PYTHON MOODLE CODES: WEEK 8

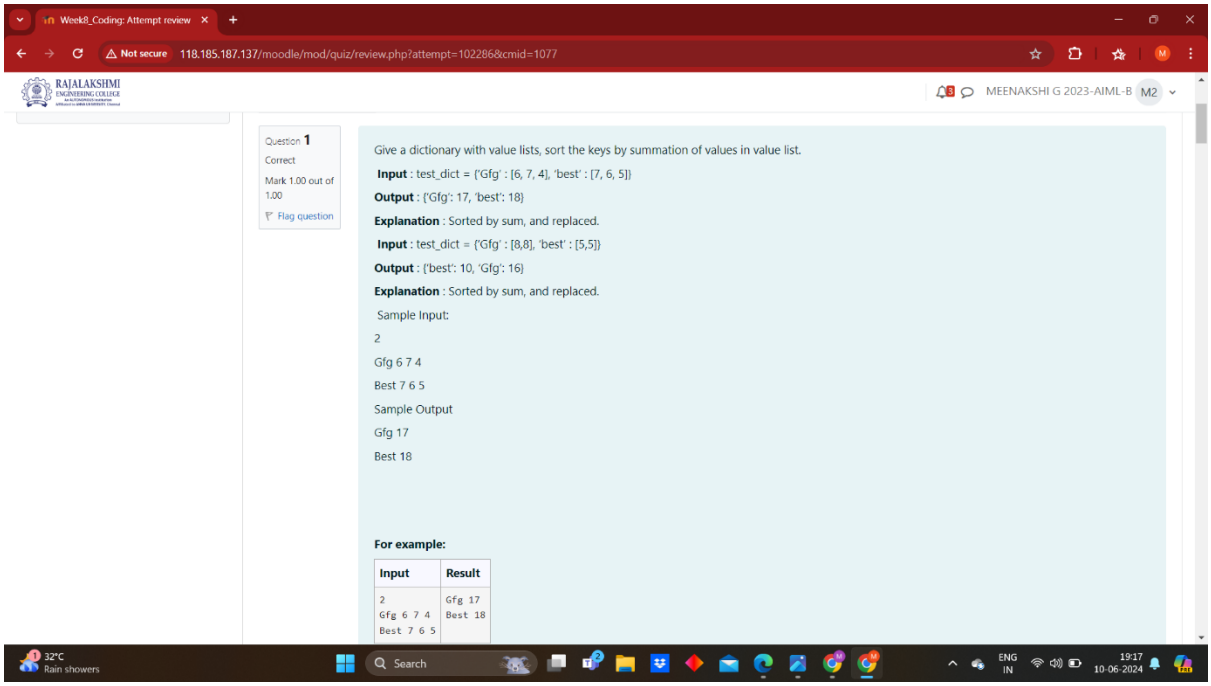
[CS23231]

G. Meenakshi

231501097

AIML-B

First year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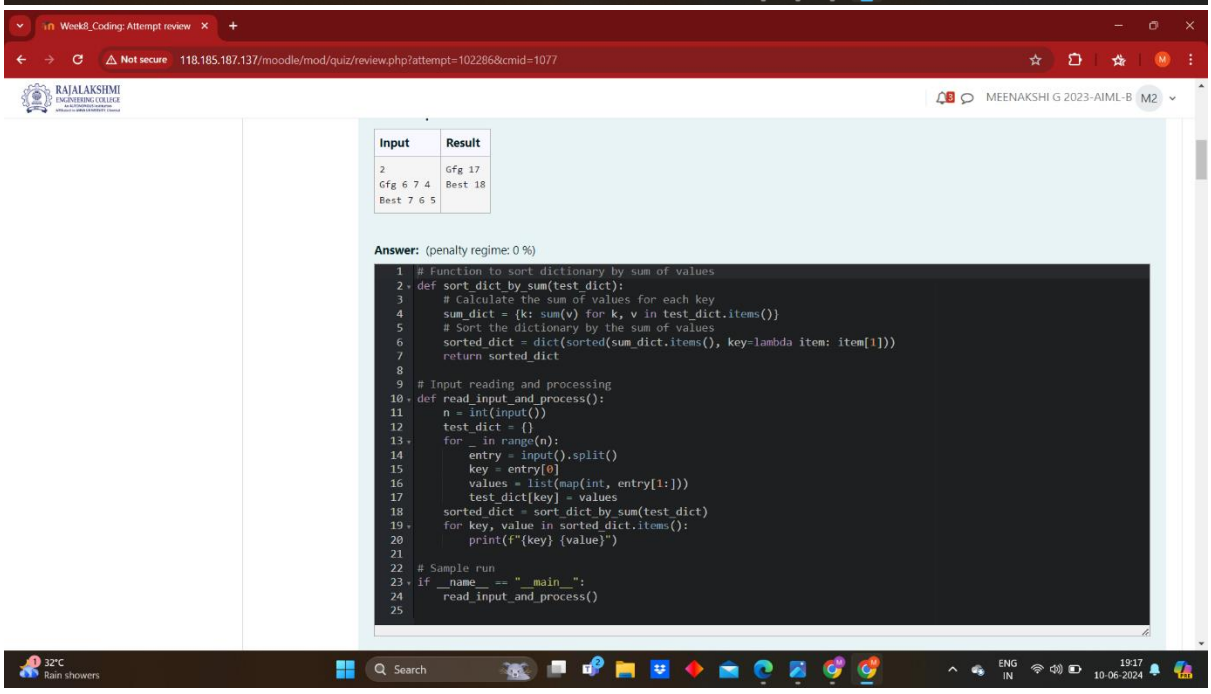
Question 1
Correct
Mark 1.00 out of 1.00
Flag question
Give a dictionary with value lists, sort the keys by summation of values in value list.
Input : test_dict = {'Gfg' : [6, 7, 4], 'best' : [7, 6, 5]}
Output : {'Gfg': 17, 'best': 18}
Explanation : Sorted by sum, and replaced.
Input : test_dict = {'Gfg' : [8,8], 'best' : [5,5]}
Output : {'best': 10, 'Gfg': 16}
Explanation : Sorted by sum, and replaced.
