

Blocking vs. Non-wait-free vs. Wait Free

Blocking

Non-wait-free

Wait-free

May context switch for example due to a lock, system call etc.

Execution time is unbounded

Execution time is bounded*

Caches likely to be invalidated

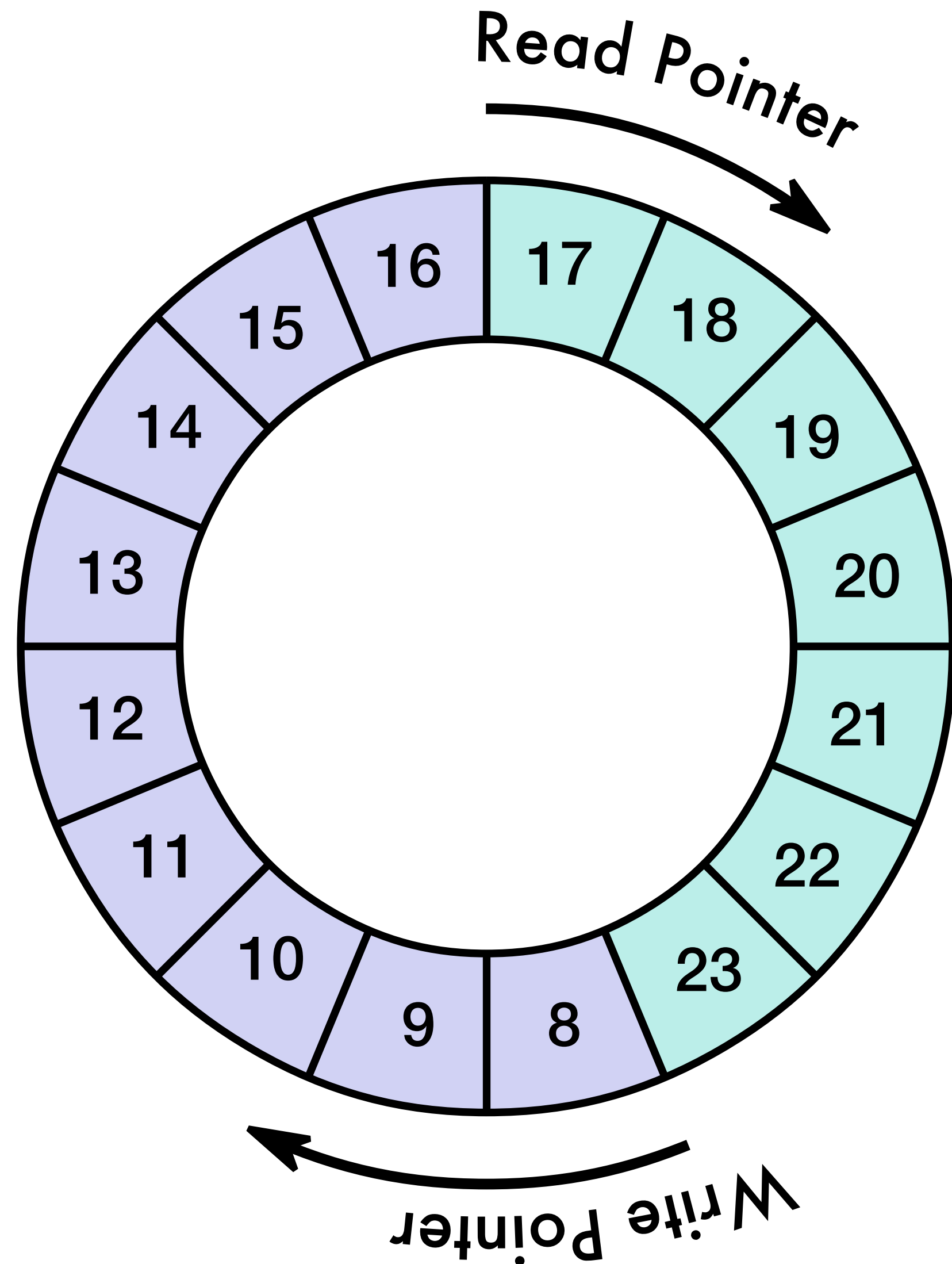
Must contain a loop (which is unbounded)

No unbounded loops

Memory may be swapped

Blocking operations are never wait-free (but not vice versa)

The humble FIFO



- Realtime code use ring buffers to implement a FIFO
- Fixed capacity: no allocations (i.e. realtime safe)
- Various flavours