

You will be given skeleton code that randomizes a semester's course enrollment. It looks like this:

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This semester, course enrollment looked like this: {'Math': [('Sam', 53), ('Alex', 70), ('Mark', 81), ('Sarah', 53), ('Anne', 100), ('John', 94)], 'Science': [('John', 75), ('Joe', 100), ('Julia', 57), ('Bob', 61), ('Anne', 56), ('Mark', 99), ('Alex', 55)], 'English': [('Sarah', 87), ('Bob', 71), ('Anne', 73), ('Freddy', 56), ('Alex', 94)], 'Gym': [('Anne', 66), ('Sarah', 67), ('John', 52), ('Sam', 100), ('Tim', 72)]}
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This is a dictionary called `courses`. Each key is a string representing the name of a course the university offers. Each value for a key is a type tuple with the name and final grade of the student in that particular class. This is randomized so you do not brute force this project.

Your task is to find this information:

1. Class Average for each course
2. Semester Average for each student
3. Find all the students who were in Math and Gym Class
4. Find all the students who were in Gym but not English Class

Here is an example of the program:

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This semester, course enrollment looked like this: {'Math': [('Sarah', 61), ('Anne', 55), ('Julia', 64), ('John', 63), ('Mark', 87)], 'Science': [('Mark', 59), ('Anne', 61), ('Bob', 86), ('Alex', 93)], 'English': [('Tim', 75), ('Julia', 74), ('Sarah', 54)], 'Gym': [('Tim', 80), ('Anne', 101), ('Julia', 69), ('Alex', 96), ('Freddy', 67), ('Bob', 52), ('John', 81)]}
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The class average for Math this semester was 66.0%
The class average for Science this semester was 74.75%
The class average for English this semester was 67.66666666666667%
The class average for Gym this semester was 78.0%
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Sarah's average this semester was 57.5%
Anne's average this semester was 72.33333333333333%
Julia's average this semester was 69.0%
John's average this semester was 72.0%
Mark's average this semester was 73.0%
Bob's average this semester was 69.0%
Alex's average this semester was 94.5%
Tim's average this semester was 77.5%
Freddy's average this semester was 67.0%
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The students who completed math and gym are {'John', 'Julia', 'Anne'}
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The students who were enrolled in gym but not english are {'John', 'Bob', 'Freddy', 'Alex', 'Anne'}
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