Quiz1_Q13

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```
In [ ]: def merge_sort(seq):
            if len(seq) == 1:
                return seq
            else:
                mid = len(seq)/2
                left = merge_sort(seq[:mid])
                right = merge_sort(seq[mid:])

                i, j, k = 0, 0, 0 #i= left counter, j= right counter, k= master counte
                while i < len(left) and j < len(right):
                    if left[i] < right[j]:
                        seq[k] = left[i]
                        i += 1; k += 1
                    else:
                        seq[k] = right[j]
                        j += 1; k += 1

                remaining = left if i < j else right
                r = i if remaining == left else j
                while r < len(remaining):
                    seq[k] = remaining[r]
                    r += 1; k += 1
                return seq

        def check_past(M, N, close_pr, P):
            sorted_pr = merge_sort(close_pr)
            if sum(sorted_pr[:M]) <= P:
                return True
            else:
                return False
```