

DEPARTMENT OF COMPUTER & INFORMATION SCIENCES

CS994 OBJECT ORIENTED PROGRAMMING 2024/25

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;
- 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 (i.e. w/c 11/11/2024), and a “Final requirements” document along with a “detailed marking scheme” and a “list of deliverables” will be released via MyPlace by **Thursday 14/11/2024**.

[Assignment brief continues on next page]

Marking criteria

100 Marks available.

The following criteria will be used when marking your submission:

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

Format

This is an individual assignment. Plagiarism/collusion¹ 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 6th 2024².

¹ Penalties apply. Please refer to the University's Student Discipline Procedures - Academic Misconduct.

² Penalties apply for late submission. Please refer to the PGT Handbook for details, i.e. "Late submission policy".