prevent heavy faulting

- Each process has a parameter w that determines a working set with few faults
- Don't run a process unless working set is in memory