

THE QUEUE

THE QUEUE

A QUEUE IS A DATA STRUCTURE WHERE YOU ADD ELEMENTS TO THE END OF THE QUEUE AND REMOVE ELEMENTS FROM THE BEGINNING OF THE QUEUE

FIFO

FIRST IN FIRST OUT

LIFO

LAST IN LAST OUT

THE OPERATIONS ON A QUEUE ARE PERFORMED AT TWO ENDS, REMOVAL IS AT THE BEGINNING AND ADDITION IS AT THE END OF THE QUEUE

THE QUEUE

ADDING A NEW ELEMENT TO THE END OF THE QUEUE IS CALLED

ENQUEUE

ENQUEUE AN ELEMENT FROM THE QUEUE

REMOVING AN ELEMENT FROM THE BEGINNING OF A QUEUE IS CALLED

DEQUEUE

DEQUEUE AN ELEMENT FROM THE QUEUE

THE QUEUE

SIMILAR TO A STACK YOU MIGHT JUST WANT TO SEE WHAT THE FIRST ELEMENT IN A QUEUE IS WITHOUT REMOVING IT

PEEK

PEEK AT THE FIRST ELEMENT IN A QUEUE

THE QUEUE IMPLEMENTATION IN JAVA HAS ANOTHER USEFUL METHOD

