

main.py

```

1 from bisect import bisect_right
2 from functools import lru_cache
3
4 def min_operations_to_make_increasing(arr1, arr2):
5     arr2.sort()
6
7     @lru_cache(None)
8     def dp(i, prev):
9         if i == len(arr1):
10             return 0
11
12         operations = float('inf')
13
14         if arr1[i] > prev:
15             operations = dp(i + 1, arr1[i])
16
17         j = bisect_right(arr2, prev)
18         if j < len(arr2):
19             operations = min(operations, 1 + dp(i + 1, arr2[j]))
20
21         return operations
22
23     result = dp(0, -float('inf'))
24     return result if result < float('inf') else -1
25
26 arr1 = [1, 5, 3, 6, 7]
27 arr2 = [1, 3, 2, 4]
28
29 print(min_operations_to_make_increasing(arr1, arr2))

```

1

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

main.py

```
1 def updateMatrix(mat):
2     rows, cols = len(mat), len(mat[0])
3     for i in range(rows):
4         for j in range(cols):
5             if mat[i][j] != 0:
6                 top = mat[i - 1][j] if i > 0 else float('inf')
7                 left = mat[i][j - 1] if j > 0 else float('inf')
8                 mat[i][j] = min(top, left) + 1
9     for i in range(rows - 1, -1, -1):
10        for j in range(cols - 1, -1, -1):
11            if mat[i][j] != 0:
12                bottom = mat[i + 1][j] if i < rows - 1 else float('inf')
13                right = mat[i][j + 1] if j < cols - 1 else float('inf')
14                mat[i][j] = min(mat[i][j], min(bottom, right) + 1)
15
16    return mat
17 mat1 = [[0, 0, 0], [0, 1, 0], [0, 0, 0]]
18 mat2 = [[0, 0, 0], [0, 1, 0], [1, 1, 1]]
19
20 print("Output for mat1:")
21 output1 = updateMatrix(mat1)
22 for row in output1:
23     print(row)
24
25 print("\nOutput for mat2:")
26 output2 = updateMatrix(mat2)
27 for row in output2:
28     print(row)
29
```

Output for mat1:

```
[0, 0, 0]
[0, 1, 0]
[0, 0, 0]
```

Output for mat2:

```
[0, 0, 0]
[0, 1, 0]
[1, 2, 1]
```

...Program finished with exit code 0

main.py

```
1 def min_length(nums):  
2     return len(nums) % 2  
3  
4 # Input  
5 nums = list(map(int, input().split()))  
6 print(min_length(nums))  
7  
8
```

input

```
1 2 3 4  
0
```

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

main.py

```
1 def string_substrings(words):
2     return [w for w in words if any(w in x for x in words if w != x)]
3
4 # Input
5 words = input().split()
6 print(string_substrings(words))
7
8
9
```

input

```
mass as hero superhero
['as', 'hero']
```

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

main.py

```
1 def min_repeats(a, b):
2     if b in a:
3         return 1
4     for i in range(1, len(b)):
5         if b.startswith(a[i:]):
6             return 1 + i
7     return -1
8
9 # Example
10 a = "abcd"
11 b = "cdabcdab"
12 output = min_repeats(a, b)
13 print(output)
14
15
```

input

3

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