# CSC8404 Assignment

## UML

Diagram, schematic

Description automatically generated

The picture above illustrates the overall structure for the student system designed by me, which includes all the fields and methods for each class/interface. Paste the png file here for better visualization.

# Package

1. university

It contains the University interface and Student interface, which implemented separated by AbstractUniversity and StudentFactory. The AbstractUniversity abstract class has the list of students, list of modules and list of supervisors as private field, and has functions to register student, amend student information, terminate student, register module/supervisor for student and issue smart card. It can return all registered modules/supervisor.

1. factory

It contains the StudentFactory which implements the Student interface, extended by Postgraduate and Undergraduate, in addition, Postgraduate extended by PostgraduateResearch and PostGraduateTaught. The StudentFactory returns different Student instance depends on the student type: UG, PGT or PGR. It’s a factory to initialize instance instead of using new from time to time for different types. It returns different student information such as name, id and type.

1. test

It contains testing code using Junit5, as well as two txt files: module.txt and Supervisor.txt