SWE 6002 Enterprise Systems Development

Assessment 001 (100%)
Due date: *14/01/2024*

Assessment Brief

The assessment strategy for this module involves a delivered project with suitable documentation. The coursework will allow you to apply the concepts taught through a series of structured formative assessments to a case study derived from a business environment. You will be asked to design and implement an enterprise solution to the stated problem. An integral part of the assessment will be your ability to identify which components of the final product address the business need. Moreover, security issues should be taken under consideration.

Learning Outcomes Assessed:

LO1: Identify and appraise the role of patterns and frameworks in the design of enterprise application architecture

LO2: Critically analyze, select, and synthesize existing technologies to develop an enterprise application.

LO3: Autonomously construct and plan an enterprise application

LO4: Examine the relationship between business goals and software development

LO5: Research and implement a number of software elements in order to meet the business/infrastructure needs of enterprise in a secure manner.

Description of the Assessment:

A startup is working on a Software as a Service solution. They are ready to launch their product and they need a Customer Relationship Management (CRM) tool to help them with prospective, current, and past customers.

Initially, they want to focus on Contact Management part of the CRM. Hence, they need a system which will:
- Keep records of all people contacted, either they are customers or not. Store personal and demographic data.
- Record contact details, like date of contact, employee who did the contact, reason of the contact, brief description, action to be taken, etc.
- Several options to search who to contact. For example, find those who are not customers yet and we have more than one month to talk to them, or find those who were customers in the past and stopped six months ago.

- Send messages to selected contacts, based on criteria.
- Provide reports and statistics to the managers and investors.

The CRM system must be web based and be open for extension with new features and requirements.

Your task is to:
- Perform analysis of the problem, discussing with the founders (your instructor will play this role) and create a backlog of the requirements.
- Design the system identifying roles and use cases and demonstrating them using appropriate notation, e.g., UML.
- Implement the system using the Spring Boot framework and MySQL database.
- Create a portfolio of the several analyses, design, end implementation documents and artifacts produced.
- Write a report of 3000-4000 words (indicative structure below).
- Present your solution.

Sample Report Outline:

- Student's information, Your full name, program title and user identification (e.g. zz009), word count
- Table of contents
- Introduction
- Definition of the case study, analysis, and design (refer to any design documents, attached as appendices)
- Implementation (refer to any implementation details attached or in GitHub code if necessary). Explain how the business goals were implemented. Also, explain the security level of the implementation in terms of authentication and authorization.
- Evaluation, explaining the role of the framework and Design Patterns for the system
- Conclusions
- References
- Header & Footer (include page number)

References and citation

Written work should be referenced using the standard University of Bolton referencing style (Harvard Referencing Style)– see:
https://www.bolton.ac.uk/library/Study-Skills/Referencing/Home.aspx

Level HE6 - It is expected that the Reference List will contain between **fifteen to twenty sources**. As a MINIMUM the Reference List should include **three refereed academic journals and five academic books.**

Assessment Criteria

Relevance 15%
Knowledge 20%
Argument/Analysis 20%
Structure 10 %
Presentation 15%
Written English 10%
Research/Referencing 10%

(Please note that the General Assessment Criteria will also apply. Please see section 16 of module guide)

Successful submission:

(1) *Students submit their report/essay on Turnitin*
(2) *if the Similarity report score is acceptable then the report is submitted also on the NYC e-learning platform along with the "Digital Receipt" from Turnitin, otherwise the student has to address any issues and resubmit on Turnitin until the due date.*
(3) *Implementation code is uploaded on GitHub.*