

Queue DS

Initially:

0	1	2	...

$head(h) = tail(t) = -1$

• enqueue(1)

0	1	2
1		

$head(h) = tail(t) = 0$

• enqueue(3)

0	1	2
1	3	

• enqueue(4), enqueue(6)

0	1	2	3	4
1	3	4	6	

$h \quad \quad \quad t$

• enqueue()

0	1	2	3
1	3	4	6

0	1	2	3	4
1	3	4	6	1

• enqueue()

0	1	2	3
1	3	4	6

• dequeue()

0	1	2	3
1	3	4	6

$h = t = 3$
• dequeue()

0	1	2	3
1	3	4	6

$h = t = -1$

• enqueue(7), enqueue(8), enqueue(9)

0	1	2	3
7	8	9	6

• peek()

return $a[h]$;

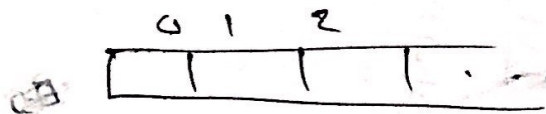
// head element, $a[0] = 7$

Queue

Variables: head, tail.

operations : ~~enqueue~~, dequeue, peek(),
enqueue(elem)

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Initially: $\text{head} = \text{tail} = -1$

voie en queue (idem)

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- if (head == tail)

head = tail == 0;

$$q[\text{tail}] = \text{elem}$$

else

$$a[+ + tail] = elem.$$

3

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void dequeue()
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4

if (head == tail)

head & tail = -1

else tail = tail - 1;

3

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int peek()
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4

return a[prev],

3