CIS2344 Algorithms Processes and Data

# Practical 12: Lists

## Activity 1 (Portfolio Task):

Implement classes **Student**, **Module**, **Grade** and **StudentSupportOffice** that provide the following functionality:

* Class Student:
  + Stores student id, and average grade for the student
  + Creates a human friendly representation of the class (i.e. toString())
* Class Module:
  + Stores module id, and average grade for the module
  + Creates a human friendly representation of the class (i.e. toString())
* Class Grade:
  + Stores a module, a student and a score (i.e. the score of the student for that module)
* Class StudentSupportOffice:
  + Creates modules, students and grades (while keeping up to date lists of modules, students and grades)
  + Grades can be inserted (a score for a new module-student pair), updated (updating a score for an existing module-student pair) or deleted (deleting an existing module-student pair)
  + Changes to grades must be reflected on module’s and student’s averages (i.e. averages must be recalculated for the given module and student)
  + Prints averages for modules and students based on up to date data

Discuss your progress with your Tutor during practical sessions.

**What to include in your Portfolio:**

* **Report:** Describe in your report which parts of **Activity 1** have been successfully implemented
* **IntelliJ Project:** Include your Java code for **Activity 1** in your IntelliJ project under package "Practical\_12"