

1. For a queue, we need to add elements to the back of the queue and pop elements from the front, therefore we need the circular array to keep track of the front and back of the queue. On the other hand, we add and pop items from the front of the stack only, and do not need to know the back of the stack.

2. Let f be the index of the front element; b be the index of the back element

- When the queue is full, allocate an array with double the size of current array.
- Copy or move all elements from index f to the end of current array to the same index in the new array
- Copy or move all elements from index 0 of current array to index b to the new array, where their index in new array will be (length of old array + index in old array)
- Deallocate the old array
- The new f will be the same as old f ; the new b will be (length of old array + old b)

3. $\Theta(1)$