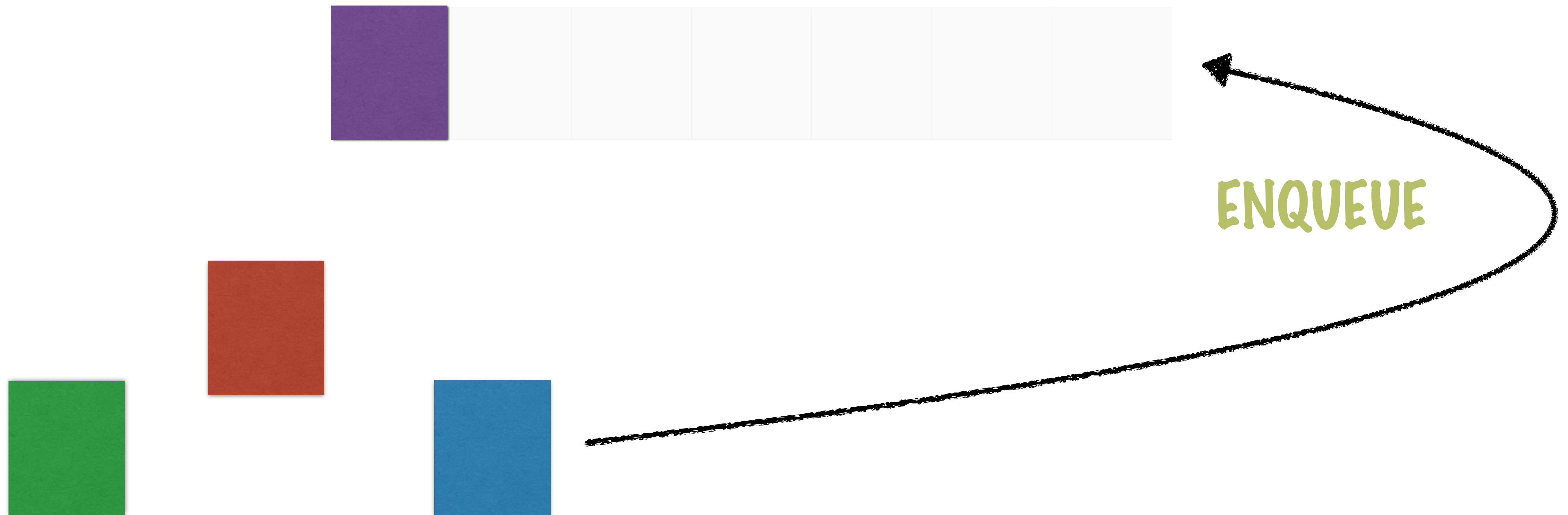
OFFER

ADDS TO A QUEUE IF SPACE IS AVAILABLE

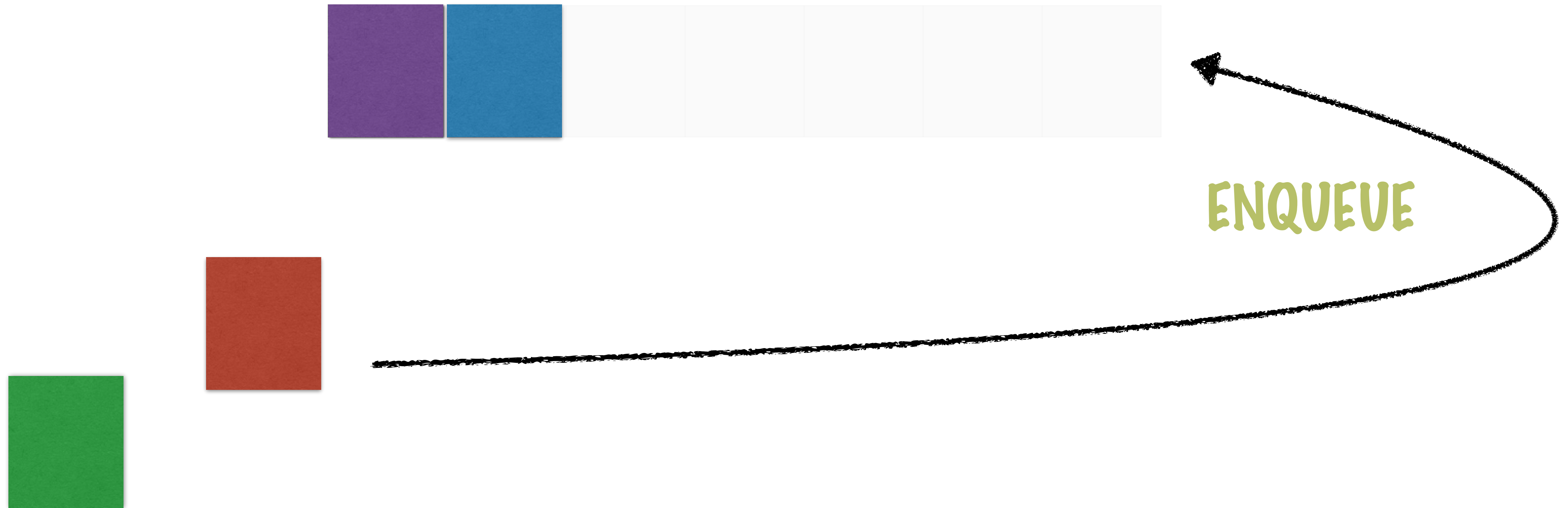
THE QUEUE



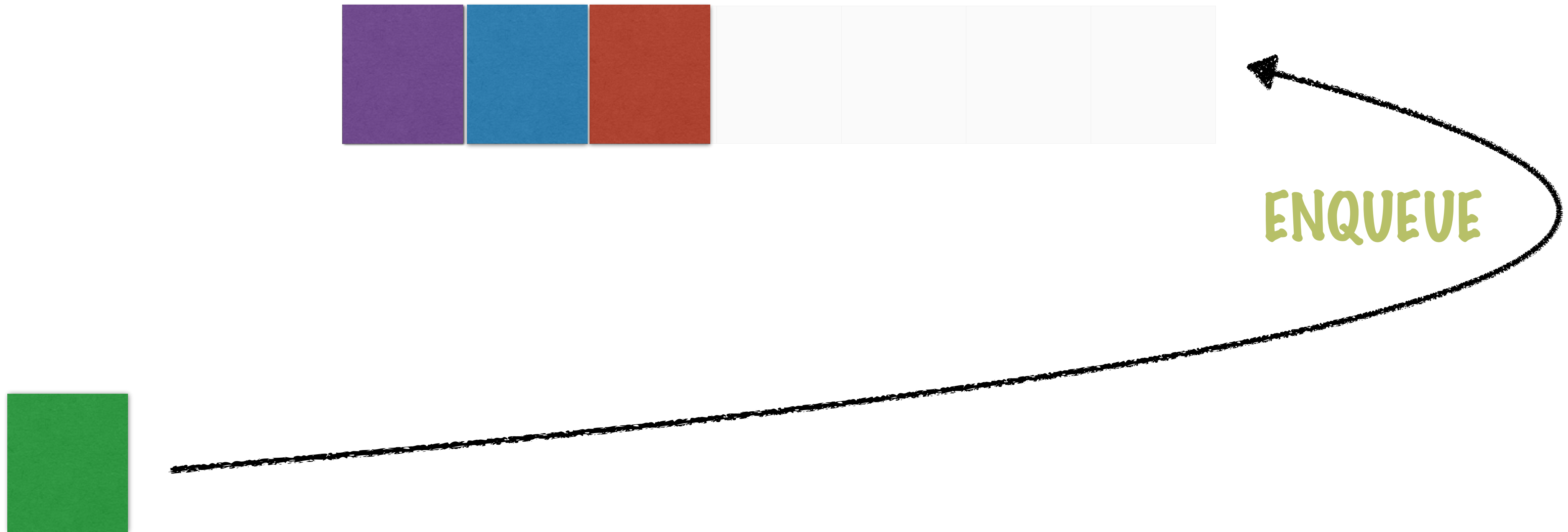
THE QUEUE



THE QUEUE

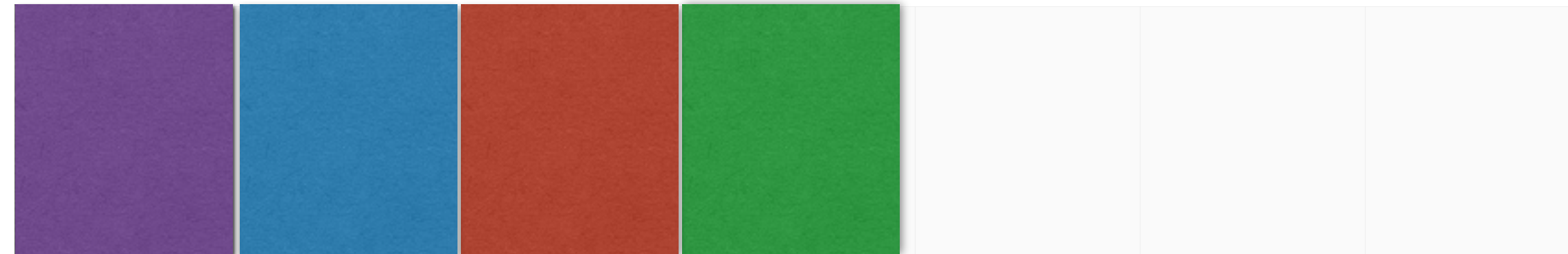


THE QUEUE



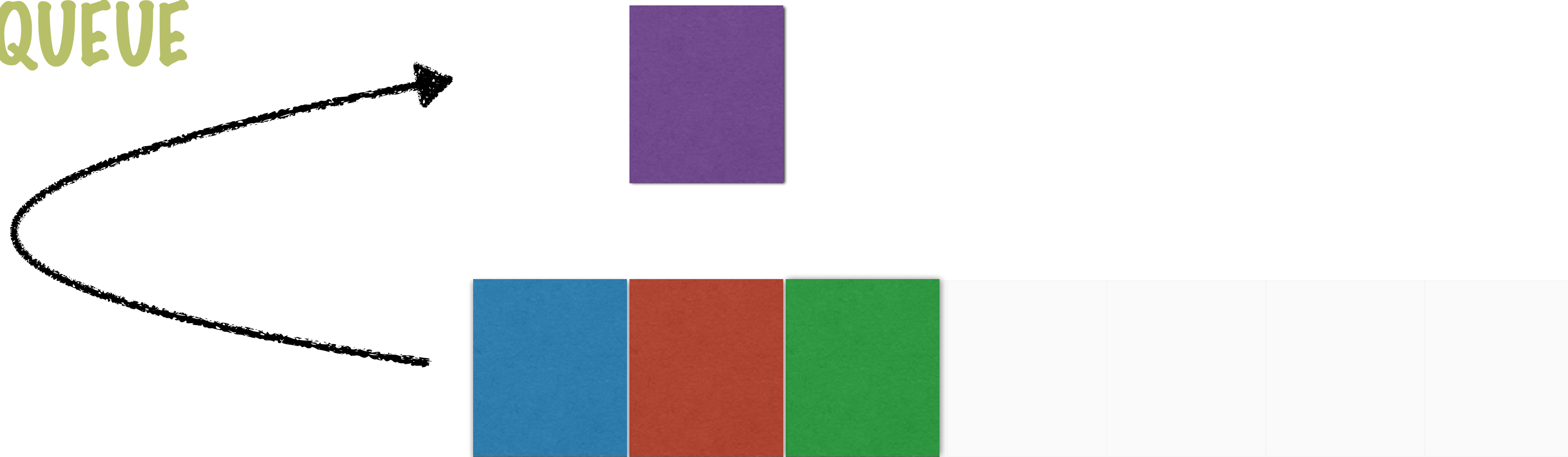
THE QUEUE

DEQUEUE



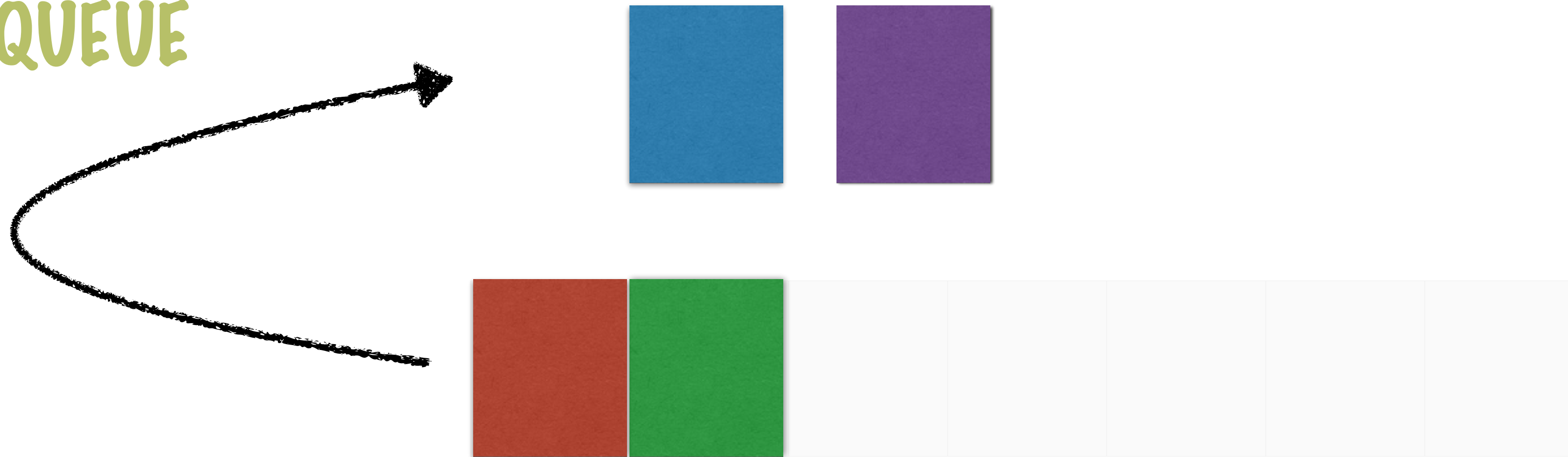
