University of Central Lancashire
UCLan

School of Enginering

UCLan Coursework Assessment Brief

Academic Year

Module Title: Software Development 2
Module Code: EL2311

2023/2024

Recording and analysing UAAV movements with a database.

This assessment is worth 50% of the overall module mark

THE BRIEF/INSTRUCTIONS

The following Learning outcomes will be assessed in this assessment

- 1. Develop appropriate software solutions to technological problems.
- 2. Describe and apply features of an object oriented programming language.
- 3. Effectively exploit the programming language and development environments.
- 4. Effectively apply software design and development principles.

Assessment Criteria	**Weighting (%)**
Software Development	70
Report	30
Total	**100**

Introduction and background

Students will be provided with the following software (on blackboard) :

An SQL–Lite database file.

A client program that generates an XML file with data.

The aim of the coursework is to give students practical experience in object–oriented software development by implementing a system in an object–oriented language (C#) that involves a number of real–world engineering applications (reading standard data format (XML), database access and storage, user interface design).

The System.

The UCLan autonomous all–terrain Vehicle (UAAV) is in testing phase, the UAAV has been designed to navigate extremely remote and hazardous locations and as such there will be many times when direct communication will not be possible. With this in mind a system has been designed that monitors various metrics around the vehicle and saves the data to a file. The system saves a snapshot of readings once every 5 minutes whilst operating and saves the result to an XML file for analysis (The client software simulates this by producing an XML file with all the readings for that day).

You have been given the task of writing a software system that can take the readings file, save its contents to a database and allow engineers to access the data.

PREPARATION FOR THE ASSESSMENT

- All elements of the coursework have been covered in lectures and labs, all labs between the release of the coursework and the coursework deadline will be dedicated to allow students to complete their coursework.

RELEASE DATES AND HAND IN DEADLINE

Assessment Release date: 15st February 2024 Assessment Deadline Date: 11.59pm 7th April 2024

Your feedback and mark for this assessment will be provided within the University's 15 working day policy for feedback. Written feedback will be available on Blackboard on or before 29th April 2024.

SUBMISSION DETAILS

Submit a single zip file containing the report and all software written to the Turnitin page on Blackboard.

HELP AND SUPPORT

- For support with using library resources, please contact <insert name and email address of your subject Mr. Neil Marshal <NMarshall7@uclan.ac.uk> or <SubjectLibrarians@uclan.ac.uk>. You will find links to lots of useful resources in the My Library tab on Blackboard.
- If you have not yet made the university aware of any disability, specific learning difficulty, long-term health or mental health condition, please complete a Disclosure Form. The Inclusive Support team will then contact to discuss reasonable adjustments and support relating to any disability. For more information, visit the Inclusive Support site.
- To access mental health and wellbeing support, please complete our online referral form. Alternatively, you can email wellbeing@uclan.ac.uk, call 01772 893020 or visit our UCLan Wellbeing Service pages for more information.
- If you have any other query or require further support you can contact The <i>, The Student Information and Support Centre. Speak with us for advice on accessing all the University services as well as the Library services. Whatever your query, our expert staff will be able to help and support you. For more information, how to contact us and our opening hours visit Student Information and Support Centre.
  If you have any valid mitigating circumstances that mean you cannot meet an assessment submission deadline and you wish to request an extension, you will need to apply online prior to the deadline.

Disclaimer: The information provided in this assessment brief is correct at time of publication. In the unlikely event that any changes are deemed necessary, they will be communicated clearly via e-mail and a new version of this assessment brief will be circulated.	Version: 1.0

Marking Criteria

Grade	Mark	Descriptor – Data Storage and Retrieval.
	100	Flawless work.
Exceptional 1st	94	Impressive treatment of **all** requirements as outlined.
High 1st	87	Excellent treatment of **all** requirements as outlined.
Mid 1st	80	Very good treatment of **all** requirements as outlined.
Low 1st	74	Consistently good or better treatment of **all** requirements as outlined, good quality working code using OOP techniques throughout.
High 2.1	68	Good treatment of **all** requirements, good review of challenges with solutions as outlined, good quality working code using OOP techniques throughout, includes extra analytical functions that can determine under what exact conditions the UAAV tests fail.
Mid 2.1	65	Good treatment of **most** requirements as outlined, good quality working code using OOP techniques throughout, includes extra analytical functions that can determine under what exact conditions the UAAV tests fail..
Low 2.1	62	Generally a good treatment of requirements as outlined, good quality working code using OOP techniques throughout, includes extra analytical functions that can determine under what exact conditions the UAAV tests fail.
High 2.2	58	Generally a good treatment of requirements as outlined, straight forward working code using some OOP techniques.
Mid 2.2	55	Generally a good treatment of most requirements as outlined, straight forward working code using some OOP techniques.
Low 2.2	52	Adequate treatment of most requirements as outlined, straight forward working code using some OOP techniques.
High 3rd	48	Adequate treatment of some requirements as outlined, simple working code using a poor design.(EG. Non use of classes etc.)
Mid 3rd	45	Patchy treatment of requirements as outlined, simple working code using a poor design.(EG. Non use of classes etc.)
Low 3rd	42	Limited treatment of requirements as outlined, working simple code using a poor design.(EG. Non use of classes etc.).
Marginal Fail	35	Superficial treatment of requirements as outlined, non-working code.
Mid Fail	30	Inadequate treatment of requirements, little if any evidence of understanding.
Low Fail	25	Largely incomplete or very poor treatment of requirements.
Fail	10	Very limited treatment of topic.
Non submission	0	No work submitted by deadline or work plagiarised.