SOEN343:
SOFTWARE ARCHITECTURE AND DESIGN

“Delivery” service application
(Phase II)

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Contents

1 General Information

Date posted: September. 17, 2024

Date due: TBA

Weight: 5% of the overall grade.

Total: 100 marks

2 Introduction

This assignment targets:

1. Understanding the system architecture.
2. Understanding the use case diagram.
3. Understanding the sequence diagram.

3 Ground rules

You are allowed to work on a team of 4 students to 6 students at most (including yourself). Each team should designate a leader who will submit the assignment electronically. See Submission Notes for the details. ONLY one copy of the project is to be submitted by the team leader.

4 Project description

The core features of the "Delivery" service include:

1. Request for delivery (details of pick up and drop of)
2. Proposal of a quotation for the service
3. Communication about the service
4. Tracking the order
5. Payment.
6. Help assistance by using Chatbot.

5 Your Project (phase II)

5.1 System Architecture

The System Architecture (SA) defines the packages within which software classes are defined. In this part of the work, you should define at least three layers among the below possible ones. For each layer you need to provide a description and details of its elements.

1) UI layer
2) Application layer
3) Domain layer
4) Business infrastructure layer
5) Technical services
6) Foundation and domain objects

The bellow figure shows all the details that you should consider in the defining each layer.

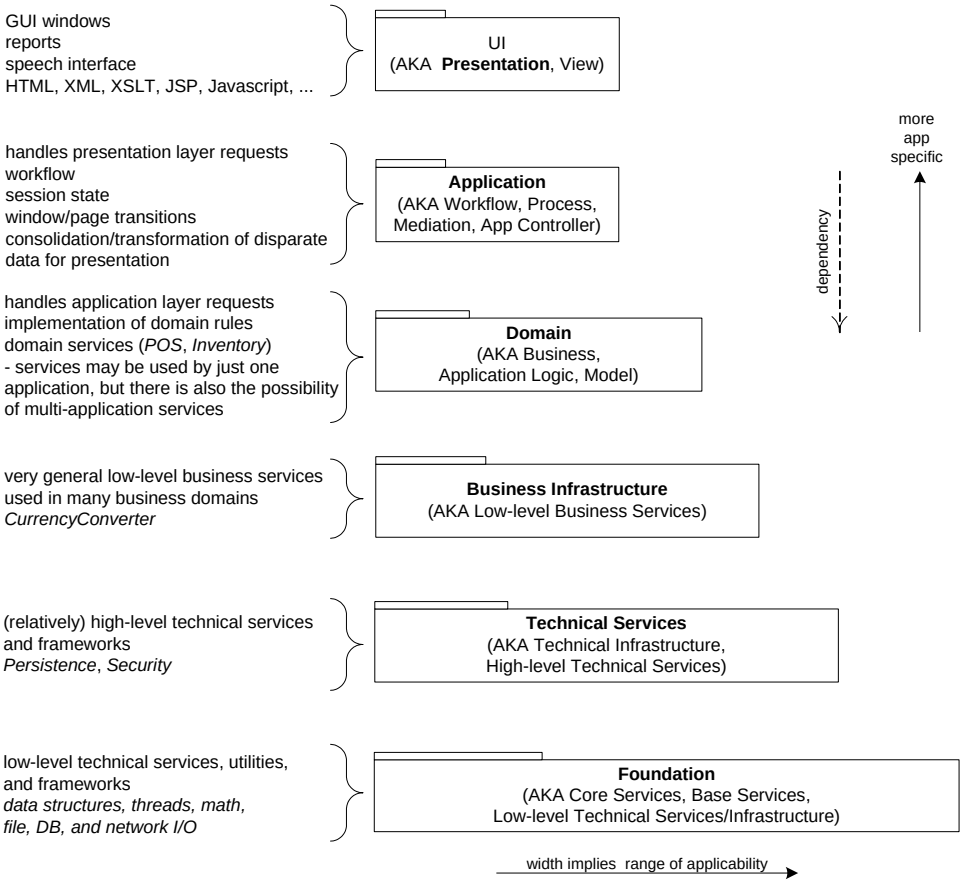

Figure 1. Common layers in an information system logical architecture.