THE QUEUE

DEQUEUE



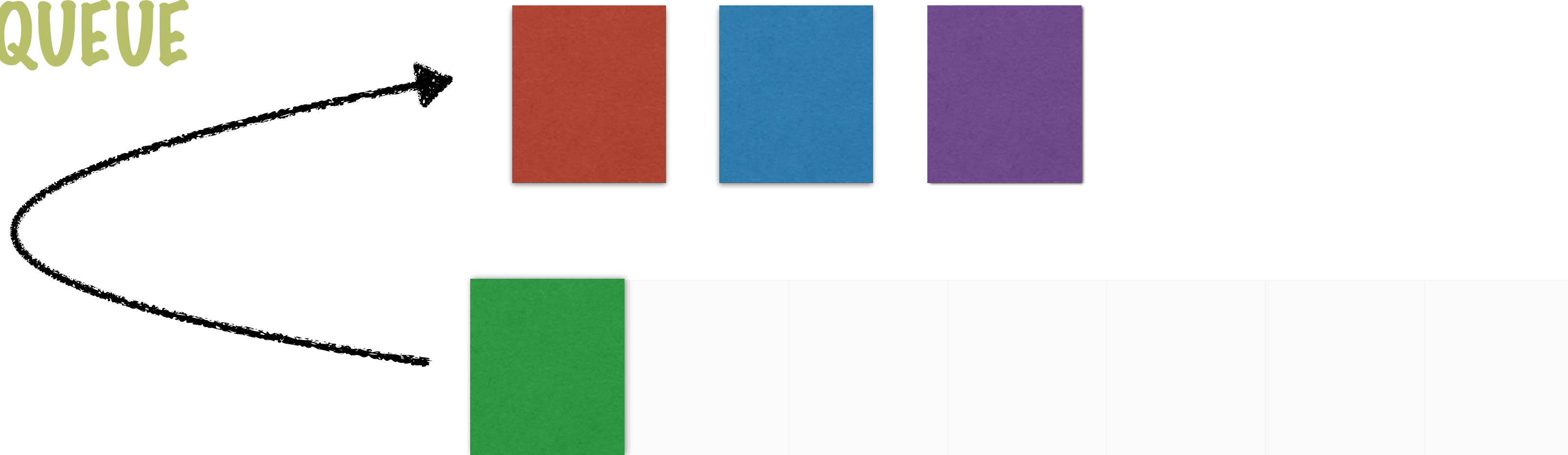
THE QUEUE

DEQUEUE



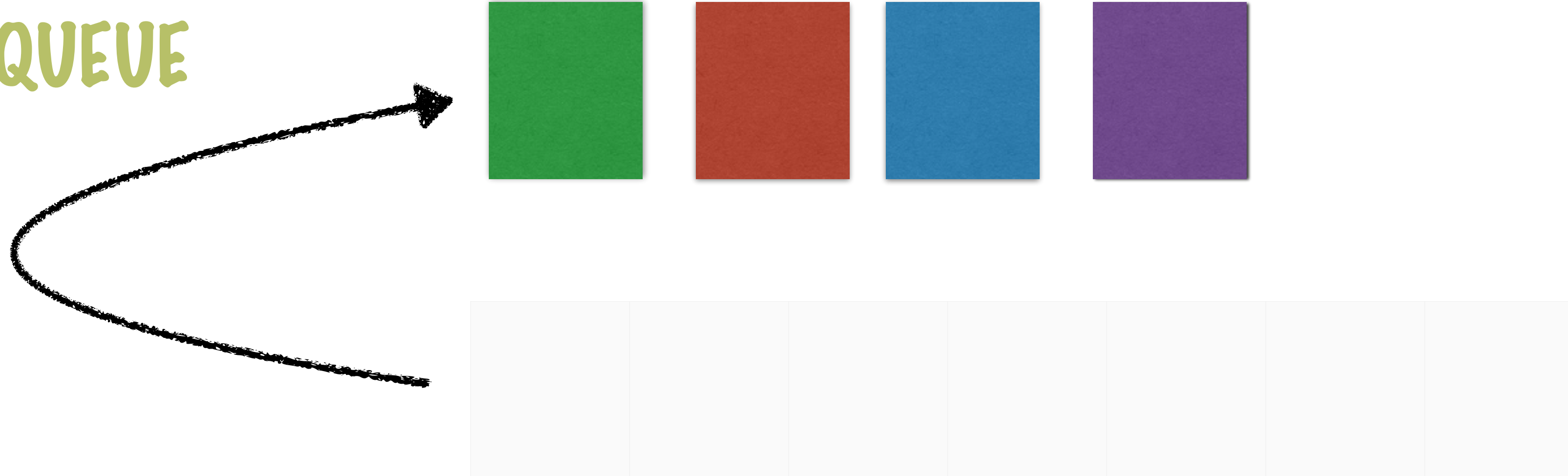
THE QUEUE

DEQUEUE



THE QUEUE

DEQUEUE



THE QUEUE

COMMON OPERATIONS ON THE QUEUE:

ENQUEUE DEQUEUE PEEK

OTHER OPERATIONS WHICH ARE USEFUL:

ISEMPTY ISFULL

OFFER

THE QUEUE

WHAT IF YOU TRY
TO DEQUEUE FROM
AN EMPTY QUEUE?

OR ENQUEUE
INTO A FULL
QUEUE?

IT'S AN ERROR, THROW
AN EXCEPTION!

THE QUEUE - UNDERLYING DATA STRUCTURE

THE MOST COMMON
OPERATIONS ON A QUEUE
INVOLVE ENQUEUEING AND
DEQUEUEING ELEMENTS

THE OPERATIONS ARE
ON BOTH ENDS OF THE
QUEUE

A LINKED LIST WITH A
POINTER TO HEAD AND
THE TAIL WORKS WELL

A COMMON DATA STRUCTURE USED IS
A CIRCULAR QUEUE WITH POINTERS TO
THE HEAD AND TO THE TAIL