K. SAINATH

Assignment - 2

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.

Program:

```
def second_lowest_grade_students(records):
    sorted_records = sorted(records, key = lambda x:x[1])
    second_lowest_grade = sorted(set(record[1] for record
        in sorted_records))[1]
    second_lowest_students = [record[0] for record
        in sorted_records if record[1] == second_lowest_grade]
    second_lowest_students.sort()
    for student in second_lowest_students:
        print(student)
n = int(input("Enter the no. of students:"))
records = []
for i in range(n):
    name = input("Enter name of the student:")
    grade = float(input("Enter the grade of the student:"))
    records.append([name, grade])
second_lowest_grade_students(records)
```

Output:

```
Enter the no. of students: 2
Enter the name of the student: Alpha
Enter the grade of the student: 50.0
Enter the name of the student: Beta
Enter the grade of the student: 20.0
Alpha
```

2. Given an array of integers nums an integer target, return indicates of the two numbers such that they add up to 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.

Program:

```
def two_sums(nums, target):
    num_indices = {}
    for i, num in enumerate(nums):
        complement = target - num
        if complement in num_indices:
            return [num_indices[complement], i]
        num_indices [num] = i
nums = [2, 7, 11, 15]
target = 9
print(two_sums(nums, target))
```

Output:

[0, 1]