

✓ 844. Backspace String Compare Easy

```
boolean backspaceCompare (String s, String t):
```

```
char [] one = s.toCharArray(), two = t.toCharArray() // convert to arrays
```

```
int one_p = 0, two_p = 0 // set pointers respectively
```

```
FOR i=0 ; i < len(one); i++:
```

```
    IF one[i] != '#':
```

```
        one[one_p++] = one[i] // store char & increment pointer
```

```
    ELSE IF i != 0 : one_p-- // decrement pointer ≥ 0
```

```
FOR i=0 ; i < len(two); i++:
```

```
    IF two[i] != '#':
```

```
        two[two_p++] = two[i] // store char & increment pointer
```

```
    ELSE IF i != 0 : two_p-- // decrement pointer ≥ 0
```

```
IF one_p != two_p : // different lengths => not same string
```

```
    Return False
```

```
FOR i=0 ; i < one_p; i++:
```

```
    IF one[i] != two[i] : // different letter @ same index => not same
```

```
        Return False
```

```
Return True // If nothing contradicts => same string
```

Complexity $O(n)$

✓ 986. Interval List Intersections Medium

```
int[][] intervalIntersection (int[][] first, int[][] second):
```

```
    List<int[]> ret = [] // initialize return variable
```

```
    int i=0, j=0 // pointer to each list of intervals
```

```
    WHILE i < len(first) AND j < len(second):
```

```
        lo = max (first[i][0], second[j][0]) // Find front cap index
```

```
        hi = min (first[i][1], second[j][1]) // Find end cap index
```

```
        IF lo ≤ hi: // if the two indices meet or can wrap
```

```
            ret.add ({lo, hi}) // Add this pair of indices
```

```
        IF first[i][1] < second[j][0]:
```

```
            i++ // increase first pointer if second dominates
```

```
        ELSE j++ // increase second pointer if first dominates
```

```
    Return ret.toArray (new int[len(ret)][2])
```

Complexity $O(n)$

✓ 11. Container With Most Water Medium

int maxArea (int[] heights):

left = 0, right = len(heights) - 1, max = 0 // set initial pointers & initial max

WHILE left < right: // While the pointers do not meet

diff = right - left, cap = min(heights[left], heights[right])

amount = diff * cap // calculate amount

IF amount > max : max = amount // update max if necessary

IF heights[left] < heights[right]: left++ // increment left if right is greater

ELSE: right-- // decrement right otherwise

Return max

Complexity: $O(n)$