Sample Input:
2
Gfg 6 7 4
Best 7 6 5
Sample Output
Gfg 17
Best 18
For example:
Input
Result
2
Gfg 6 7 4
Best 7 6 5
Gfg 17
Best 18
32°C
Rain showers
Search
ENG
IN
19:17
10-06-2024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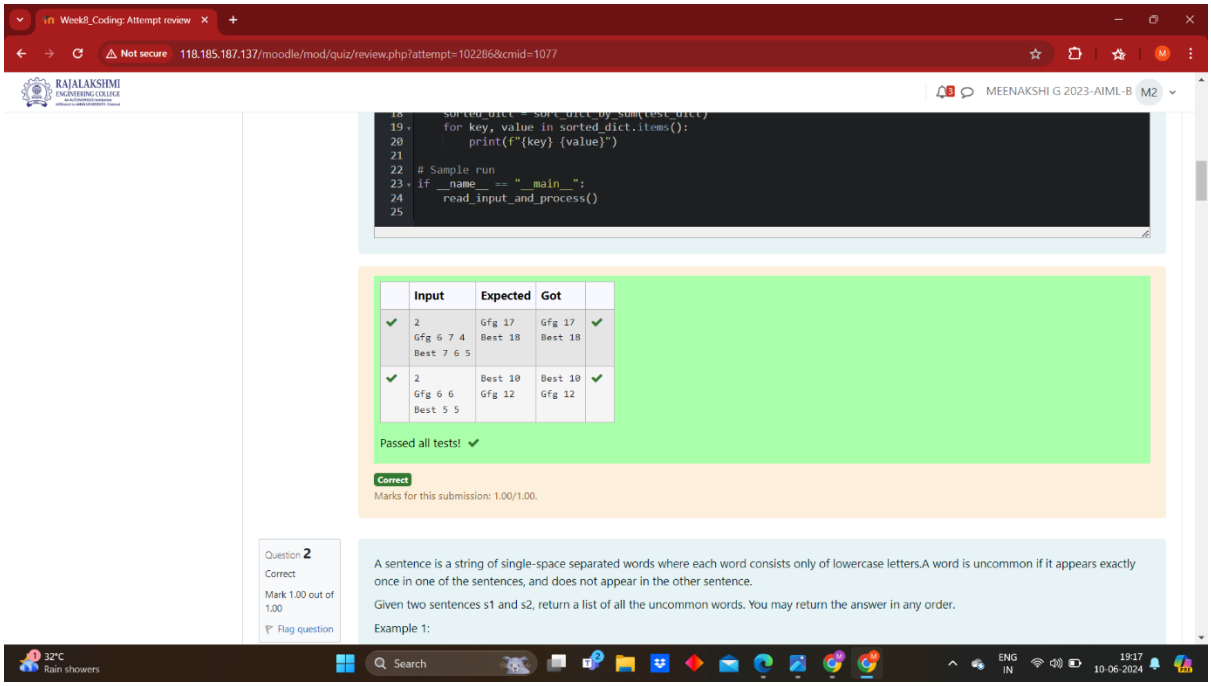
Input
Result
2
Gfg 6 7 4
Best 7 6 5
Gfg 17
Best 18
Answer: (penalty regime: 0 %)
# Function to sort dictionary by sum of values
def sort_dict_by_sum(test_dict):
# Calculate the sum of values for each key
sum_dict = {k: sum(v) for k, v in test_dict.items()}
# Sort the dictionary by the sum of values
sorted_dict = dict(sorted(sum_dict.items(), key=lambda item: item[1]))
return sorted_dict
# Input reading and processing
def read_input_and_process():
n = int(input())
test_dict = {}
for _ in range(n):
entry = input().split()
key = entry[0]
values = list(map(int, entry[1:]))
test_dict[key] = values
sorted_dict = sort_dict_by_sum(test_dict)
for key, value in sorted_dict.items():
print(f"{key} {value}")
# Sample run
if __name__ == "__main__":
read_input_and_process()
32°C
Rain showers
Search
ENG
IN
19:17
10-06-2024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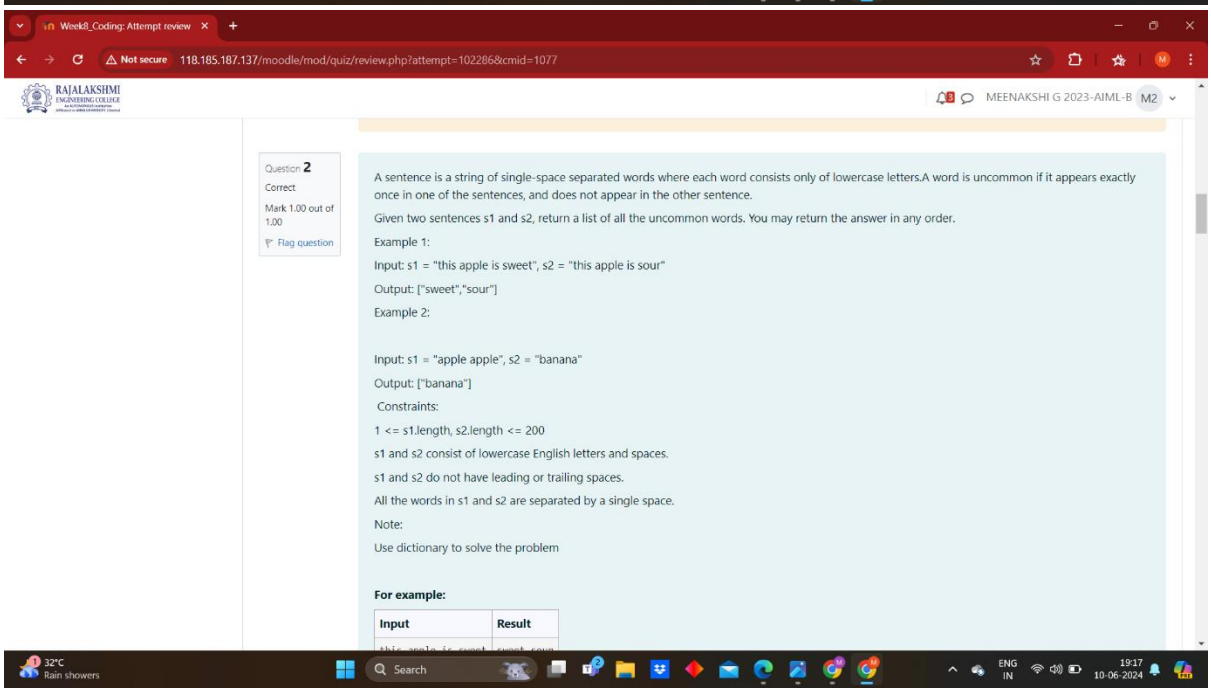
for key, value in sorted_dict.items():
print(f"{key} {value}")
# Sample run
if __name__ == "__main__":
read_input_and_process()
Input
Expected
Got
2 Gfg 6 7 4 Best 7 6 5
Gfg 17 Best 18
Gfg 17 Best 18
2 Gfg 6 6 Best 5 5
Best 10 Gfg 12
Best 10 Gfg 12
Passed all tests!
Correct
Marks for this submission: 1.00/1.00.
Question 2
Correct
Mark 1.00 out of 1.00
Flag question
A sentence is a string of single-space separated words where each word consists only of lowercase letters.A word is uncommon if it appears exactly once in one of the sentences, and does not appear in the other sentence.
Given two sentences s1 and s2, return a list of all the uncommon words. You may return the answer in any order.
Example 1:
32°C Rain showers
Search
ENG IN
19:17 10-06-2024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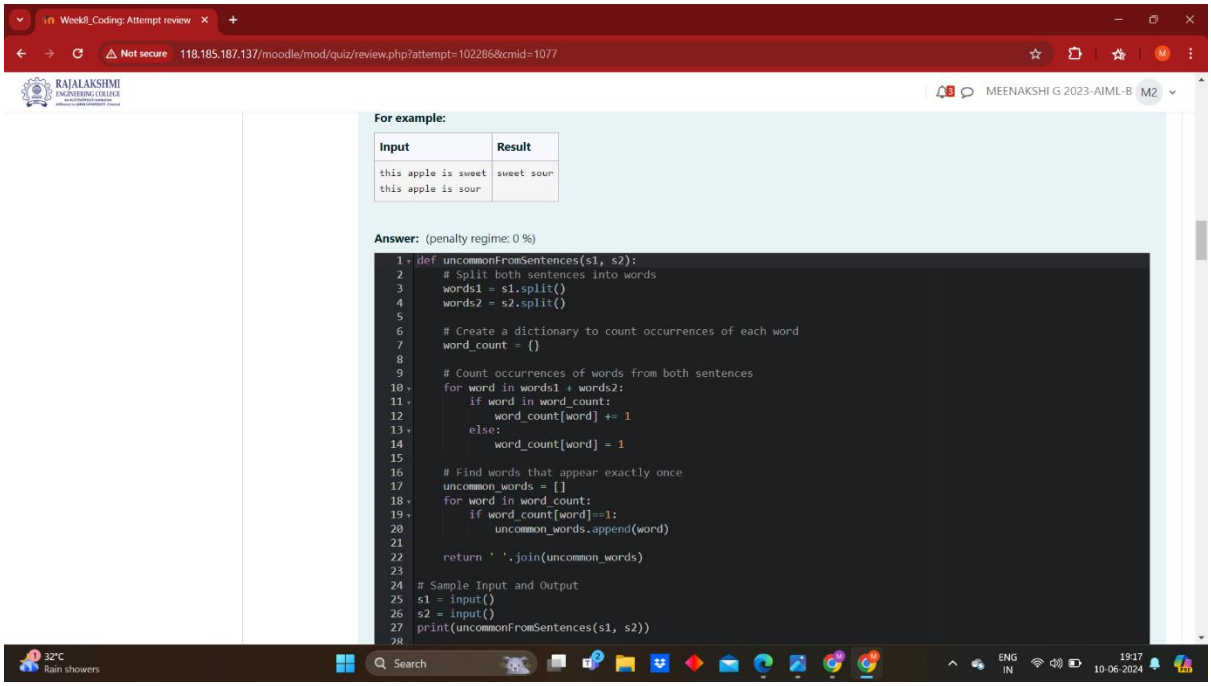
Question 2
Correct
Mark 1.00 out of 1.00
Flag question
A sentence is a string of single-space separated words where each word consists only of lowercase letters.A word is uncommon if it appears exactly once in one of the sentences, and does not appear in the other sentence.
