502045 Software Engineering Project

A company selling **Supplement Facts products** to agents needs software with the following functions:

- Accountants shall be able to create Goods Received when the company imports goods (a warehouse receipt will include many items) (C# Win Form)
- Agents shall be able to place an order of items and choose a payment method (Cash, bank transfer, Momo...). Agents would also see the status of their orders (C# MVC Webform)
- Accountants shall be able to create Goods Delivery Note to deliver goods to agents (print delivery slips), update the status of orders as being transferred and update the payment status of agents. (C# Win Form)
- Accountants shall be able to view incoming/outgoing stock report, best-selling products and revenue report monthly. (C# Win Form/Report)
- **High Distinction Task: A B2C website (or Mobile App) to sell products (*)**, can use any programing language but should connect to the same **MSSQL Server**

Requirements:

- Complete the report according to the template below (From Title Page to Section 6)
- Presentation / Video recording demo and screenshot (link youtube, github,..)
- The list of products/Agents should have about 7-10 products
- Self-suggested Database structure (submit script database file include insert into to check plagiarism)
- Submit source code (students are free to choose any technologies for (*))
- 2 Students per group, *replace "a company" with your given name of members. For example; Nguyen Van **An** & Tran Thuy **Tien** then "An Tien Co.,Ltd". Show your group logo on any form/report.*

Deadline: 11Dec2022. Language for Winform, Webform, database table,… and Report: English

Vietnamese translation:

Một công ty bán **thực phẩm chức năng** cho các Đại Lý cần phần mềm với các chức năng sau:

- Phát triển chức năng cho kế toán tạo Phiếu nhập kho khi công ty nhập khẩu hàng về (1 phiếu nhập kho sẽ gồm nhiều mặt hàng) (C# Win Form)
- Phát triển chức năng Web cho phép đại lý có thể đặt danh sách mặt hàng và chọn hình thức thanh toán (Tiền mặt, chuyển khoản, Momo…). Đại lý có thể xem tình trạng đơn hàng. (C# MVC Webform).
- Phát triển chức năng cho kế toán làm phiếu xuất kho để chuyển hàng cho các đại lý (in phiếu xuất hàng), cập nhật tình trạng đơn hàng là đang chuyển và cập nhật tình trạng thanh toán của đại lý. (C# Win Form)
- Phát triển chức năng cho kế toán phép xem lại thống kê hàng ra hàng vào, mặt hàng bán chạy nhất, doanh thu của từng tháng. (C# Win Form/Report)
- **Phát triển Website hay Moblie App bán lẻ để bán sản phẩm(*)** (Bất kỳ Ngôn ngữ lập trình nhưng kết nối vào chung **MSSQL Server**)

Yêu cầu:

- Hoàn thành báo cáo theo mẫu bên dưới (Từ Title Page đến mục 6)
- Thuyết Trình / Quay clip demo chức năng và chụp màn hình (link gitgub, youtube)
- Danh mục sản phẩm/đại lý nên có khoảng 7-10 sản phẩm
- Cấu trúc Database tự đề xuất (nộp file script database bao gồm insert into để check đạo văn).
- Nộp toàn bộ mã nguồn sản phẩm (sinh viên tự chọn công nghệ cho mục **(*))**
- Mỗi nhóm : 2 SV, thay thế "A company" bằng tên của các thành viên của nhóm. Ví dụ; Nguyễn Văn An & Trần Thủy Tiên là "An Tien Co.,Ltd". Hiển thị logo của nhóm trên bất kỳ form/report.

Deadline: 11Dec2022. Tất cả các form, report, database table,… và báo cáo đều là English.

Final Report requires the following outline.

