

# Coding problem

You're tasked with implementing a simple calculator (a console application where the user feeds commands and gets results). The calculator stores numbers as 12-bit unsigned integers (that can never overflow) on an internal queue and has the following commands:

- **Put <value>**  
Puts <value> on the memory queue. The queue has a maximum capacity of 5. When the queue capacity is exceeded the command results in error.
- **Remove**  
Removes a value from the memory queue and discards it. If there are no values on the queue, no operation is performed.
- **Add**  
Removes two values from the queue, adds them together, prints the result and puts the result back to the queue. If the required operands are not on the queue, the command results in error.
- **Sub**  
Removes two values from the queue, subtracts the first value from the second one, prints the result, and puts the result back to the queue. If the required operands are not on the queue, the command results in error.

Example interaction with the calculator:

**Put 10**

(queue is 10)

**Put 7**

(queue is 10, 7)

**Put 25**

(queue is 10, 7, 25)

**Add**

>> 17

(queue is 25, 17)

**Sub**

>> 4088

(queue is 4088)

Use C#, focus on correctness, submit solution through a git repo