Page Replacement Algorithms
- Passed around computer looking at some XP page replacement.

Q: High use vs. low use memory

NUMA

random, FIFO ? Paging algorithms

Stack Algorithms ... Inclusive -
Given a trace:
\[ M(s,t) \] = memory contents at time \( t \) given \( s \) pages
\[ M(s_1, t) \leq M(s_2, t) \text{ if } s_1 < s_2 \]

FIFO with a second chance:
If we set the access bit, we don't evict the tail but rather move it back to the head.

While worst case is bad, amortized cost is quite good.
FIFO - If you don't keep an A bit
Clock with 'three strike rule': keep
three accessor bit and shift left on each
cycle.

- Working Set vs. Global
- Cyclic patterns
- Garbage Collection

Miss ratio curve:

Use page fault
rate as a
proxy for determining
memory allocation.
If you have n pages, keep track of $2^n$. Memory

Repeated Access

One Time Read Through