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### ArrayStack

My ArrayStack is relatively simple and straightforward. I initialized a large array and a count variable to see how much data was pushed into the array. Push is simple and checks for empty, then moves the data if its not empty and adds the new data and increments the count. Pop is also simple in the sense that it removes data if the count is not 0. It also decrements the count. Peek just returns the value of count. Upper Bound is  $O(N)$  since while loop in backmasking.java uses push and pop but  $O(1)$  for function in ArrayStack.

### ListStack

ListStack has a Node template first so the nodes are available for classes to access. Contains double N and node nNode. hNode is the first node in the list. Push just sees if hNode is empty and moves data if not and adds new data there. Pop checks if empty and then stores the data in a temporary variable. Peek just sees the count and hNode. Upper bound is  $O(N)$  since while loop uses pop and push.  $O(1)$  time complexity in the function.