



Queues

Part 02

Queues

- First in First Out (FIFO)
 - Processing Data in Order
 - Time
 - “Waiting in a Line”
- Queue Operations
 - Enqueue: Add new element to the end of the queue
 - Dequeue: Remove the first element from the queue
 - Peek: Observe but not remove the first element in a queue
 - Print: Print all elements in a Queue

Queue



Example







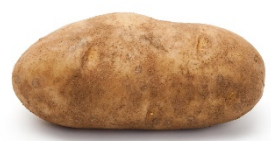
Secret Time:



Secret Time:
Current Time:



Secret Time: 15
Current Time: 15



Secret Time: 15
Current Time: 15

5



Secret Time: 15
Current Time: 15

5



Secret Time: 15
Current Time: 10



Secret Time: 15
Current Time: 10

3



Secret Time: 15
Current Time: 7

4



Secret Time: 15
Current Time: 3

2



Secret Time: 15
Current Time: 1

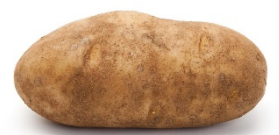
5



Secret Time: 15
Current Time: -4



Secret Time: 15
Current Time: -4



Secret Time: 15
Current Time: -4



Secret Time:23
Current Time:23

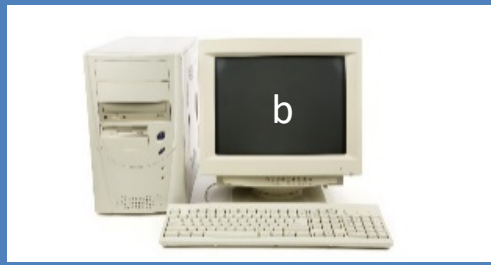


Secret Time:23
Current Time:23





Queue



Head

Tail



Queue



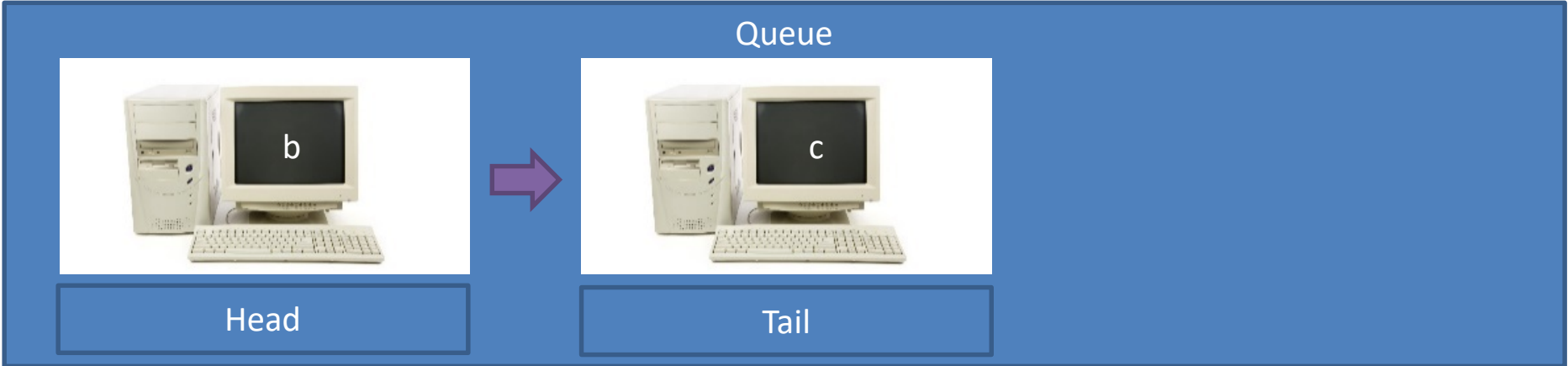
Head

Tail



Secret Time: 15

