Assignment Guidance and Front Sheet

This sheet is to be populated by the Module Tutor, checked by the Programme Team, and uploaded to Moodle for students to fill in their ID and submit with their assessment.

Student ID or IDs for group work	Student fill in own ID and attach document for submission
	2136685

Module Title & Code	*WM240, Cyber Context of Software Engineering*
Module Owner	*Hassan Raza*
Module Tutor	*Hassan Raza*
Module Marker	*Hassan Raza*
Assesment type	*Coursework*
Date Set	*cw1 – 27-1-23*
Submission Date (excluding extensions)	*cw1 – 10-3-23*
Marks return date (excluding extensions)	*cw1 - 11-04-2023*
Weighting of mark	*cw1 - 50%*

Assessment Detail	*See individual specifications*
Additional details	*See individual specifications*
Module learning outcomes (numbered)	*1) Apply cyber security good practice to various phases of the software engineering lifecycle* *2) Critically reflect on the development of a software project* *3) Demonstrate the understanding and application of relevant software development frameworks to a given software development scenario*

Learning outcomes assessed in this assessment (numbered)	*1, 2, 3: cw1*
Marking guidelines	*See individual specifications*
Submission guidance	*See individual specifications*
Academic Guidance	*support in timetable lab sessions*
Resubmission details	*A combination of CW1 and CW2 with a new case study i.e., paras 2, 3, 4 in the Introduction will be replaced by a new case study*
Late submission details	If work is submitted late, penalties will be applied at the rate of **5 marks per University working day** after the due date, up to a **maximum of 10 working days** late. After this period the mark for the work will be reduced to 0 (which is the maximum penalty). "Late" means **after the submission deadline time as well as the date** – work submitted after the given time even on the same day is counted as 1 day late.

1 Introduction

Individual Assignment: Cyber Context of Software Engineering

Problem Statement
Global Finance provide automotive loans to retail customers. The system that is being used to process loans is very old and needs to be digitized. Currently, if a customer signs up for a new loan, they need to call into a service centre where the agent takes the customer details and then directs the customer to the dealer who will verify the identity documents and send the confirmation to the customer service agent along with an email containing the customer documents. The customer service agent will enter the details of the customer into the retail system which will send the request for credit check and then the underwriter will follow a manual process to get the customer loan agreement setup. This will be posted to the dealer for the customer to sign before the new car can be ordered for the customer. This whole process can take several days and during busy periods, it can up to two weeks to get an auto loan.

Global Finance want to build a digital platform that is modular in nature and the customer will access the digital platform via a website. The website will have three modules. The first module will allow the customer to browse a selection of cars. After they have selected the car, they have the option to purchase it by making a full payment. In this case, they will be given details of the closest dealer in their area. The second option is to finance the car. If the customer chooses to finance the car, they will be directed to the second module in the digital platform which is the customer finance module.

In the customer finance module, the customer will enter their personal details. Once this is done, the process of validating and approving the finance for the customer will start. The customer should have the option to upload their personal documents to the platform for verification by the finance team. You will need to create a web portal where the specific customer information is stored and only the customer can access their account.

The third module in the website is an internal administration module that will be accessed by the company staff clicking on an administration button on the webpage. The finance team will logon using their username and password and you need to ensure that Multifactor authentication has been enabled such that the user is prompted to enter a code sent to their registered email address. The finance team can keep track of the inventory, the number of cars sold, customer finance applications and customer documents that have been uploaded.

Your Task

For the assessment, you will be required to create a website with the three modules described above.

Your coursework submissions will comprise individual writeups of the work that has been conducted. You must not collaborate on the writeup of individual reports.

Assessment 1: 50% of the total grade

There are two parts to the first part of the assessment: 1A, and 1B.

1A (25%)

You can use any programming language or any web development framework to build the website. It is essential that you are able to show the code and working website on the 10th March, 2023 in class when the assessment is due. In addition, You will need to show that you have created a Github repository and the code has been uploaded to the repository.

If you are not present in class on Friday, 10th March, 2023 to present your code and working website in class, you will automatically be given the mark of 0%.

1B (25%)

You must produce a software design and delivery report that documents the approach you have taken to design and implement your website. You will need to:

a. Provide specific details about how the high-level business requirements were mapped to functional and non-functional requirements
b. Explain how these requirements were delivered using the agile software development methodology
c. Explain the software architecture and high level data flow and please include a diagram for each.
d. Explain how the prototype that you have developed meets the business requirements.

You can use Inkscape, or draw.io for visualisation. The prototype must be included in Appendix 1 of your report. Please note that this is an individual report that needs to be completed by the student.

2 Presentation

You will not receive marks for presentation. However, your submission will be explicitly penalised for presentation errors. Your submission must be professionally presented and must follow a consistent formatting/presentation scheme. Ensure that you follow the guidance outlined below. This guidance is not intended to be conclusive.

Submission format. The submission must be a PDF document.

Formatting. All figures and tables must be properly labelled and captioned. All pages must be numbered. Formatting must be consistently applied throughout the submission. Submissions that stray from this guidance may be penalised.

Referencing. You are strongly advised to use a reference management system such as *Endnote Web*. You must follow the Harvard referencing standard. Please study the guidance provided by the University Library[1]. Citation and referencing errors may be penalised.

Coherence. A poorly worded report will hide excellent content. The narrative should be easy to read, and arguments should be presented coherently and convincingly. Ensure that you spell check the submission, use a grammar checker and ensure that you proofread your work prior to submission. Spell/grammar checkers must be set to UK English, do not use 'Americanised' spellings.

[1]https://warwick.ac.uk/services/library/students/referencing/referencing-styles/harvard_referencing_guide.pdf

Word Count

Coursework 1 word count 1500 words

A margin of ±10% will be allowed on the word count. If your submission exceeds this, you may be penalised. Tables are included in the word count. The references section and the appendices are not included in the word count.