

# Code Challenge



Implement a Queue using two Stacks.

## Specifications

- Read all of these instructions carefully. Name things exactly as described.
- Do all your work in a public repository called `data-structures-and-algorithms`, with a well-formatted, detailed top-level README.md.
- Create a new branch in your repo called `queue_with_stacks`.
- Your top-level readme should contain a “Table of Contents” navigation to all of your challenges and implementations so far. (Don’t forget to update it!)
- This assignment should be completed within the `challenges` subdirectory of the repository.
- On your branch, create...
  - **C#**: a new .NET Core console project named `QueueWithStacks`. Within your `Program.cs` create a new static method outside of `Main()` following the naming conventions below. Call your newly created method in `Main()` once complete.
  - **JavaScript**: a folder named `queuewithstacks` which contains a file called `queue-with-stacks.js`
  - **Python**: a folder named `queue_with_stacks` which contains a file called `queue_with_stacks.py`
  - **Java**: a folder named `queuewithstacks` which contains a file called `PseudoQueue.java`
- Include any language-specific configuration files required for this challenge to become an individual component, module, library, etc.
  - *NOTE: You can find an example of this configuration for your course in your class lecture repository.*

## Feature Tasks

Create a brand new `PseudoQueue` class. Do not use an existing Queue. Instead, this PseudoQueue class will implement our standard queue interface (the two methods listed below), but will internally only utilize 2 `Stack` objects. Ensure that you create your class with the following methods:

- `enqueue(value)` which inserts `value` into the PseudoQueue, using a *first-in, first-out* approach.

- `dequeue()` which extracts a value from the PseudoQueue, using a *first-in, first-out* approach.

The `Stack` instances have only `push`, `pop`, and `peek` methods. You should use your own Stack implementation. Instantiate these Stack objects in your PseudoQueue constructor.

## Example

`enqueue(value)`

Input	Args	Output
<code>[10]-&gt;[15]-&gt;[20]</code>	<code>5</code>	<code>[5]-&gt;[10]-&gt;[15]-&gt;[20]</code>
	<code>5</code>	<code>[5]</code>

`dequeue()`

Input	Output	Internal State
<code>[5]-&gt;[10]-&gt;[15]-&gt;[20]</code>	<code>20</code>	<code>[5]-&gt;[10]-&gt;[15])</code>
<code>[5]-&gt;[10]-&gt;[15]</code>	<code>15</code>	<code>[5]-&gt;[10]</code>

## Requirements

Ensure your complete solution follows the standard requirements.

1. Write [unit tests](#)
2. Follow the [template for a well-formatted README](#)
3. Submit the assignment following [these instructions](#)