

## DEPARTMENT OF COMPUTER & INFORMATION SCIENCES

### CS994 OBJECT ORIENTED PROGRAMMING 2022/23 INDIVIDUAL COURSEWORK ASSIGNMENT

#### Aims

The aims of this assignment are to:

- gather and specify requirements, and design a software system under the paradigm of Object-Orientation;
- implement this system in Java;
- use appropriate tools for test automation; and
- write and produce API documentation.

#### Learning outcomes

After completing this assignment, you will be able to:

- understand and use objects in common object-oriented languages;
- understand and develop programs using class based object-oriented programming.

#### Brief

Your core task is to implement a **“Library system”** in Java, using advanced elements of the language (e.g. encapsulation, information hiding, inheritance, and polymorphism), and complex data elements and data structures. You are also expected to cover other aspects of the software development lifecycle process, namely requirements gathering and specification, system design, system documentation and testing. Your system must follow the Object-Oriented paradigm. Requirements gathering/brainstorming will take place during the kick-off week, and a “Final requirements” document will be released via MyPlace by Thursday 10/11/2022.

#### Marking criteria

The following criteria will be used when marking your assignment:

1. Requirements	5%
2. System design	15%
3. System implementation (completeness and correctness)	50%
4. Testing/Test cases	20%
5. System documentation/API	10%

#### Format

This is an individual assignment. Plagiarism/collusion<sup>1</sup> checks will be performed on all submissions. You are expected to submit: i) all the source code for your implementation and testing, ii) your system design, and iii) your system documentation/API.

#### Contribution to overall mark

This assignment contributes 50% towards your final module mark.

#### Due date

By 12PM Friday December 2<sup>nd</sup> 2022<sup>2</sup>.

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<sup>1</sup> Penalties apply.

<sup>2</sup> Penalties apply for late submission. Please refer to the PGT Handbook for details, i.e. “Late submission policy”.