

Problem 1: Odd String Difference

```
def oddString(words):  
    def get_difference(word):  
        return [ord(word[i+1]) - ord(word[i]) for i in range(len(word) - 1)]  
  
    differences = [get_difference(word) for word in words]  
    for i in range(len(differences)):  
        if differences.count(differences[i]) == 1:  
            return words[i]
```

```
words = ["adc", "wzy", "abc"]  
print(oddString(words))
```

**Output: "abc"**

**Time complexity :-  $O(m^2 \cdot n)$ .**

Problem 2: Words Within Two Edits of Dictionary

```
def withinTwoEdits(queries, dictionary):  
    def is_within_two_edits(query, word):  
        if len(query) != len(word):  
            return False  
        diff_count = sum(1 for a, b in zip(query, word) if a != b)  
        return diff_count <= 2  
    result = []  
    for query in queries:  
        if any(is_within_two_edits(query, word) for word in dictionary):  
            result.append(query)  
  
    return result  
  
queries = ["word", "note", "ants", "wood"]  
dictionary = ["wood", "joke", "moat"]  
print(withinTwoEdits(queries, dictionary))
```

**Output: ["word", "note", "wood"]**

**Time complexity :-  $O(q \cdot d \cdot n)$**

Problem 3: Next Greater Element IV

```
def nextGreaterElementIV(nums):  
    n = len(nums)  
    res = [-1] * n  
    stack1, stack2 = [], []  
    for i in range(n):  
        while stack2 and nums[stack2[-1]] < nums[i]:  
            res[stack2.pop()] = nums[i]  
        while stack1 and nums[stack1[-1]] < nums[i]:  
            stack2.append(stack1.pop())  
        stack1.append(i)  
  
    return res  
nums = [2,4,0,9,6]  
print(nextGreaterElementIV(nums))
```

**Output: [9,6,6,-1,-1]**

**Time complexity :-  $O(n)$**

Problem 4: Minimum Addition to Make Integer Beautiful

```
def makeIntegerBeautiful(n, target):  
    def digit_sum(x):  
        return sum(int(digit) for digit in str(x))  
  
    x = 0  
    while digit_sum(n + x) > target:  
        x += 1  
    return x  
n = 16  
target = 6  
print(makeIntegerBeautiful(n, target))
```

**Output: 4**

**Time complexity :-**  $O(n \cdot \log n)$

Problem 5: Sort Array by Moving Items to Empty Space

**def sortByMovingToEmpty(nums):**

**n = len(nums)**

**sorted\_nums = sorted(nums)**

**sorted\_positions = {val: idx for idx, val in enumerate(sorted\_nums)}**

**moves = 0**

**zero\_index = nums.index(0)**

**for i in range(n):**

**while nums[i] != sorted\_nums[i]:**

**target\_index = sorted\_positions[nums[i]]**

**nums[zero\_index], nums[target\_index] = nums[target\_index], nums[zero\_index]**

**zero\_index = target\_index**

**moves += 1**

**return moves**

**nums = [4,2,0,3,1]**

**print(sortByMovingToEmpty(nums))**

**Output: 3**

**Time complexity :-**  $O(n \log n)$ .