Title   Page   Executive
Summary
Table of Contents List of
Figures List of Tables

1. Introduction

1.1.   Purpose and Scope
1.2.   Product Overview (including capabilities, scenarios for using the product, etc.)
1.3.   Structure of the Document
1.4.   Terms, Acronyms, and Abbreviations

2. Project Management Plan

2.1.   Project Organization
2.2.   Lifecycle Model Used
2.3.   Risk Analysis
2.4.   Hardware and Software Resource Requirements
        (Do not forget to describe what *new* software or hardware each team member learned
        during the project)
2.5.   Deliverables and Schedule
2.6.   Monitoring, Reporting, and Controlling Mechanisms
2.7.   Professional Standards
2.8.   Evidence all the artifacts have been placed under configuration management
2.9.   Impact of the project on individuals and organizations
        (Include a description of what impact your project will have on individuals and society)

3. Requirement Specifications

3.1.   Stakeholders for the system
3.2.   Use case model
3.2.1. Graphical use case model
3.2.2. Textual Description for each use case
3.3.   Functional requirements
3.4.   Non-functional requirements

4. Architecture

4.1.   Architectural style(s) used

4.2.   Architectural model

4.3.   Technology, software, and hardware used

4.4.   Rationale for your architectural style and model

5. Design

5.1.   Database design

5.2.   Static model – class diagrams

5.3.   Dynamic model – sequence diagrams

5.4.   Rationale for your detailed design model

5.5.   Traceability from requirements to detailed design model

6. Test Plan

6.1.   Requirements/specifications-based system level test cases

6.2.   Traceability of test cases to use cases

6.3.   Techniques used for test generation

6.4.   Assessment of the goodness of your testsuite (Which metrics were used for such assessment?)

7. Demo

7.1.   Database

7.2.   Source code

7.3.   Testing

References

(Must be complete, correctly formatted using the standard for IEEE/APA Conference Proceedings)

<u>Notes:</u>

Serious violations may result in disciplinary action by Faculty, you will receive zero points including but not limited to:

- o Each other's plagiarism will receive a penalty with zero point for both the giver and the copier.
- o Plagiarism from online sources (if any) are more than **30% (based on words count)**
- o Failed to comply with the following requirements for report submission.

Rubrics Assessment:

Item	Rubrics	1	2	3
	Points /10	0-0.25	0.25 – 0.5	0.5 – 1.0
1/ Project Management Plan	1.0	- No clear project management plan, no analysis	- Good project management plan but have some lack of depth and detail	- Clear and correct project management plan
2/ Requirements Specification	1.0			
Use case diagrams	0.5	- No use case diagrams or having significant errors.	- Having use case diagrams but with some acceptable errors	- Having correct and sufficient use case diagrams
Use case specification	0.5	- No use case specification or having significant errors.	- Having use case specifications but with some acceptable errors	- Having correct and sufficient use case specifications
3/ Architecture design	1.0	- No architecture design or having significant errors.	- Having architecture design but with some acceptable errors	- Having correct and sufficient architecture design
4/ Design	1.5			
Class diagrams	0.5	- No class diagrams or having significant errors.	- Having class diagrams but with some acceptable errors	- Having correct and sufficient class diagrams
Sequence diagrams	0.5	- No sequence diagrams or having significant errors	- Having sequence diagrams but with some acceptable errors	- Having correct and sufficient sequence diagrams
Database design	0.5	- No database design or having significant errors	- Having database design but with some acceptable errors	- Having correct and sufficient database design

Item	Rubrics	1	2	3
	Points /10	0-0.25	0.25 – 0.5	0.5 – 1.0
5/ Build apps with at least 4 main functions	2.0	- No application - No demo	- Having runnable applications with acceptable bugs - Having video demo	- Having runnable applications with good, stable functionalities - High quality video demo
6/ Coding Convention	0.5	- No or minimal coding convention.	- Having coding convention but not thorough	- Having thorough coding convention
7/ Testing, Test case, Unit test	1.0	- No testing - No unit test	- Having testing and unit test but not thorought	- Having thorough testing and unit test
8/ SVN/GIT	0.5	- Not using GIT/SVN	- Using GIT/SVN but not thorougth	- Using GIT/SVN throughout the whole project.
9/ Hình thức báo cáo, demo	1.5	- Do not use standard report - Having significant grammatical and stylistic errors	- Few significant errors/mistakes in report	- Rich in content - Minimal errors - No grammatical errors - Full references
10/ High Distinction Task or Extra Point	**1.0**			- B2C Web - Mobile App via API - Or MVC Web well performance
Total	10 **+ 1**			

Technology:

i) C# + MSSQL

ii) (*): B2C Web or Mobile App: can use .php, React/NodeJS,… but same database with i)

Roles in software development