Given two sentences s1 and s2, return a list of all the uncommon words. You may return the answer in any order.
Example 1:
Input: s1 = "this apple is sweet", s2 = "this apple is sour"
Output: ["sweet","sour"]
Example 2:
Input: s1 = "apple apple", s2 = "banana"
Output: ["banana"]
Constraints:
1 <= s1.length, s2.length <= 200
s1 and s2 consist of lowercase English letters and spaces.
s1 and s2 do not have leading or trailing spaces.
All the words in s1 and s2 are separated by a single space.
Note:
Use dictionary to solve the problem
For example:
Input
Result
32°C Rain showers
Search
ENG IN
19:17 10-06-2024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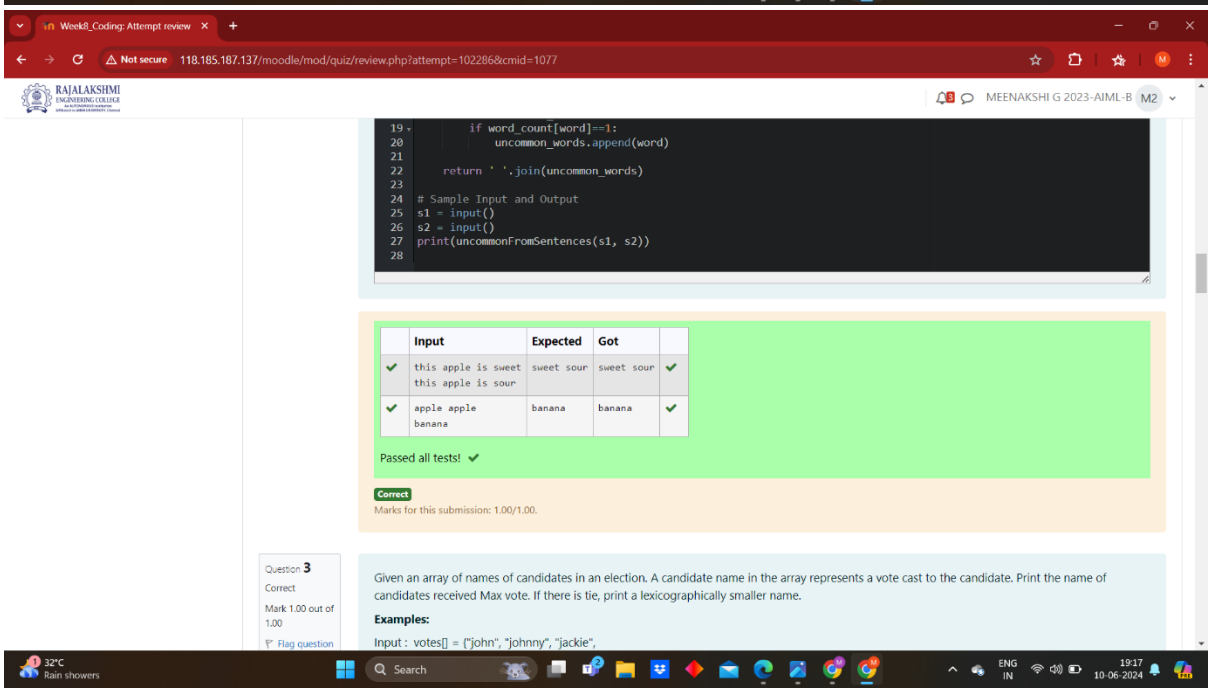
For example:
Input
Result
this apple is sweet
this apple is sour
sweet sour
Answer: (penalty regime: 0 %)
def uncommonFromSentences(s1, s2):
# Split both sentences into words
words1 = s1.split()
words2 = s2.split()
# Create a dictionary to count occurrences of each word
word_count = {}
# Count occurrences of words from both sentences
for word in words1 + words2:
if word in word_count:
word_count[word] += 1
else:
word_count[word] = 1
# Find words that appear exactly once
uncommon_words = []
for word in word_count:
if word_count[word]==1:
uncommon_words.append(word)
return ' '.join(uncommon_words)
# Sample Input and Output
s1 = input()
s2 = input()
print(uncommonFromSentences(s1, s2))
32°C
Rain showers
Search
ENG
IN
19:17
10-06-2024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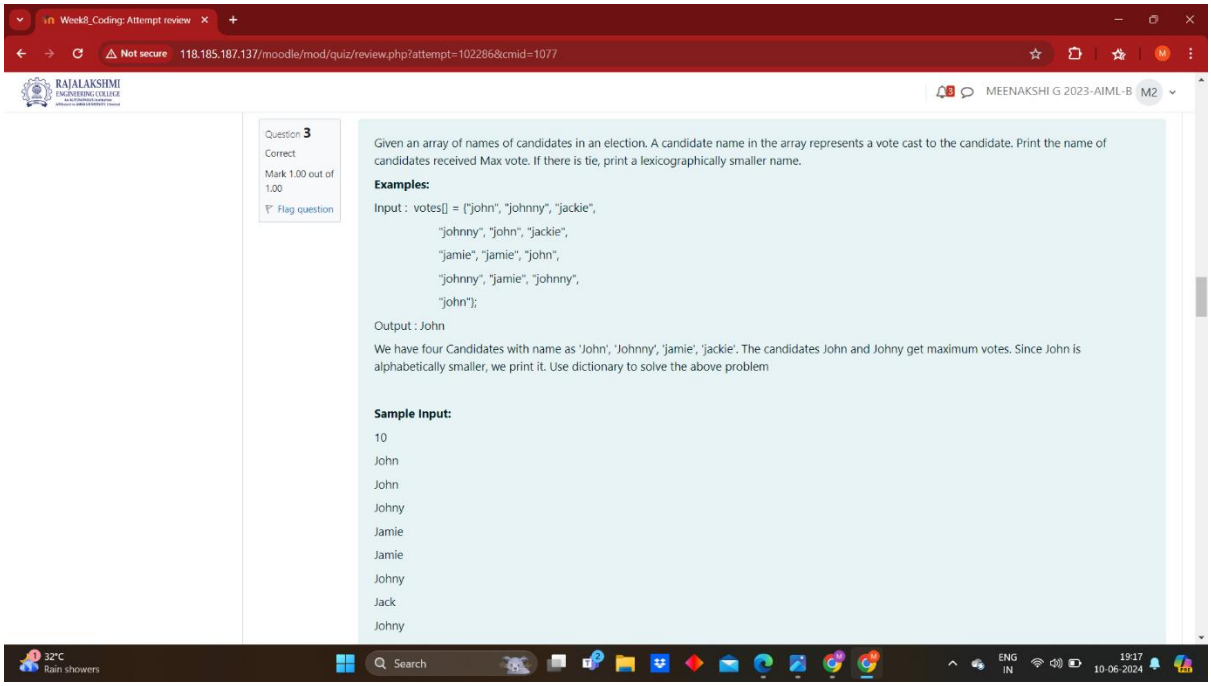
if word_count[word]==1:
uncommon_words.append(word)
return ' '.join(uncommon_words)
# Sample Input and Output
s1 = input()
s2 = input()
print(uncommonFromSentences(s1, s2))
Input
Expected
Got
this apple is sweet
this apple is sour
sweet sour
sweet sour
apple apple
banana
banana
banana
Passed all tests!
Correct
Marks for this submission: 1.00/1.00.
