



main.py

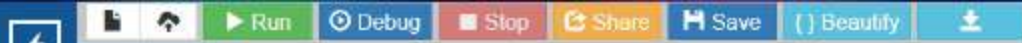
```
1 def count_elements(arr):  
2     return sum(1 for x in arr if x + 1 in arr)  
3  
4 arr = [1, 2, 3]  
5 print(count_elements(arr))  
6
```



input

2

...Program finished with exit code 0  
Press ENTER to exit console.



main.py

```
1 def string_shift(s, shift):
2     for direction, amount in shift:
3         if direction == 0:
4             s = s[amount:] + s[:amount]
5         else:
6             s = s[-amount:] + s[:-amount]
7     return s
8
9 s = "abc"
10 shift = [(0, 1), (1, 2)]
11 result = string_shift(s, shift)
12 print(result)
13
```



input

cab

```
...Program finished with exit code 0
Press ENTER to exit console.
```

```
main.py
1 def leftMostColumnWithOne(binaryMatrix: 'BinaryMatrix') -> int:
2     rows, cols = binaryMatrix.dimensions()
3     current_row = 0
4     current_col = cols - 1
5     leftmost_col = -1
6
7     while current_row < rows and current_col >= 0:
8         if binaryMatrix.get(current_row, current_col) == 1:
9             leftmost_col = current_col
10            current_col -= 1
11        else:
12            current_row += 1
13
14    return leftmost_col
15
```

input

```
...Program finished with exit code 0
Press ENTER to exit console.
```

main.py

```
1 from collections import deque, OrderedDict
2
3 class FirstUnique:
4     def __init__(self, nums):
5         self.queue = deque()
6         self.count = {}
7         self.unique = OrderedDict()
8
9         for num in nums:
10             self.add(num)
11
12     def showFirstUnique(self):
13
14         for key in self.unique:
15             if self.count[key] == 1:
16                 return key
17         return -1
18
19     def add(self, value):
20         if value in self.count:
21             self.count[value] += 1
22         else:
23             self.count[value] = 1
24
25         self.queue.append(value)
26
27         if self.count[value] == 1:
28             self.unique[value] = None
29         elif value in self.unique:
```

input

```
...Program finished with exit code 0
Press ENTER to exit console.
```



main.py

```
1 class TreeNode:
2     def __init__(self, x):
3         self.val = x
4         self.left = None
5         self.right = None
6
7 def isValidSequence(root: TreeNode, arr: [int]) -> bool:
8     def dfs(node, index):
9         if not node:
10             return False
11
12         if index >= len(arr) or node.val != arr[index]:
13             return False
14
15         if not node.left and not node.right and index == len(arr) - 1:
16             return True
17
18         return dfs(node.left, index + 1) or dfs(node.right, index + 1)
19
20     return dfs(root, 0)
21
22 root = TreeNode(0)
23 root.left = TreeNode(1)
24 root.right = TreeNode(0)
25 root.left.left = TreeNode(0)
26 root.left.right = TreeNode(1)
27 root.right.left = TreeNode(0)
28 root.left.right.left = TreeNode(0)
29 root.left.right.right = TreeNode(1)
```

input

False

False

...Program finished with exit code 0

Press ENTER to exit console.



```
main.py
1 def kids_with_candies(candies, extra_candies):
2     """
3     Returns a boolean array where each element represents whether the kid at that index
4     can have the greatest number of candies after receiving all the extra candies.
5
6     Args:
7     candies (list): A list of integers representing the number of candies each kid has.
8     extra_candies (int): The number of extra candies available.
9
10    Returns:
11    list: A boolean list where each element is True if the kid at that index can have
12    the greatest number of candies, False otherwise.
13    """
14    max_candies = max(candies)
15
16    result = [False] * len(candies)
17
18    # Iterate over the kids
19    for i in range(len(candies)):
20        # If the kid's candies plus the extra candies is greater than or equal to the max candies,
21        # they can have the greatest number of candies
22        if candies[i] + extra_candies >= max_candies:
23            result[i] = True
24
25    return result
26
27 print(kids_with_candies([2,3,5,1,3], 3))
28
```

main.py

```
1 def maximumGap(num: int) -> int:
2     num_str = str(num)
3     max_num = num
4     min_num = num
5
6     for i in range(10):
7         for j in range(10):
8             new_str = ''.join([str(j) if c == str(i) else c for c in num_str])
9             if new_str[0] == '0' and len(new_str) > 1:
10                 continue
11             new_num = int(new_str)
12             if new_num != num:
13                 max_num = max(max_num, new_num)
14                 min_num = min(min_num, new_num)
15
16     return max_num - min_num
17 print(maximumGap(555))
```

input

888

...Program finished with exit code 0  
Press ENTER to exit console.

```
main.py
1 def checkIfCanBreak(s1, s2):
2     s1_sorted = sorted(s1)
3     s2_sorted = sorted(s2)
4
5     can_break_s2 = all(x >= y for x, y in zip(s1_sorted, s2_sorted))
6     can_break_s1 = all(x >= y for x, y in zip(s2_sorted, s1_sorted))
7
8     return can_break_s2 or can_break_s1
9 print(checkIfCanBreak("abc", "xya"))
```

input

True

...Program finished with exit code 0  
Press ENTER to exit console.



main.py

```

1 import sys
2 from typing import List
3
4 MOD = int(1e9) + 7
5
6 def numberWays(hats: List[List[int]]) -> int:
7     n = len(hats)
8     dp = [[0] * 41 for _ in range(n + 1)]
9     dp[0][0] = 1
10
11     for i in range(1, n + 1):
12         for j in range(41):
13             dp[i][j] = dp[i - 1][j]
14             for k in hats[i - 1]:
15                 if j >= k:
16                     dp[i][j] += dp[i - 1][j - k]
17             dp[i][j] %= MOD
18
19     return dp[n][0]
20 print(numberWays([[3,4],[4,5],[5]]))

```

input

1

...Program finished with exit code 0  
Press ENTER to exit console.

```
main.py
1 def nextPermutation(nums):
2     i = len(nums) - 2
3     while i >= 0 and nums[i + 1] <= nums[i]:
4         i -= 1
5     if i >= 0:
6         j = len(nums) - 1
7         while j > i and nums[j] <= nums[i]:
8             j -= 1
9         nums[i], nums[j] = nums[j], nums[i]
10    left, right = i + 1, len(nums) - 1
11    while left < right:
12        nums[left], nums[right] = nums[right], nums[left]
13        left += 1
14        right -= 1
15    nums = [1, 2, 3]
16    nextPermutation(nums)
17    print(nums)
```