



# Challenge 4: Implement a Queue Using Stacks

We have seen the difference between stacks and queues, but is it possible to make one from the other? Let's find out.

## We'll cover the following



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  - Input
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## Problem Statement#

You have to implement the `enqueue()` and `dequeue()` functions using the `MyStack` class we created earlier. `enqueue()` will insert a value into the queue and `dequeue()` will remove a value from the queue.

## Input#

- `enqueue()`: A value to insert into the queue
- `dequeue()`: Does not require any input



## Output#



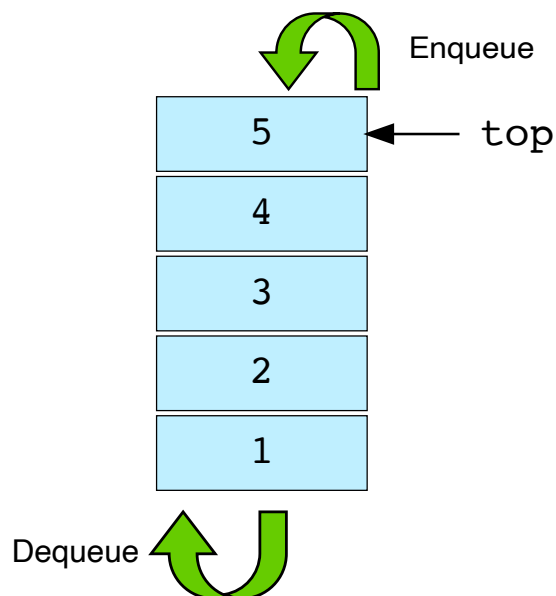
- **enqueue( )**: Does not return anything
- **dequeue( )**: Pops out and returns the oldest value in the queue

## Sample Input#

```
value = 5 # [1, 2, 3, 4]
enqueue(value)
dequeue()
```

## Sample Output#

```
True # [1, 2, 3, 4, 5]
1 # [2, 3, 4, 5]
```



## Coding Exercise#



Take a close look at the problem and design a step-by-step algorithm before jumping on implementation.



You can make helper functions or add members to the **NewQueue** class, but the main functionality should be built on stacks.

This problem is designed for your practice, so try to solve it on your own first. If you get stuck, you can always refer to the solution review.

Good luck!

main.py

Stack.py

```
class MyStack:
    def __init__(self):
        self.stack_list = []
        self.stack_size = 0

    def is_empty(self):
        return self.stack_size == 0

    def peek(self):
        if self.is_empty():
            return None
        return self.stack_list[-1]


    def size(self):
        return self.stack_size

    def push(self, value):
        self.stack_size += 1
        self.stack_list.append(value)

    def pop(self):
        if self.is_empty():
            return None
        self.stack_size -= 1
        return self.stack_list.pop()
```



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