Question 3
Correct
Mark 1.00 out of 1.00
Flag question
Given an array of names of candidates in an election. A candidate name in the array represents a vote cast to the candidate. Print the name of candidates received Max vote. If there is tie, print a lexicographically smaller name.
Examples:
Input : votes[] = {"john", "johnny", "jackie",
32°C
Rain showers
Search
ENG
IN
19:17
10-06-2024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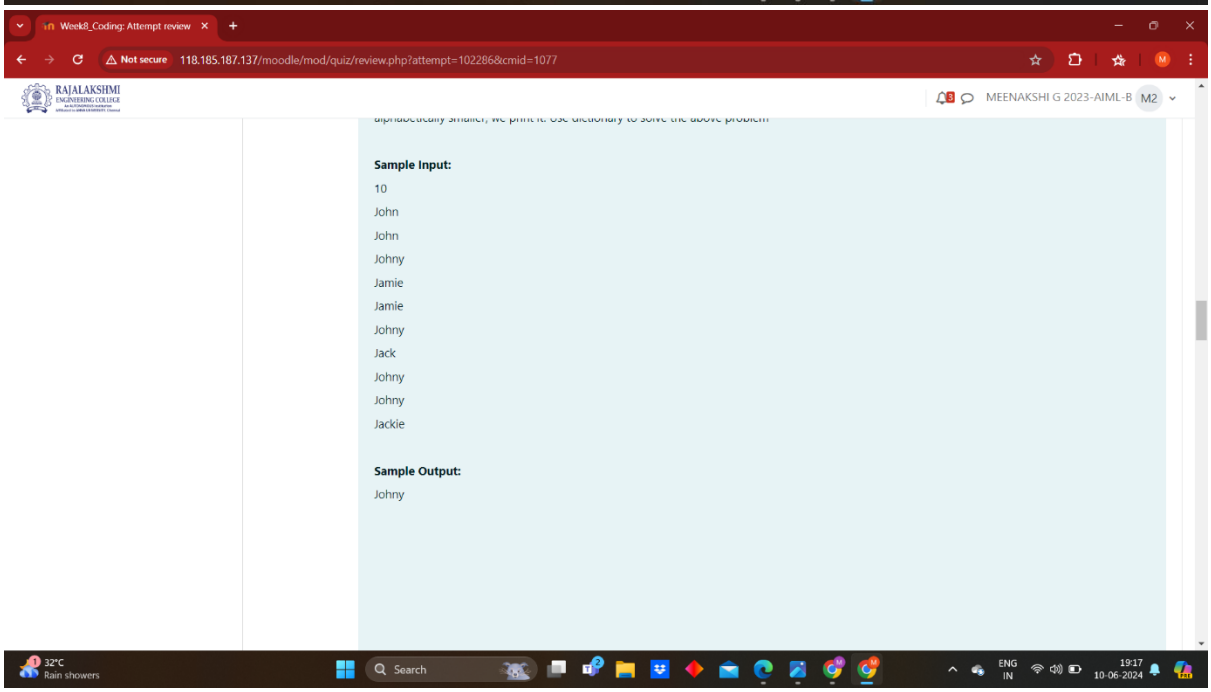
Question 3
Correct
Mark 1.00 out of 1.00
Flag question
Given an array of names of candidates in an election. A candidate name in the array represents a vote cast to the candidate. Print the name of candidates received Max vote. If there is tie, print a lexicographically smaller name.
Examples:
Input : votes[] = {"john", "johnny", "jackie",
"johnny", "john", "jackie",
"jamie", "jamie", "john",
"johnny", "jamie", "johnny",
"john"};
Output : John
We have four Candidates with name as 'John', 'Johnny', 'Jamie', 'Jackie'. The candidates John and Johny get maximum votes. Since John is alphabetically smaller, we print it. Use dictionary to solve the above problem
Sample Input:
10
John
John
Johny
Jamie
Jamie
Johny
Jack
Johny
32°C
Rain showers
Search
ENG
IN
19:17
10-06-2024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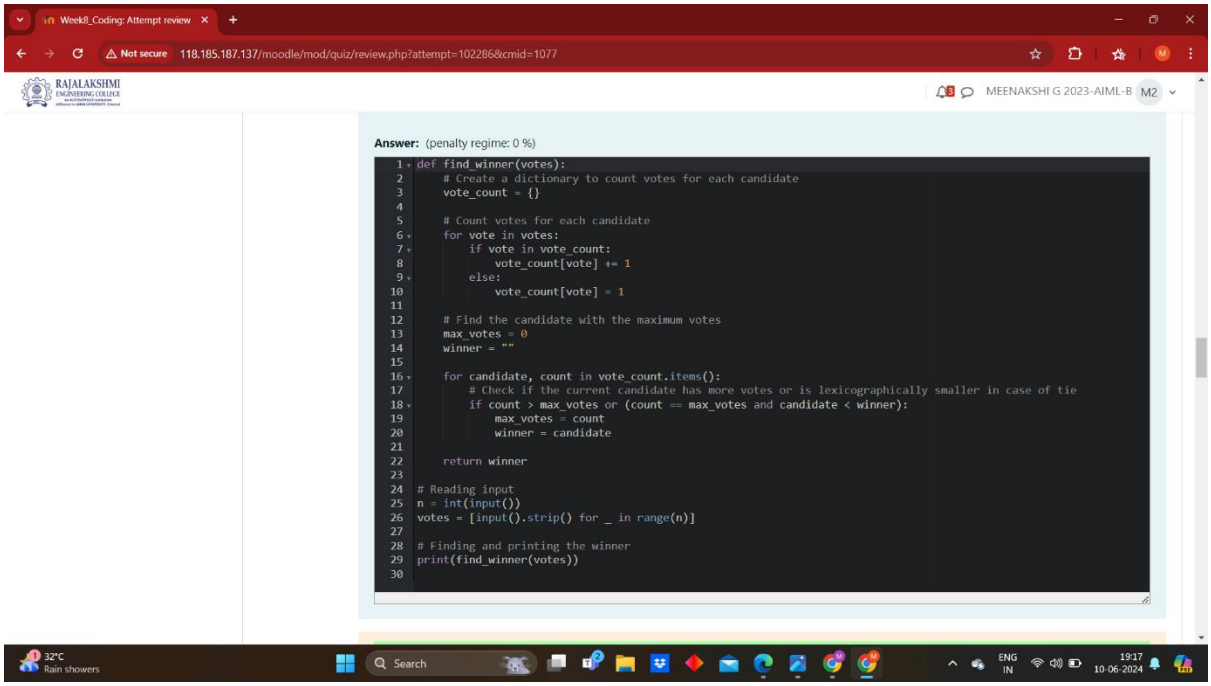
Sample Input:
10
John
John
Johny
Jamie
Jamie
Johny
Jack
Johny
Johny
Jackie
Sample Output:
Johny
32°C
Rain showers
Search
ENG
IN
19:17
