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In [3]: def find_second_lowest_grade(records):
# Flatten the list
flattened_records = [item for sublist in records for item in sublist]

# Sort the records based on grades
sorted_records = sorted(flattened_records, key=lambda x: (x[1], x[0]))

# Find the second lowest grade
second_lowest_grade = sorted(set(record[1] for record in sorted_records))[1]

# Find students with the second lowest grade
students_with_second_lowest = [record[0] for record in sorted_records if record[1]

return students_with_second_lowest

# Test the function
if __name__ == "__main__":
records = []
while True:
record_input = input("Enter student's name and grade (or 'done' to finish): ")
if record_input.lower() == 'done':
break
else:
# Split input to get name and grade and create the nested list
name, grade = record_input.split(',')
records.append([[name.strip(), float(grade.strip())]])

second_lowest_students = find_second_lowest_grade(records)
if second_lowest_students:
print("Student(s) with the second lowest grade:")
for student in sorted(second_lowest_students):
print(student)
else:
print("There are no students with the second lowest grade.")
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Enter student's name and grade (or 'done' to finish): chi,20.0
Enter student's name and grade (or 'done' to finish): beta,50.0
Enter student's name and grade (or 'done' to finish): alpha,50.0
Enter student's name and grade (or 'done' to finish): done
Student(s) with the second lowest grade:
alpha
beta
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In [ ]:
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In [5]: def two_sum(nums, target):
        num_index_map = {}

        for i, num in enumerate(nums):
            complement = target - num
            if complement in num_index_map:
                return [num_index_map[complement], i]
            num_index_map[num] = i

        return []

# Test the function with user input
if __name__ == "__main__":
    nums = list(map(int, input("Enter the array of integers separated by commas: ").split()))
    target = int(input("Enter the target sum: "))
    result = two_sum(nums, target)
    if result:
        print("Indices of the two numbers that add up to the target:", result)
        explanation = "Explanation: The sum of {} at index {} and {} at index {} equals the target {}."
        print(explanation.format(nums[result[0]], result[0], nums[result[1]], result[1], target))
    else:
        print("No two numbers found that add up to the target.")
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Enter the array of integers separated by commas: 2,7,11,15

Enter the target sum: 9

Indices of the two numbers that add up to the target: [0, 1]

Explanation: The sum of 2 at index 0 and 7 at index 1 equals the target 9.

In []:

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