Assignment 2

Name: Divya Ganesh Bharsakle

Roll no: 342

Batch: C2

Tests on Students Details

File:

StudentDetails.csv

1 to 5 of 5 entries Filter

Name	Roll no	Gender	Phone no	CGPA	Division	Weight	Height	Percentage	Branch
Sumit	523	Male	9886475128	8	E	40	159	80%	Chemical
Aditya	154	Male	8734951267	9	A	50	169	90%	Civil
Yash	290	Male	9147653492	10	B	48	164	100%	Computer
Isha	304	Female	8600597314	6	C	42	160	60.00%	Mechanical
Riya	409	Female	9568721648	7	D	47	150	70%	ENTC

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Problem Statement:

1. Sort them roll number wise in ascending order
2. How many female students are there in total

3. How many male students are there in total

4. Determine who has highest CGPA

5. Arrange them in descending order of there percentage

6. Sort them from highest to lowest Weight

7. Sort them from lowest to highest Height

8. Print students with Civil, Chemical Branch

9. Print the students with C division

10. Print name and percentage of highest CGPA student

Code:

```
data = [
    ["Sumit", 523, "Male", 9886475128, 8, "E", 40, 159, "80%",
"Chemical"],
    ["Aditya", 154, "Male", 8734951267, 9, "A", 50, 169, "90%",
"Civil"],
    ["Yash", 290, "Male", 9147653492, 10, "B", 48, 164, "100%",
"Computer"],
    ["Isha", 304, "Female", 8600597314, 6, "C", 42, 160, "60.00%",
"Mechanical"],
    ["Riya", 409, "Female", 9568721648, 7, "D", 47, 150, "70%", "ENTC"]
]

# 1. Sort them roll number wise in ascending order
sorted_data = sorted(data, key=lambda x: x[1])
print("Sorted data (Roll number wise):")
for student in sorted_data:
```

```
    print(student)

# 2. How many female students are there in total
female_students = sum(1 for student in data if student[2] == "Female")
print("Total female students:", female_students)

# 3. How many male students are there in total
male_students = sum(1 for student in data if student[2] == "Male")
print("Total male students:", male_students)

# 4. Determine who has the highest CGPA
highest_cgpa_student = max(data, key=lambda x: x[4])
print("Student with the highest CGPA:", highest_cgpa_student[0])

# 5. Arrange them in descending order of their percentage
sorted_by_percentage = sorted(data, key=lambda x: float(x[8][:-1]),
reverse=True)
print("Sorted data (Descending order of percentage):")
for student in sorted_by_percentage:
    print(student)

# 6. Sort them from highest to lowest Weight
sorted_by_weight = sorted(data, key=lambda x: x[6], reverse=True)
print("Sorted data (Highest to lowest Weight):")
for student in sorted_by_weight:
    print(student)

# 7. Sort them from lowest to highest Height
sorted_by_height = sorted(data, key=lambda x: x[7])
print("Sorted data (Lowest to highest Height):")
for student in sorted_by_height:
    print(student)

# 8. Print students with Civil, Chemical Branch
civil_chemical_students = [student for student in data if student[9] in
["Civil", "Chemical"]]
print("Students with Civil or Chemical Branch:")
for student in civil_chemical_students:
    print(student)

# 9. Print the students with C division
c_division_students = [student for student in data if student[5] ==
"C"]
print("Students with C division:")
for student in c_division_students:
    print(student)

# 10. Print name and percentage of the student with the highest CGPA
```

```
highest_cgpa_student = max(data, key=lambda x: x[4])
print("Name and percentage of the student with the highest CGPA:")
print("Name:", highest_cgpa_student[0])
print("Percentage:", highest_cgpa_student[8])
```

Output:

Sorted data (Roll number wise):
['Aditya', 154, 'Male', 8734951267, 9, 'A', 50, 169, '90%', 'Civil']
['Yash', 290, 'Male', 9147653492, 10, 'B', 48, 164, '100%', 'Computer']
['Isha', 304, 'Female', 8600597314, 6, 'C', 42, 160, '60.00%', 'Mechanical']
['Riya', 409, 'Female', 9568721648, 7, 'D', 47, 150, '70%', 'ENTC']
['Sumit', 523, 'Male', 9886475128, 8, 'E', 40, 159, '80%', 'Chemical']
Total female students: 2
Total male students: 3
Student with the highest CGPA: Yash
Sorted data (Descending order of percentage):
['Yash', 290, 'Male', 9147653492, 10, 'B', 48, 164, '100%', 'Computer']
['Aditya', 154, 'Male', 8734951267, 9, 'A', 50, 169, '90%', 'Civil']
['Sumit', 523, 'Male', 9886475128, 8, 'E', 40, 159, '80%', 'Chemical']
['Riya', 409, 'Female', 9568721648, 7, 'D', 47, 150, '70%', 'ENTC']
['Isha', 304, 'Female', 8600597314, 6, 'C', 42, 160, '60.00%', 'Mechanical']
Sorted data (Highest to lowest Weight):
['Aditya', 154, 'Male', 8734951267, 9, 'A', 50, 169, '90%', 'Civil']
['Yash', 290, 'Male', 9147653492, 10, 'B', 48, 164, '100%', 'Computer']
['Riya', 409, 'Female', 9568721648, 7, 'D', 47, 150, '70%', 'ENTC']
['Isha', 304, 'Female', 8600597314, 6, 'C', 42, 160, '60.00%', 'Mechanical']
['Sumit', 523, 'Male', 9886475128, 8, 'E', 40, 159, '80%', 'Chemical']
Sorted data (Lowest to highest Height):
['Riya', 409, 'Female', 9568721648, 7, 'D', 47, 150, '70%', 'ENTC']
['Sumit', 523, 'Male', 9886475128, 8, 'E', 40, 159, '80%', 'Chemical']
['Isha', 304, 'Female', 8600597314, 6, 'C', 42, 160, '60.00%', 'Mechanical']
['Yash', 290, 'Male', 9147653492, 10, 'B', 48, 164, '100%', 'Computer']
['Aditya', 154, 'Male', 8734951267, 9, 'A', 50, 169, '90%', 'Civil']
Students with Civil or Chemical Branch:
['Sumit', 523, 'Male', 9886475128, 8, 'E', 40, 159, '80%', 'Chemical']
['Aditya', 154, 'Male', 8734951267, 9, 'A', 50, 169, '90%', 'Civil']
Students with C division:
['Isha', 304, 'Female', 8600597314, 6, 'C', 42, 160, '60.00%', 'Mechanical']
Name and percentage of the student with the highest CGPA:
Name: Yash
Percentage: 100%