10-06-2024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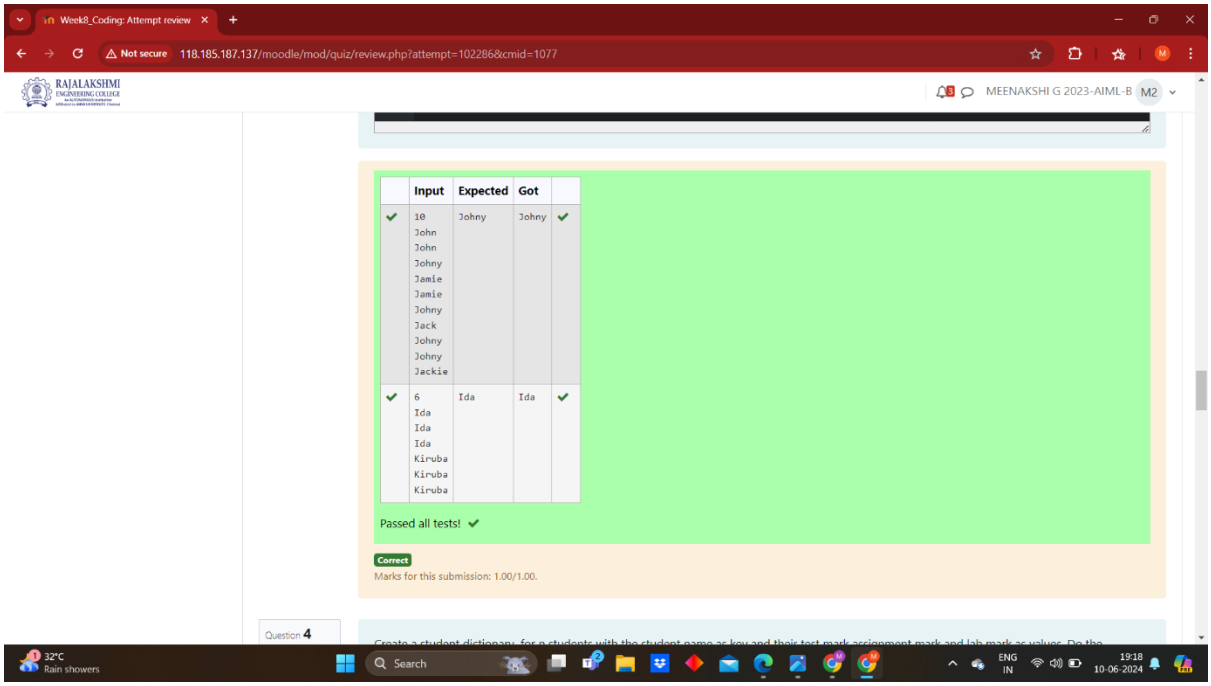
Answer: (penalty regime: 0 %)
def find_winner(votes):
# Create a dictionary to count votes for each candidate
vote_count = {}
# Count votes for each candidate
for vote in votes:
if vote in vote_count:
vote_count[vote] += 1
else:
vote_count[vote] = 1
# Find the candidate with the maximum votes
max_votes = 0
winner = ""
for candidate, count in vote_count.items():
# Check if the current candidate has more votes or is lexicographically smaller in case of tie
if count > max_votes or (count == max_votes and candidate < winner):
max_votes = count
winner = candidate
return winner
# Reading input
n = int(input())
votes = [input().strip() for _ in range(n)]
# Finding and printing the winner
print(find_winner(votes))
32°C
Rain showers
Search
ENG
IN
19:17
10-06-2024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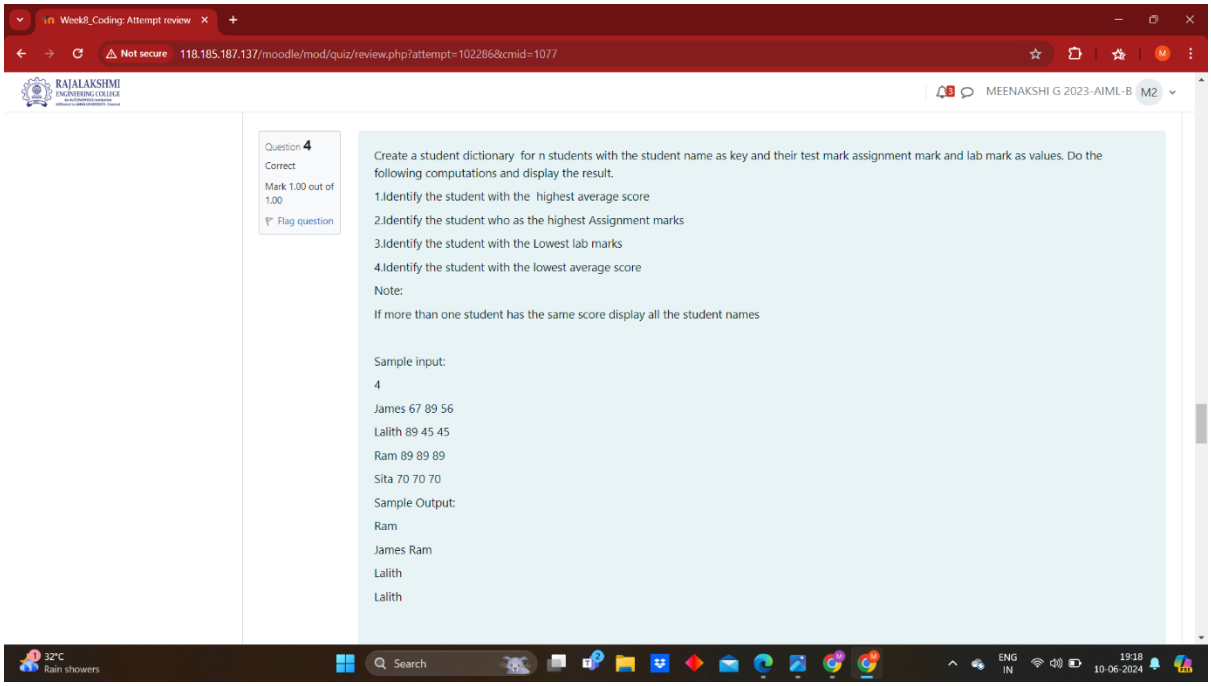
Input
Expected
Got
10
John
John
Johny
Jamie
Jamie
Johny
Jack
Johny
Johny
Jackie
Johny
Johny
6
Ida
Ida
Ida
Kiruba
Kiruba
Kiruba
Ida
Ida
Passed all tests!
Correct
Marks for this submission: 1.00/1.00.
Question 4
32°C
Rain showers
Search
ENG
IN
19:18
10-06-2024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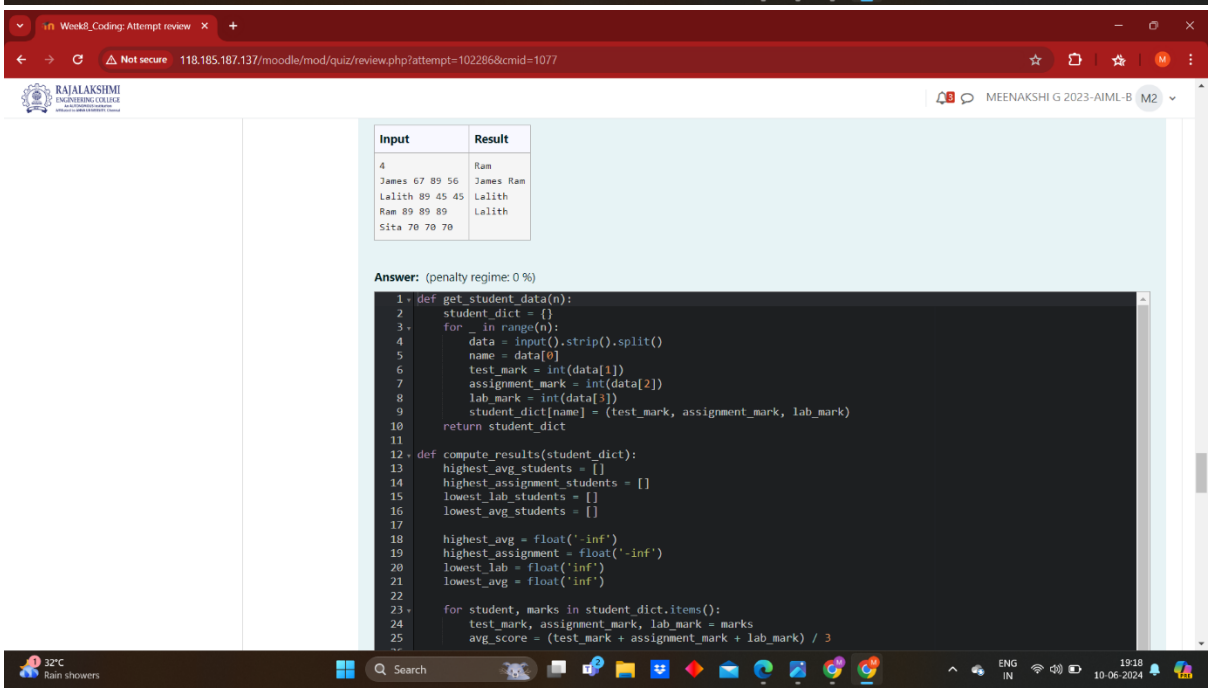
Question 4
Correct
Mark 1.00 out of 1.00
Flag question
Create a student dictionary for n students with the student name as key and their test mark assignment mark and lab mark as values. Do the following computations and display the result.
