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CIS454

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Quiz 2

**Develop pseudocode (writing an algorithm) to divide the students in a class into groups of 4 students each, such that no two students in the same group have taken the same set of technical electives.**

You may assume that the input to the algorithm isan array containing information about students which includes a list of technical elective courses taken by each student.

Rubric for grading:

* If your algorithm is identical or very similar to that of another student, then reported for academic dishonesty;
* Else if it does not address the problem given, then 0 points;
* Else if it is not written in the format of pseudocode, then 1 point;
* Else if it doesn’t work for normal inputs, then 2 points;
* Else if it doesn’t address all kinds of inputs, then 3 points;

Assuming input is: [ [student1,class1,class2] , [student2,class3,class4],[student3,class5,class6], [student4, class7,class8]]

Assuming output is:

* Group1 = [student1,student2,student3,student4]
  + Bc they all take different electives
* Group2 = empty
* Group3 = empty
* Group 4 = empty

Issues: What if the class doesn’t evenly divide into 4 groups each

1. //Check Input values
2. For each in input
   1. If each[0] == (A student Name) and not a number
      1. Pass
   2. Else
      1. Break
      2. Display(“Not a student, check input”)
   3. While each[1] -> each[-1]
      1. If this is an actual class and not a student
         1. Pass
      2. Else
         1. Break
         2. Display(“Not a class, check input”)
3. //Do algo after checking if input is valid from above
4. groups =[]
5. GroupNum = 0
6. While GroupNum <=4
   1. CurrentStudent = empty
   2. For values in input
      1. currentStudent = values[0]
      2. //Use a for loop to get current classes
      3. //Values[1] excludes name which is values[0]
      4. For values[1] -> values[-1]
         1. ClassesCurrent = [values[1]->values[-1]]
      5. for Compare in input
         1. comparedStudent= values[0]
         2. for compare[1] -> compare[-1]
            1. ClassesCompare = [compare[1] -> compare[-1]]
         3. If ClassesCurrent != ClassesCompare
            1. Add currentStudent to groups[GroupNum]
         4. Else
            1. Pass
   3. If GroupNum = (Length input/4)
      1. GroupNum+= 1