Project 4: Student Management System

Managing a university department like ours can be a challenge. There are many students, staff, courses and modules to manage. The aim of this project is to build a student management system prototype that helps staff keep track of the students and courses they are teaching. The desired functionality of the system has been broken down into complexity tiers. It is up to students to attempt to deliver as much functionality as they can.

Basic requirements:

1. • The application must have a Java Swing-based GUI.
2. • The application must represent at least three types of individual – students, academics and tutors. Record appropriate details for these individuals as appropriate such as position, office location, areas of expertise, their employment status in the team (full-time vs part-time), modules taught, a students supervised.
3. • The application must allow users to create and delete modules. modules must have a name, module code, a leader and a moderator.
4. • The application must allow users to create and delete students.
5. • The application must allow users to add students to modules.
6. • The application must allow users to remove students from modules.
7. • The application must allow users to create and delete other types of people, e.g., tutors.
8. • The application must allow users to record students results. For each assignment it shall record the week it was assigned, the grade, and the feedback.
9. • The application must display module class lists.

Intermediate Requirements:

10. • The application must auto-compute statistics for the class, e.g. average mark, maximum mark, minimum mark.
11. • The application must auto-compute statistics for a student – average mark for a module.
12. • The application must display student details.
13. • The application must allow users to view staff profiles (modules being taught, office hours, personal website etc).
14. • All data input to the application must be saved to an appropriate file. Data is always saved when exiting the application.

Advanced Requirements:

15. • The application must be able to load student data from an appropriate file.
16. • The application must have a search facility, allowing users to search for people by name.