1.Identify the student with the highest average score
2.Identify the student who as the highest Assignment marks
3.Identify the student with the Lowest lab marks
4.Identify the student with the lowest average score
Note:
If more than one student has the same score display all the student names
Sample input:
4
James 67 89 56
Lalith 89 45 45
Ram 89 89 89
Sita 70 70 70
Sample Output:
Ram
James Ram
Lalith
Lalith
32°C
Rain showers
Search
ENG
IN
19:18
10-06-2024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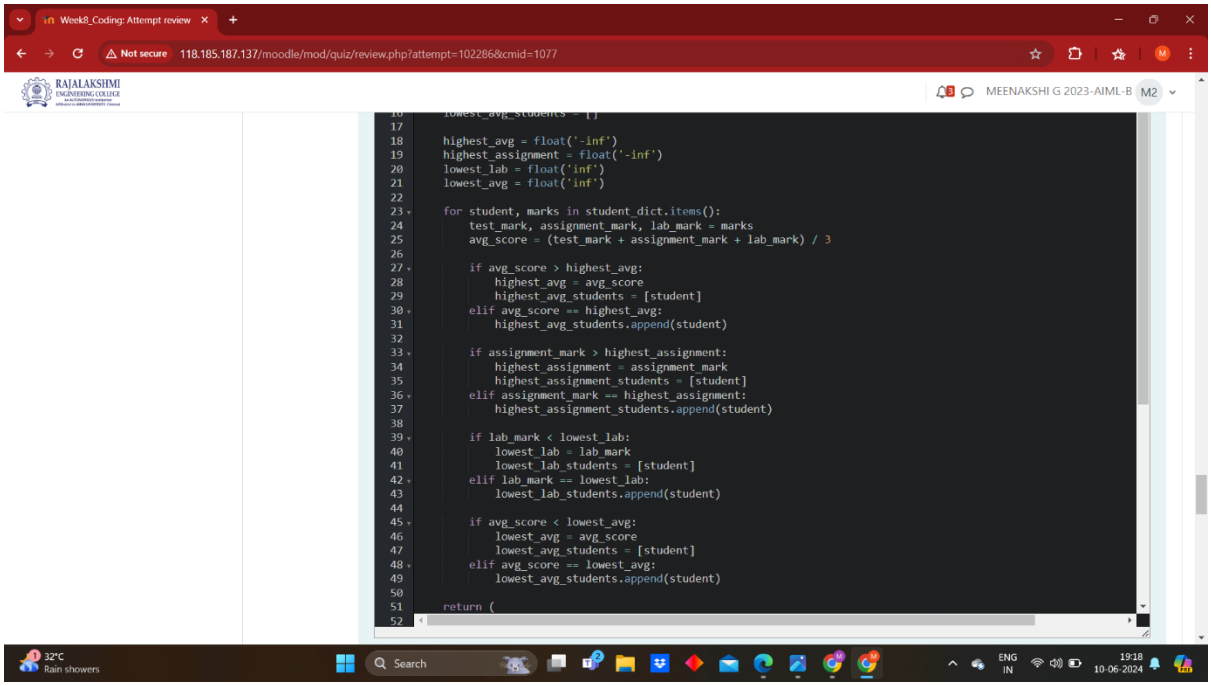
Input
Result
4
James 67 89 56
Lalith 89 45 45
Ram 89 89 89
Sita 70 70 70
Ram
James Ram
Lalith
Lalith
Answer: (penalty regime: 0 %)
def get_student_data(n):
student_dict = {}
for _ in range(n):
data = input().strip().split()
name = data[0]
test_mark = int(data[1])
assignment_mark = int(data[2])
lab_mark = int(data[3])
student_dict[name] = (test_mark, assignment_mark, lab_mark)
return student_dict
def compute_results(student_dict):
highest_avg_students = []
highest_assignment_students = []
lowest_lab_students = []
lowest_avg_students = []
highest_avg = float('-inf')
highest_assignment = float('-inf')
lowest_lab = float('inf')
lowest_avg = float('inf')
for student, marks in student_dict.items():
test_mark, assignment_mark, lab_mark = marks
avg_score = (test_mark + assignment_mark + lab_mark) / 3
32°C
Rain showers
Search
ENG
IN
19:18
10-06-2024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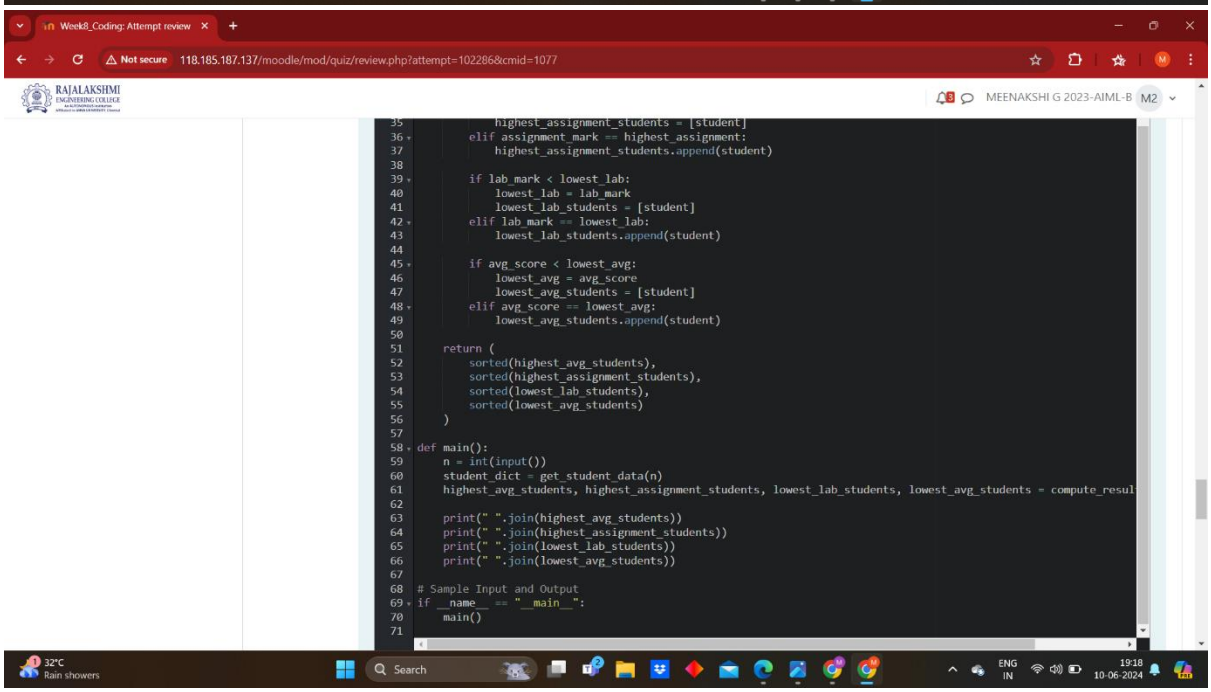
lowest_avg_students = []
highest_avg = float('-inf')
highest_assignment = float('-inf')
lowest_lab = float('inf')
lowest_avg = float('inf')
for student, marks in student_dict.items():
test_mark, assignment_mark, lab_mark = marks
avg_score = (test_mark + assignment_mark + lab_mark) / 3
if avg_score > highest_avg:
highest_avg = avg_score
highest_avg_students = [student]
elif avg_score == highest_avg:
highest_avg_students.append(student)
if assignment_mark > highest_assignment:
highest_assignment = assignment_mark
highest_assignment_students = [student]
elif assignment_mark == highest_assignment:
