Assignment-2

Question :1

Given the names and grades for each student in a class of N students, store them in a nested list and print the name(s) of any student(s) having the second lowest grade. Note: IF there are multiple students with the second lowest grade order their names alphabetically and print each name on a new line

Solution:

```
# A nested list of [name, grade] pairs representing students.
students = [
    ["Azra", 85],
    ["Noor", 90],
    ["Nuzhat", 75],
    ["Jahan", 83],
    ["Nusrat", 88],
]

def find_second_lowest_students(students):
    if len(students) < 2:
        return []

# Extracting grades
grades = [student[1] for student in students]
# Sorting grades in ascending order
grades.sort()

# Finding the second lowest grade
second_lowest_grade = None
if len(grades) > 1:
    second_lowest_grade = grades[1]

# Finding students with the second lowest grade
second_lowest_students = []
for student in students:
    if student[1] == second_lowest_grade:
        second_lowest_students.append(student[0])
```

```
    # Sorting student names alphabetically
    second_lowest_students.sort()

    return second_lowest_students

# Finding students with the second lowest grade
second_lowest = find_second_lowest_students(students)

# Prining  the result
if second_lowest:
    print("Students with the second lowest grade:")
    for student in second_lowest:
        print(student)
else:
    print("There are no students with the second lowest grade.")
```

```
Students with the second lowest grade:
Jahan
```

Question:2

Given an array of integer nums and an integer target, return indices of the two numbers such that they add up to the target. You may assume that each input would have exactly one solution and you may not use the same element twice. You can return the answer in any order.

Solution:

```
nums = [2, 7, 11, 15]
target = 9

def two_sum(nums, target):
    # Iterating through the array
    for i in range(len(nums)):
        for j in range(i + 1, len(nums)):
            # Check if the sum of the current pair equals the target
            if nums[i] + nums[j] == target:
                return [i, j]

    # If no solution is found, return an empty list
    return []

print(two_sum(nums, target))  # Output: [0, 1] (indices of numbers 2 and 7)
```

```
[0, 1]
```