











- the object will be in some other sto

- when the method returns, © 2003 Herlihy and Shavit

Pre and PostConditions for Dequeue

- Precondition:
- Queue is non-empty
- Postcondition:
 - Returns first item in queue
- Postcondition:
 Removes first item in queue
- You got a problem with that?

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- -q. enq(x)
- Response
 - result or exception
 - -q. enq(x) returns voi d
 - -q. deq() returns x
 - -q.deq() throws empty

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More Reasoning	Strategy
<pre>public class LockFreeC Linearization order is int head = 0, tail = order head and tail item[QSIZE] items; fields modified public void enq(item x) { while (tail-head == QSIZE); // busy-wait items[tail % QSIZE] = k; tail++; } public item deq() { while (tail == head); // busy-wait item item = items[head % QSIZE]; head++; return item; } </pre>	 Identify one atomic step where method "happens" Critical section Machine instruction Doesn't always work In theory Usually works in practice
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Fact Any partial order Never required to pause method call Locality Can verify linearizability per object Can compose correctly Granularity matters