highest_assignment_students.append(student)
if lab_mark < lowest_lab:
lowest_lab = lab_mark
lowest_lab_students = [student]
elif lab_mark == lowest_lab:
lowest_lab_students.append(student)
if avg_score < lowest_avg:
lowest_avg = avg_score
lowest_avg_students = [student]
elif avg_score == lowest_avg:
lowest_avg_students.append(student)
return (
32°C
Rain showers
Search
ENG
IN
19:18
10-06-2024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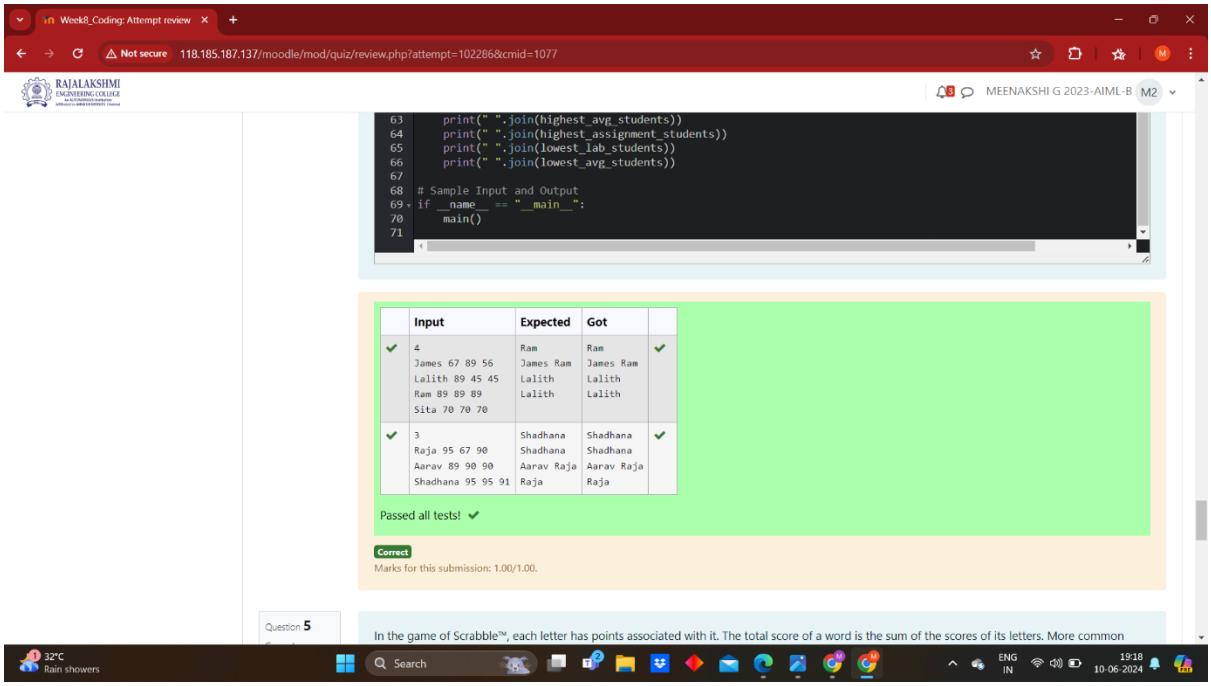
highest_assignment_students = [student]
elif assignment_mark == highest_assignment:
highest_assignment_students.append(student)
if lab_mark < lowest_lab:
lowest_lab = lab_mark
lowest_lab_students = [student]
elif lab_mark == lowest_lab:
lowest_lab_students.append(student)
if avg_score < lowest_avg:
lowest_avg = avg_score
lowest_avg_students = [student]
elif avg_score == lowest_avg:
lowest_avg_students.append(student)
return (
sorted(highest_avg_students),
sorted(highest_assignment_students),
sorted(lowest_lab_students),
sorted(lowest_avg_students)
)
def main():
n = int(input())
student_dict = get_student_data(n)
highest_avg_students, highest_assignment_students, lowest_lab_students, lowest_avg_students = compute_resul
print(" ".join(highest_avg_students))
print(" ".join(highest_assignment_students))
print(" ".join(lowest_lab_students))
print(" ".join(lowest_avg_students))
# Sample Input and Output
if __name__ == "__main__":
main()
32°C
Rain showers
Search
ENG
IN
19:18
10-06-2024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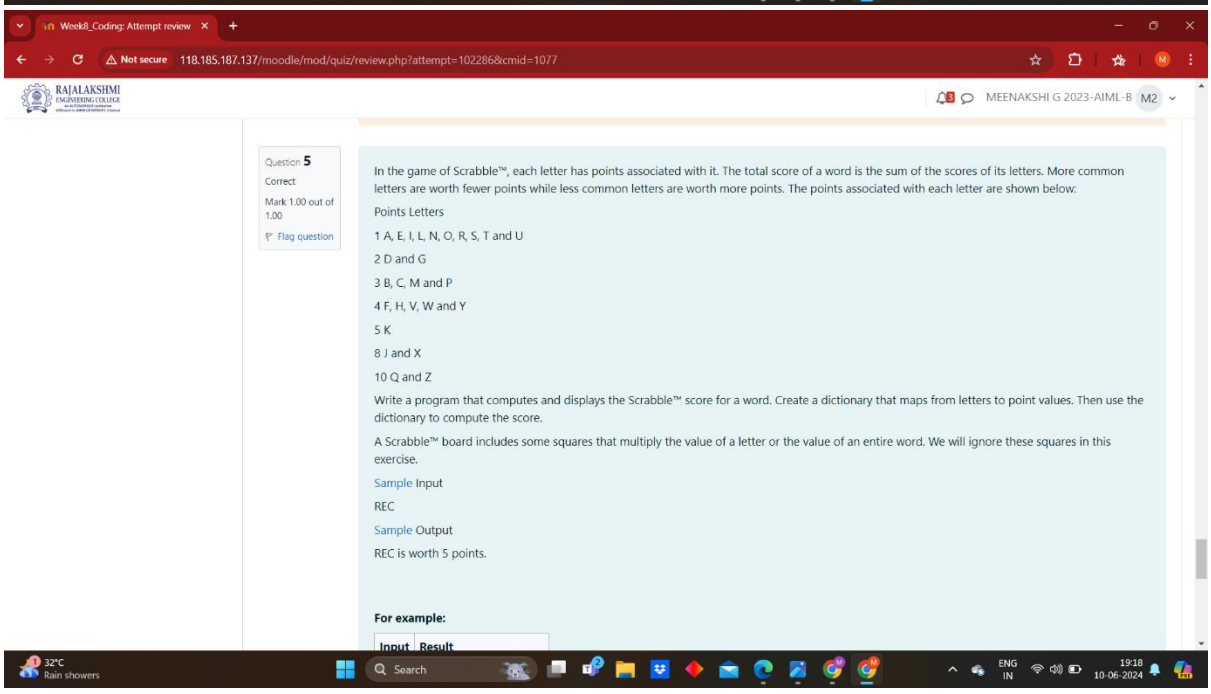
print(" ".join(highest_avg_students))
print(" ".join(highest_assignment_students))
print(" ".join(lowest_lab_students))
print(" ".join(lowest_avg_students))
# Sample Input and Output
if __name__ == "__main__":
main()
Input
Expected
Got
4
James 67 89 56
Lalith 89 45 45
Ram 89 89 89
Sita 70 70 70
Ram
James Ram
Lalith
Lalith
Ram
James Ram
Lalith
Lalith
3
Raja 95 67 90
Aarav 89 90 90
Shadhana 95 95 91
Shadhana
Shadhana
Aarav Raja
Raja
Shadhana
Shadhana
Aarav Raja
Raja
Passed all tests!
Correct
Marks for this submission: 1.00/1.00.
