

# Synchronisation

- We are trying to synchronise our processes in order to safeguard the integrity of shared data.
  - Classic synchronisation problem is that of Producer-Consumer
    - Producer process creates items of data and puts them in a buffer
    - Consumer process processes the items of data produced by the producer
    - The buffer can be bounded or unbounded
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# Semaphores

- Semaphores are a tool for handling the exclusion problem
- A semaphore has:
  - A data item
  - Two indivisible operations
    - $P(S)$  for waiting for the semaphore
    - $V(S)$  for releasing the semaphore