**Mindmap:**

NVM → Slow write & Bad endurance → Cell wear

Cell wear → Intra rank
Cell wear → Inter rank

Intra rank → Intra-set: Some ways more
Intra rank → Inter-set: Some sets more

↓↓
Formula

**SNWR**

Divide m windows

First I intervals is usual

Select a window in round robin fashion

Make WRW (Write Restricted Window)

Problem → Doesn't consider count. Some window have more write than others

Read hit → Visual

Write hit inside window
→ Invalid Yes outside → Write back there & invalidate the inside
→ Invalid No outside → Evict LRU outside. Insert there. Invalidate the inside

Write hit outside window → Visual

LLC Miss → Fetch & write outside.

**DWWR** → Use counters for each window → Make max count window as WRW → Reset count for it

Problem → Some ways inside light window might have more write than that of heavy window

**DWAWR** → Use counters for each window → Top k ways become WRW → Reset count for it