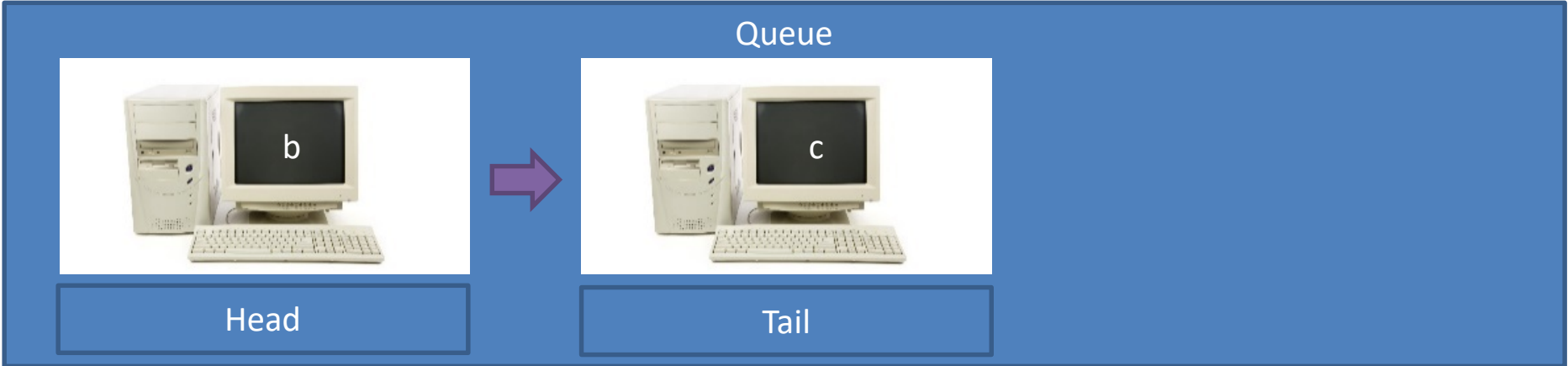
Current Time: 15



Current Player



Secret Time: 15
Current Time: 15



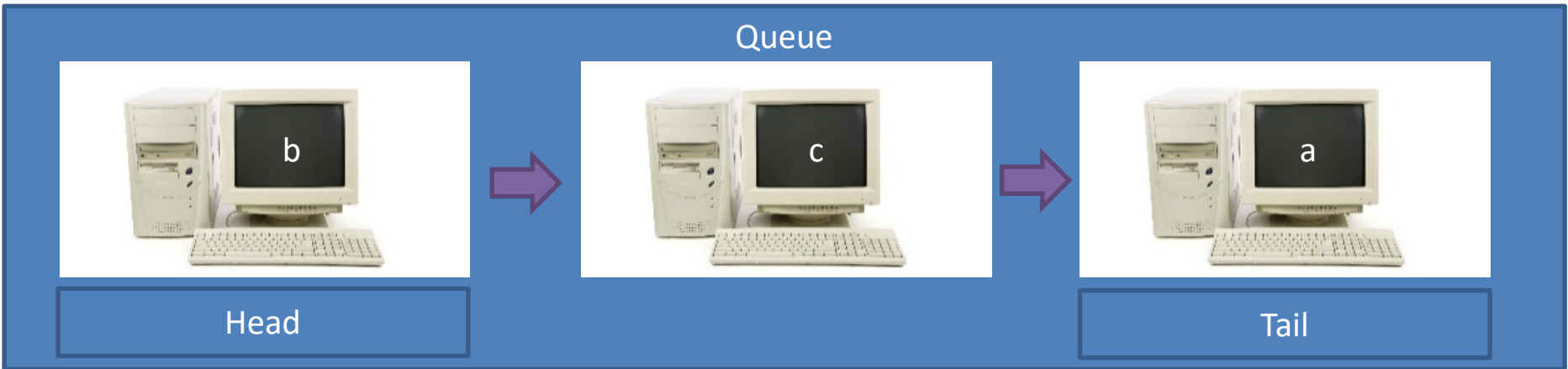
5



Current Player

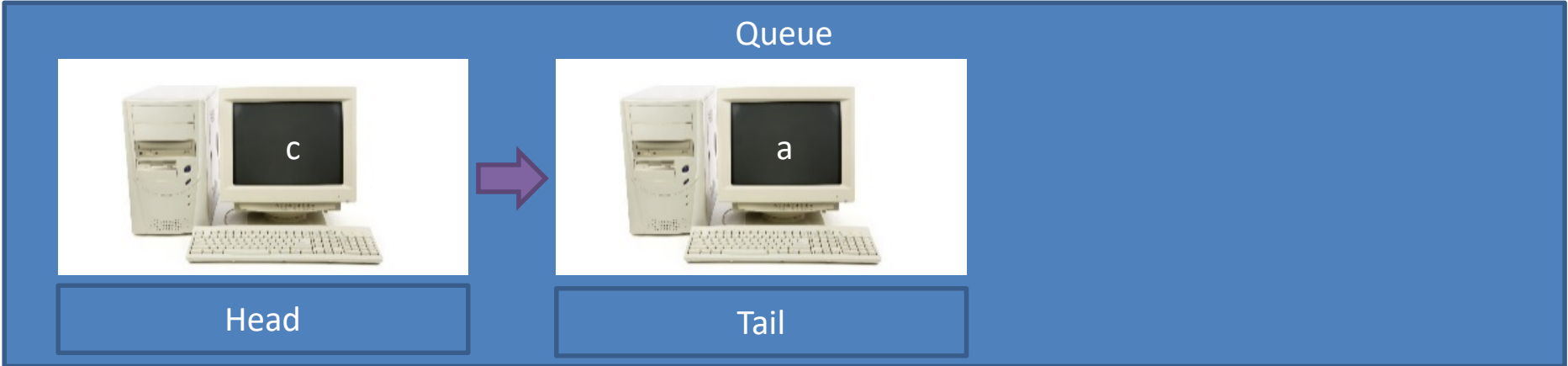


Secret Time: 15
Current Time: 10



Secret Time: 15
Current Time: 10

Current Player

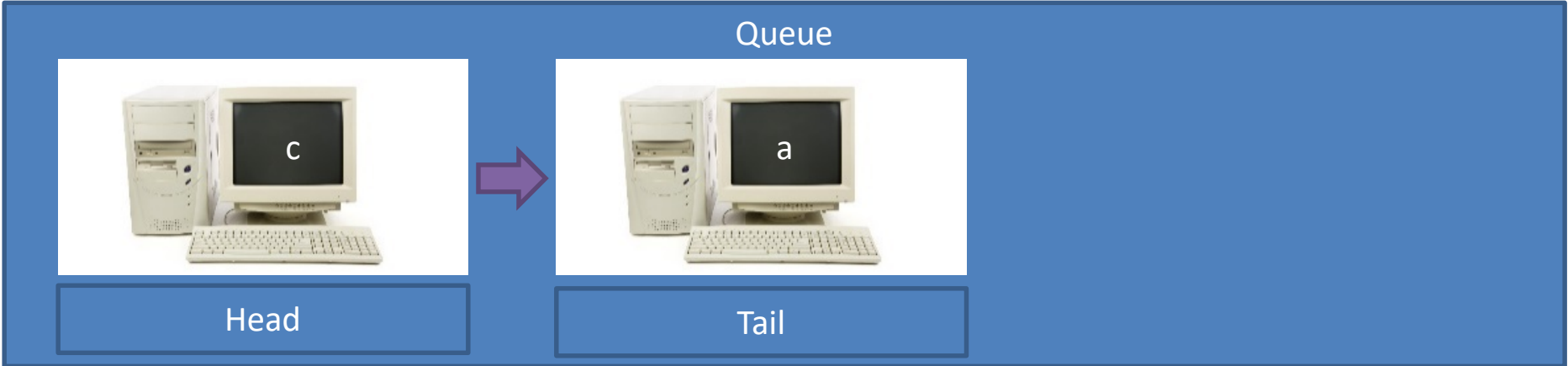


Current Player



Secret Time: 15
Current Time: 10

A Few Turns Later



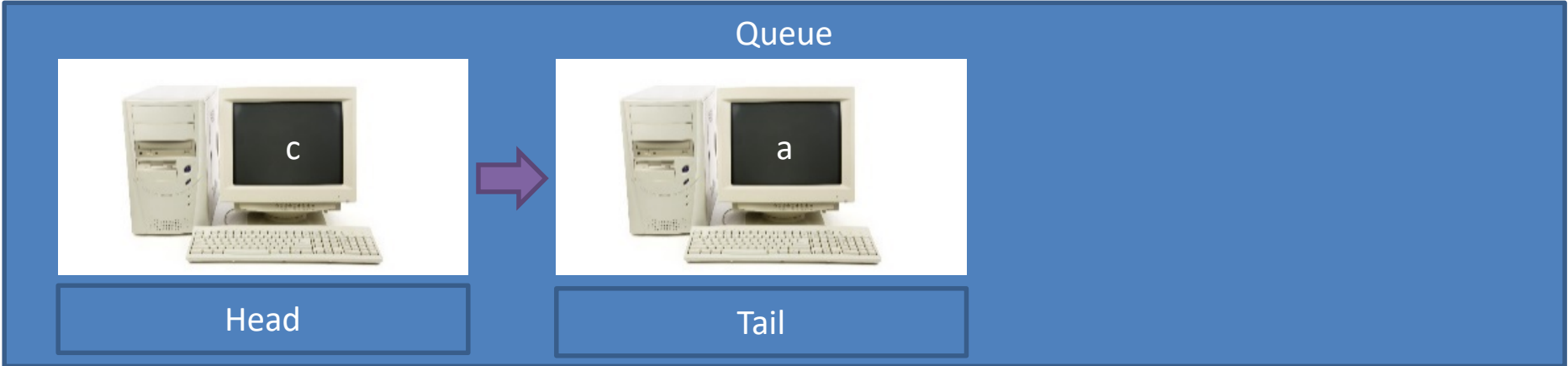
5



Current Player



Secret Time: 15
Current Time: -4



Secret Time: 15
Current Time: -4

Current Player