



MAKE
SCHOOL

STACKS AND QUEUES

Stacks on stacks on queues

QUEUE

Operations

enqueue - add an object to the back

dequeue - remove and return the object from the front

front - look at the object at the front

FIFO - first in, first out

Dequeue

Enqueue



Front

Back

QUEUE

Space $O(n)$

Enqueue $O(1)$

Dequeue $O(1)$

Front $O(1)$

STACK

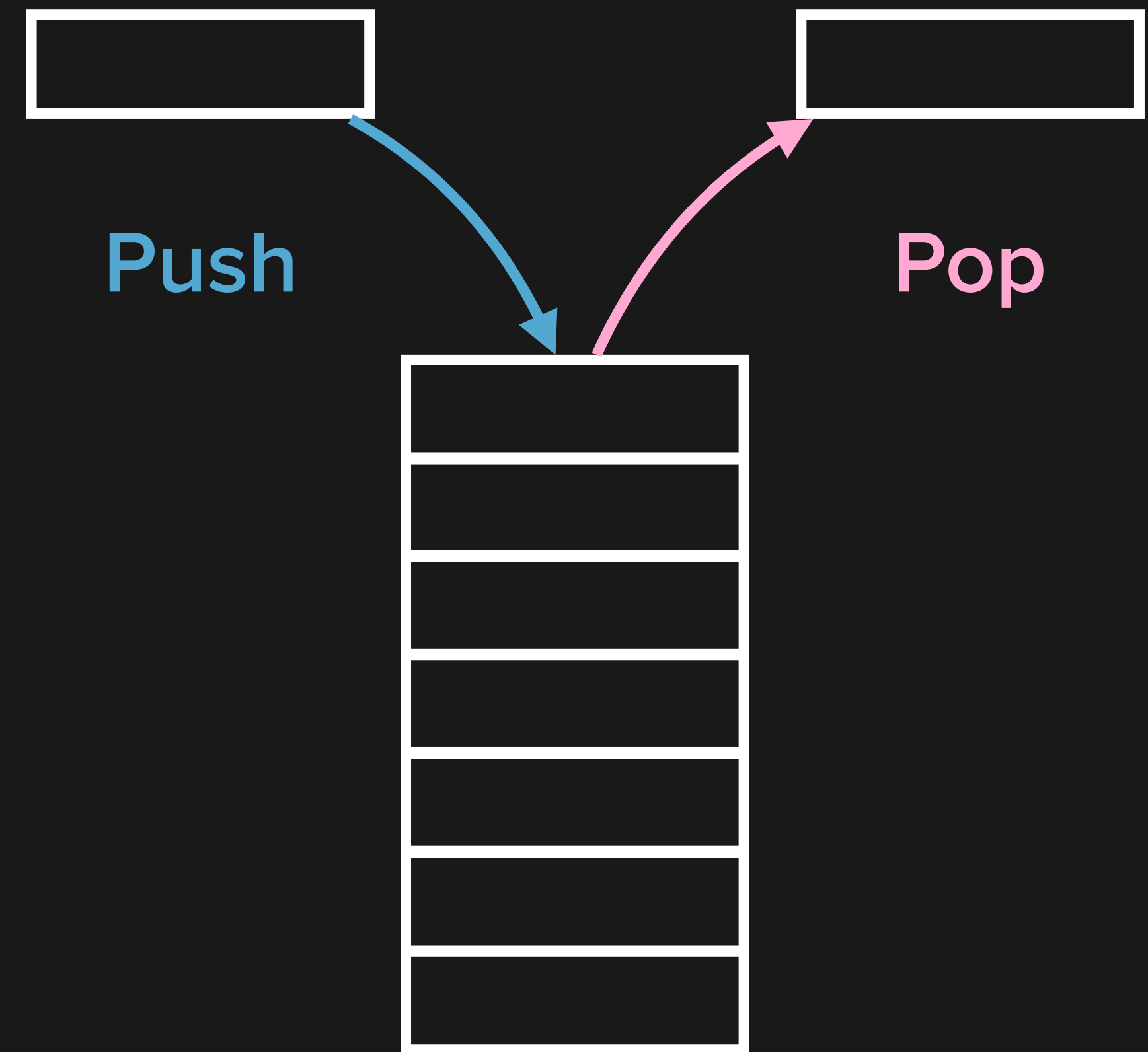
Operations

push - add an object to the top

pop - remove and return the object on the top

peek - return the object on the top

LIFO - last in, first out



STACK

Space	$O(n)$
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Push	$O(1)$
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Pop	$O(1)$
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Peek	$O(1)$
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STACK & QUEUE

Optional methods

isEmpty - returns bool

isFull - returns bool

size - returns number of objects stored

PYTHON

Stacks with list

<https://docs.python.org/3/tutorial/datastructures.html#using-lists-as-stacks>

Queues with list?

<https://docs.python.org/3/tutorial/datastructures.html#using-lists-as-queues>



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