

Part 2: Instructions

You can use any Python IDE of your choosing (e.g. VSCode, Jupyter Notebook, PyCharm, etc.). The free online version is <https://www.online-python.com>.

You are given 20 minutes to complete at least 1 coding problem. You can choose whichever is easier to be done. If you still have time, feel free to work on the other coding problem for bonus points! :)

You can copy and paste the code block for the coding question you choose into the Python IDE. I/O stream handling has been provided. Therefore, you can just focus to write the logic into the user-defined functions, namely, `solution()` accordingly.

The use of Generative AI tools like ChatGPT, Gemini, Claude, Llama, etc. are strictly prohibited!!!

Coding Problem 1

Given a string `input_str`, reverse the characters in each word individually, keeping the original spacing and the sequence of words intact. Your task is to write the logic in the user-defined function `solution()`.

- **Example 1:**

- **Input:** `input_str = "Jane Doe 123."`
- **Output:** `"enaJ eoD .321"`

- **Example 2:**

- **Input:** `input_str = "I like apple."`
- **Output:** `"I ekil .elppa"`

```
def solution(input_str):  
    # Write your logic here  
  
input_string = str(input('Type your input string: '))  
output_string = solution(input_string)  
print(f'\nThe output string is: {output_string}\n')
```

Coding Problem 2

Given an array of integers, `nums`, and an integer `target`, your task is to find the indices of two distinct numbers in the array that sum up to the `target` value. Your task is to write the logic in the user-defined function `solution()`.

Assume that there is exactly one unique solution for each input, and you cannot use the same element twice. The solution may be returned in any order.

- **Example 1**

- **Input:** `nums = [2, 3, 13, 17]`, `target = 5`
- **Output:** `[0, 1]`
- **Explanation:** The elements at indices 0 and 1 sum up to 5 (`nums[0] + nums[1] = 5`), so `[0, 1]` is returned.

- **Example 2**

- **Input:** `nums = [7, 1, 5]` , `target = 6`
- **Output:** `[1, 2]`
- **Explanation:** The elements at indices 1 and 2 sum up to 6 (`nums[1] + nums[2] = 6`), so `[1, 2]` is returned.

• **Example 3**

- **Input:** `nums = [3, 3]` , `target = 6`
- **Output:** `[0, 1]`
- **Explanation:** The elements at indices 0 and 1 both equal 3, summing to 6 (`nums[0] + nums[1] = 6`), so `[0, 1]` is returned.

```
def solution(nums, target):
    # Write your logic here

nums = str(input('Enter your list of nums: '))
start, end = 1 if nums[0]=='[' else 0, int(len(nums))-2 if nums[-1]==']' else
int(len(nums))-1
if nums[end]==' ':
    end -= 1
nums = [int(num) for num in nums[start:end+1].split(',')]
target = int(input('Enter your target: '))
output = solution(nums, target)
print(f'\nThe indices are {sorted(output)}\n')
```