Question 5
In the game of Scrabble™, each letter has points associated with it. The total score of a word is the sum of the scores of its letters. More common
32°C
Rain showers
Search
ENG
IN
19:18
10-06-2024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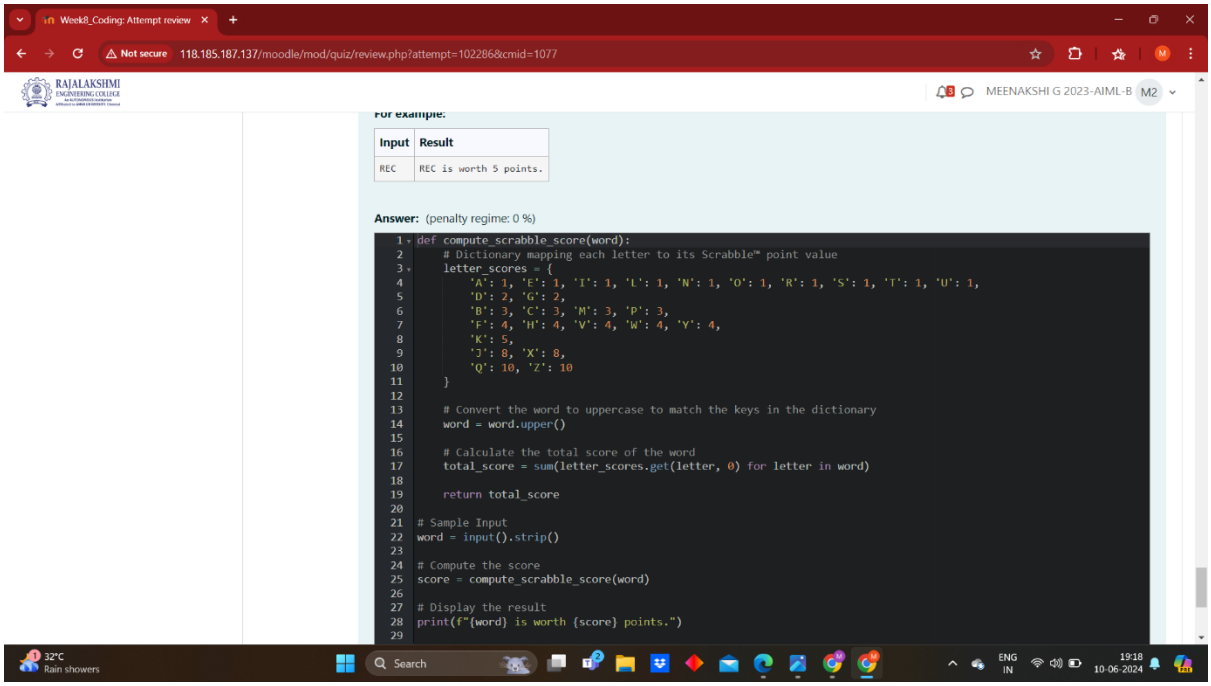
Question 5
Correct
Mark 1.00 out of 1.00
Flag question
In the game of Scrabble™, each letter has points associated with it. The total score of a word is the sum of the scores of its letters. More common letters are worth fewer points while less common letters are worth more points. The points associated with each letter are shown below:
Points Letters
1 A, E, I, L, N, O, R, S, T and U
2 D and G
3 B, C, M and P
4 F, H, V, W and Y
5 K
8 J and X
10 Q and Z
Write a program that computes and displays the Scrabble™ score for a word. Create a dictionary that maps from letters to point values. Then use the dictionary to compute the score.
A Scrabble™ board includes some squares that multiply the value of a letter or the value of an entire word. We will ignore these squares in this exercise.
Sample Input
REC
Sample Output
REC is worth 5 points.
For example:
Input
Result
32°C
Rain showers
Search
ENG
IN
19:18
10-06-2024


Week8_Coding: Attempt review
Not secure
118.185.187.137/moodle/mod/quiz/review.php?attempt=102286&cmid=1077
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For example:
Input Result
REC REC is worth 5 points.
Answer: (penalty regime: 0 %)
def compute_scrabble_score(word):
# Dictionary mapping each letter to its Scrabble™ point value
letter_scores = {
'A': 1, 'E': 1, 'I': 1, 'L': 1, 'N': 1, 'O': 1, 'R': 1, 'S': 1, 'T': 1, 'U': 1,
'D': 2, 'G': 2,
'B': 3, 'C': 3, 'M': 3, 'P': 3,
'F': 4, 'H': 4, 'V': 4, 'W': 4, 'Y': 4,
'K': 5,
'J': 8, 'X': 8,
'Q': 10, 'Z': 10
}
# Convert the word to uppercase to match the keys in the dictionary
word = word.upper()
# Calculate the total score of the word
total_score = sum(letter_scores.get(letter, 0) for letter in word)
return total_score
# Sample Input
word = input().strip()
# Compute the score
score = compute_scrabble_score(word)
# Display the result
print(f"{word} is worth {score} points.")
32°C Rain showers
Search
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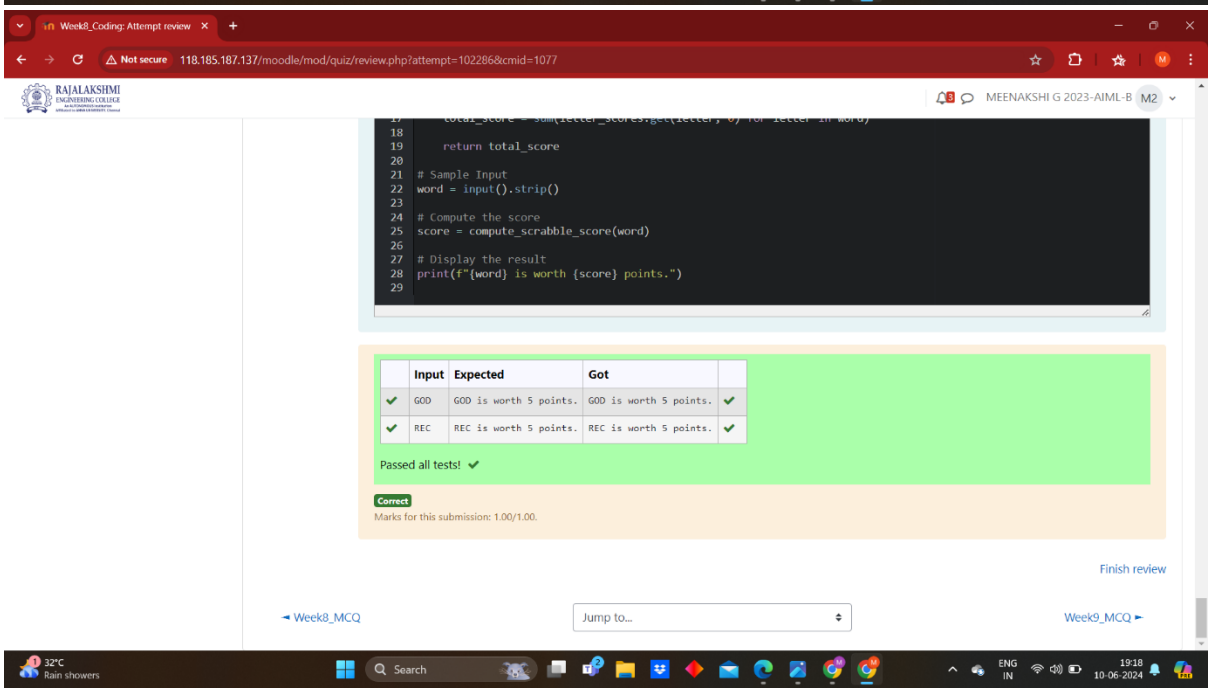
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return total_score
# Sample Input
word = input().strip()
# Compute the score
score = compute_scrabble_score(word)
# Display the result
print(f"{word} is worth {score} points.")
Input Expected Got
GOD GOD is worth 5 points. GOD is worth 5 points.
REC REC is worth 5 points. REC is worth 5 points.
Passed all tests!
Correct
Marks for this submission: 1.00/1.00.
Finish review
◄ Week8_MCQ
Jump to...
Week9_MCQ ►
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