**Algorithm Design**

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# Solution of Exercise C-2.3

To implement the Stack ADT using two queues, $Q1$ and $Q2$, we can simply enqueue elements into $Q1$ whenever a push call is made. This takes $O(1)$ time to complete. For pop calls, we can dequeue all elements of $Q1$ and enqueue them into $Q2$ except for the last element which we set aside in a temp variable. We then return the elements to $Q1$ by dequeing from $Q2$ and enqueing into $Q1$. The last element that we set aside earlier is then returned as the result of the pop. Thus, performing a pop takes $O(n)$ time.