

CS4013 Software Development Project
University of Limerick
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Objectives:

- Apply an object-oriented approach to the design and development of a software application.
- Apply the concepts and techniques introduced in lectures, tutorials and labs to the design and development of a small software application.

UL Student Records Systems

System Requirements:

You are required to build a student records system for UL (in so far as you can). UL offers many different types of programmes, which are of varying duration, at varying levels such as undergraduate, postgraduate and also include both taught programmes and research programmes. Programmes are run by Departments/Schools and these departments hold examination boards at the end of each review period to review student progression. Students may be requested to repeat a module, link-in to modules, repeat semester, year etc...

Your system should store student results (grades in modules each semester) and should perform QCA calculations per semester/year/programme (and others as deemed necessary) for the different types of programmes available in UL. The system should be able to identify students that do not meet the minimum academic standards for progression.

Students should be able to review their own transcript. Faculty should be able to look up transcripts. Faculty should be able to submit results for their modules each year/semester. Departments should be able to hold exam boards to review progression.

All files associated with this application should be stored as csv files and a command line interface should be included.

The UL Handbook of Academic Regulations is available here:

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Suggestions

- In terms of managing the project, consider adopting some of the ideas from an Agile approach such as Scrum...for example such an approach advocates daily meetings. In the context of this project and your work on other modules, maybe you could agree to meet every 2-3 days where it is made clear what each team member will work on.

Project Deliverables

This project must be implemented in the Java programming language. As can be seen from the deliverables below this project is not just an implementation project, it also involves design and documentation.

The following are the deliverables for the project:

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- A document outlining the Class Responsibility Collaboration (CRC) cards. These can be created in a word document.
- A UML class diagram showing the relationships between the classes.
- Documentation for the software generated using the javadoc utility and a help file describing briefly how to run the application.
- The source code for the system where each Java class is stored in a separate file. Any csv files that are required by the system should also be included.
- The use of a Github repository for source code version management.
- The completed contributions file which will be available on Brightspace.

Rules and Regulations

- You must undertake this assignment on a group basis. Strictly groups with max size 4.
- **You must add your details to the project group spreadsheet by the deadline specified (link to spreadsheet will be provided via a Brightspace announcement, deadline for this also provided in this communication). Failure to do so will result in zero marks being awarded for the project.**
- You will be required to give a code walkthrough and demo at a selected time from the start of week 12 to the end of the examination period. It is your responsibility to prepare adequately for such a demonstration and to be knowledgeable about the design, implementation and documentation submitted. Failure to satisfactorily demonstrate your project will result in an F grade for the assignment irrespective of the contents of the submitted documentation. An unsatisfactory demonstration is also likely to be considered plagiarism. It is also your responsibility to ensure that other students do not submit any part of your work as part of their project. This will also be deemed as plagiarism. Plagiarism will result in an F-grade being awarded for all in-term assessments and the University Code of Conduct will be applied.
- An F-grade is awarded if the contributions file is not included and complete.
- The project must be submitted as a single compressed file to Brightspace by the stated deadline. Submission deadline is **12h00 Thursday Week 12**. A **penalty** of 10% for each day thereafter will be imposed for late submissions. Submissions will not be accepted after 12h00 Monday Week 13.
- Lab interviews may be undertaken before the deadline to establish your progress towards completing this assignment. Marks may be awarded for this purpose. Non-attendance at your specified lab may result in you forfeiting these marks.
- Accidental loss of work will not be accepted as an excuse.

Version History:

1.0 released on 25/10/2023