SOEN343:
SOFTWARE ARCHITECTURE AND DESIGN

“Delivery” service application
(Phase I)

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Fall 2024

Contents

1 General Information

Date posted: Friday, September 6th, 2024.

Date due: September 21st

Weight: 5% of the overall grade.

Total: 5 marks

2 Introduction

This assignment targets:

1. Understanding system as-is
2. Proposing a system-to be
3. Understanding how the problem can be identified
4. Understanding the concept and domain of the system.

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 I)

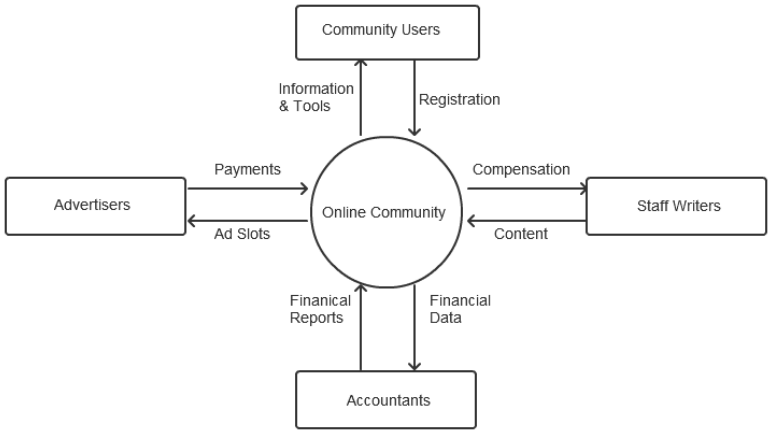
5.1 Problem definition

Problem definition is a description of a problem to be addressed or a condition to be improved upon. It identifies the gap between the current state and desired state of a system. In this part of the work, the students should answer the bellow questions:

1) What is the problem?
2) How the problem emerged?
3) What is your solution?
4) What are the advantages of your solution in comparison with the existing solutions?
5) What are the features that you may think of and make your system better than your competitors?

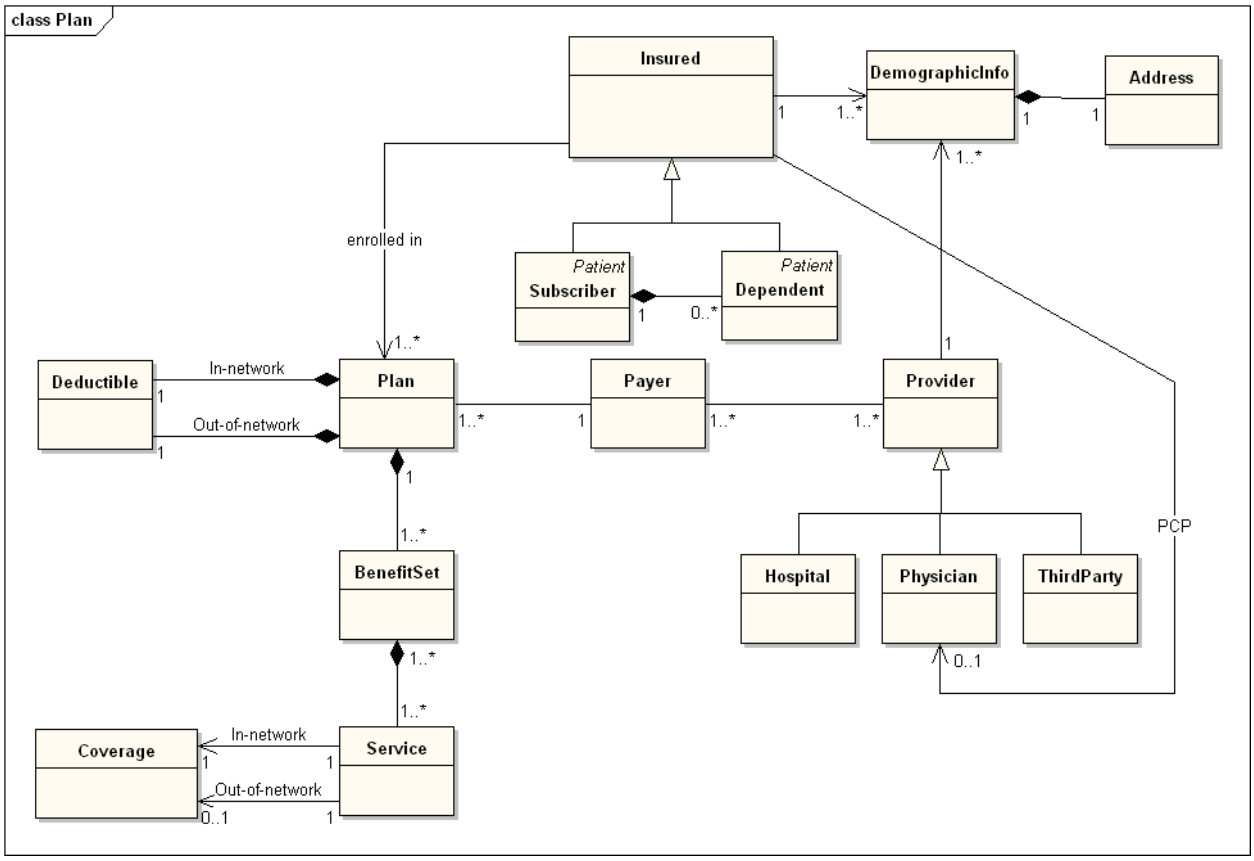
5.2 Context diagram

Context diagram is a high-level view of a system, which defines the boundary between the system, or part of a system, and its environment. In other word, the diagram represents all external entities that may interact with a system. In this part, the students should find all the external entities that have relation with their system. A sample context diagram is shown as follow[1].



5.3 Domain model

A domain model is a formal representation of a knowledge domain with concepts, roles, datatypes, individuals, and rules, typically grounded in a description logic. The bellow figure shows a sample domain model for a health insurance plan [2].



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.

IMPORTANT: You are allowed to work on a team including 4 to 6 students at most (including yourself). ONLY 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, Date,Team members, student IDs and roles

Second Page: Table of content

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

I- Project Definition
I.1. Objectives: (list of objectives: which problem to solve…)
I.2. Defined method of approach:
- methodology of work and members responsibilities
- elements and deliverables of the project (use the details provided in the syllabus and course outline)
I.3. Project scope: focus on design principles and learn….

II- Problem Definition
II.1 What is the problem?
II.2 How the problem emerged?
II.3 What is your solution?
II.4 What are the advantages of your solution in comparison with the existing solutions?

III- Technology used: {technology used for the following activities)
- Team collaboration
- Monitoring and verification
- Design and modeling work
- Interface
- Coding….

IV- Context diagram

V- Domain model

Reference: In the last part of the project the reference should be identified.

7 Grading Scheme

Problem definition	2~10 marks
Context diagram	2~10 marks
Domain model	2~10 marks
Using tools (such as drow.io or other tools for drawing diagrams)	2~10 marks
Documentation with following the template	2~10 marks
Total	**10~50 marks**

8 Reference

[1] https://www.modernanalyst.com/Careers/InterviewQuestions/tabid/128/ID/1433/What-is-a-Context-Diagram-and-what-are-the-benefits-of-creating-one.aspx

[2] https://en.wikipedia.org/wiki/Domain_model