5.2 Use cases

5.2.1 Use case diagram

A use case diagram is a graphical depiction of a user who interacts with a system. A use case diagram shows various use cases and different types of users the system has and will often be accompanied by other types of diagrams as well. At least six features are expected to be included:

1) Requesting the delivery (entering delivery details and receiving delivery identification).
2) Proposal of a quotation for the delivery service (details of the request)
3) Tracking the delivery (initiate tracking by Id and getting the information about the delivery: time to arrival, contact person info).
4) Payment (identification of the service with due payment and payment).
5) Review of service (details of the usage of the service, comments on the delivery person and other details related to the offered service).
6) Customer support (for general or specific requests)

5.2.2 Use case Scenarios

For each use case described in the above section, provide a use case scenario describing the behavior of the system. Use the below template for your scenarios

ID:	**[Unique ID of this use case]**
Title:	[Enter the goal of the use case - preferably as a short, active verb phrase]
Description:	[Describe the goal and context of this use case. This is usually an expanded version of what you entered in the "Title" field.]
Primary Actor:	[A person or a software/hardware system that interacts with your system to achieve the goal of this use case.]
Preconditions:	[Describe the state the system is in before the first event in this use case.]
Postconditions:	[Describe the state the system is in after all the events in this use case have taken place.]
Inputs:	[known inputs for the use case]
Outputs:	[Known outputs of the use case]
Main Success Scenario:	[Describe the flow of events from preconditions to postconditions, when nothing goes wrong.]

5.3 Sequence diagram

Sequence diagram is an "interaction diagram" that models a single scenario executing in the system.

In this part you should draw six sequence diagrams for the use cases described in the above section.

6 What to Submit

The whole assignment is submitted by the due date under the corresponding assignment link. It has to be completed by ALL members of the team and only one file in PDF or WORD format will be submitted.

6.1 Submission Notes

Clearly include the names and student IDs of all members of the team in the submission. Indicate the team leader.

One copy of the assignment is to be submitted. You must make sure that you upload the project to the correct link on Moodle. No email submissions are accepted. Projects uploaded to the wrong system, wrong folder, or submitted via email will be discarded and no resubmission will be allowed. Make sure you can access Moodle prior to the submission deadline. ***The deadline will not be extended.***

Naming convention for uploaded file: Create a PDF or WORD file using the following naming convention. The file should be called a#_studids, where # is the number of the project phase, and studids is the student id of the team leader. For example, for the first project phase, student ID is 12345678 would submit a PDF file named a1_12345678.pdf. Submit your project electronically on Moodle based on the instruction given by your instructor as indicated above: https://moodle.concordia.ca

6.2 Submission template

The bellow shows the submission template for the project.

First page: Project name, Team Name, Team members, student IDs, document purpose (Phase 2: System architecture and sequence diagram), Date.

Second Page: Table of content

Body of the report: The body of the report will be organized as follow.

I- Summary of the project

[small summary about the system to-be]

II- System architecture

[details of the layers with description; make sure you provide enough details in the diagram for the different layers and their content. Amend the diagram with explanation in text-based paragraph]

III- Use cases

[diagrams and scenarios: start the paragraph with a brief introduction of the system functionalities, draw the use case diagram of the system and a scenario for each one (according to the template)]

IV- Sequence diagram

[sequence diagrams with details and link to the scenario: for each functionality mention how it is initiated in real life and draw its corresponding sequence diagram]

7 Grading Scheme

System summary	0~10 marks
System architecture (layers identified, explained, reflect full understanding of system architecture, level of details)	0~20 marks
Use case diagram (appropriate notation, correct diagrams and complete details of the scenario reflecting and understanding of the dynamic model)	0~20 marks
Sequence diagram (correct and complete representation, usage of automated tool)	0~20 marks
Documentation and professionalism	0~10 marks
Overall assessment (Originality of the ideas and particularities of the work)	0~20 marks
Total	**0-100 marks**