

Assignment 2 [12]. Consider an input file with the following example input.

```
John Back, 23, B, CSC366
Bob Wilson, 11, B, CS201
John Back, 23, A, CSC369
```

In general, the input file will contain the student name, the student ID number, grade, and course. You need to write a Map/Reduce program that prints the student name, student id, and the list of classes for that student. The output should be **sorted by** name and then sorted by grade for each name. Here is an example output.

```
Bob Wilson, 11, (B, CS201)
John Back, 23, (A, CSC369), (B, CSC366)
// sorted by name and then by grade
```

- a) what is the natural and the composite key?
- b) show the composite key class (must implement WritableComparable and have compareTo method)
- c) show the mapper class
- d) show the partitioner class
- e) show the group comparator class
- f) show the reducer class