

CS708 – Software Requirement Engineering

Solution to Assignment 4

Instructions to Solve Assignments

The purpose of assignments is to give you hands on practice. It is expected that students will solve the assignments themselves. Following rules will apply during the evaluation of assignment.

- Cheating from any source will result in zero marks in the assignment.
- Any student found cheating in any two of the assignments submitted will be awarded "F" grade in the course.
- No assignment after due date will be accepted.

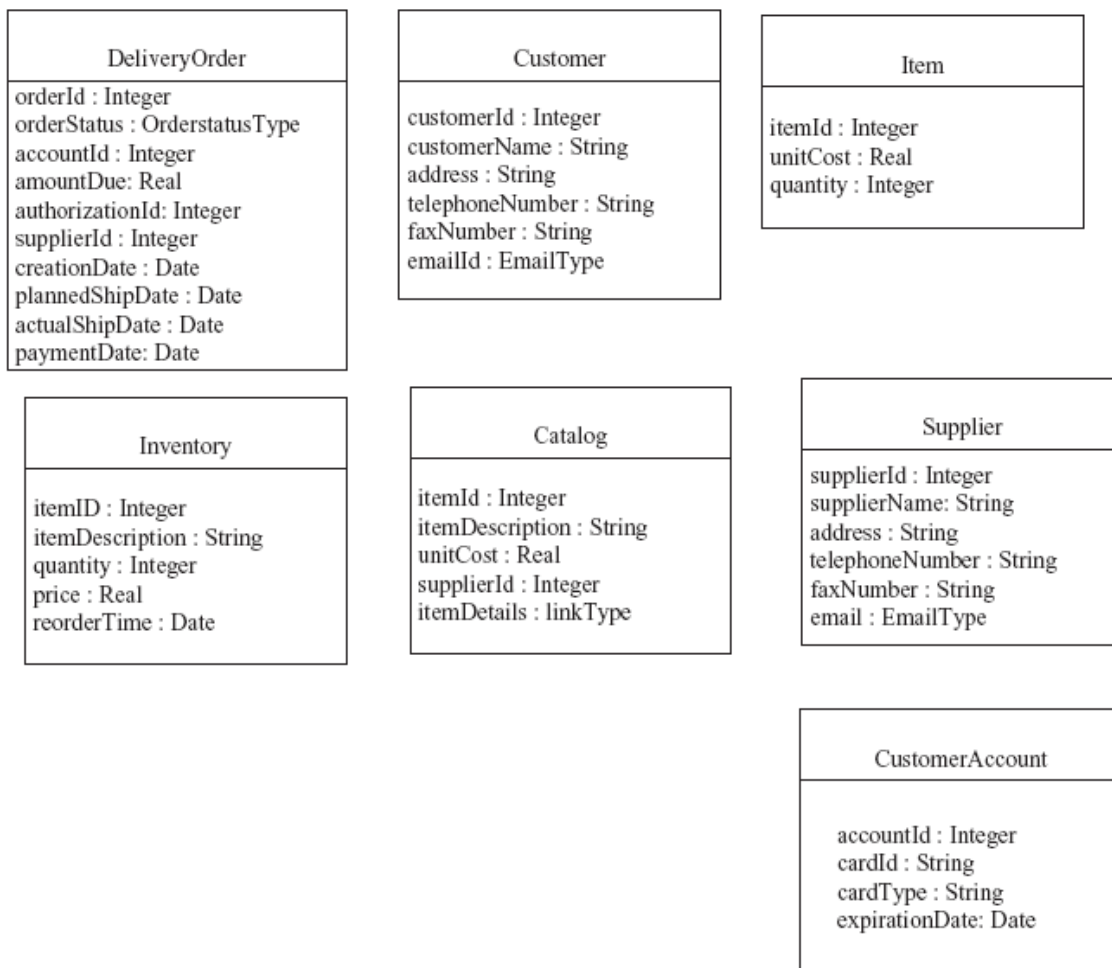
Question 1: Total Points (10+20+25=55)

In the Web-based Online Shopping System, customers can request to purchase one or more items from the supplier. The customer provides personal details, such as address and credit card information. This information is stored in a customer account. If the credit card is valid, a delivery order is created and sent to the supplier. The supplier checks the available inventory, confirms the order, and enters a planned shipping date. When the order is shipped, the customer is notified and the customer's credit card account is charged.

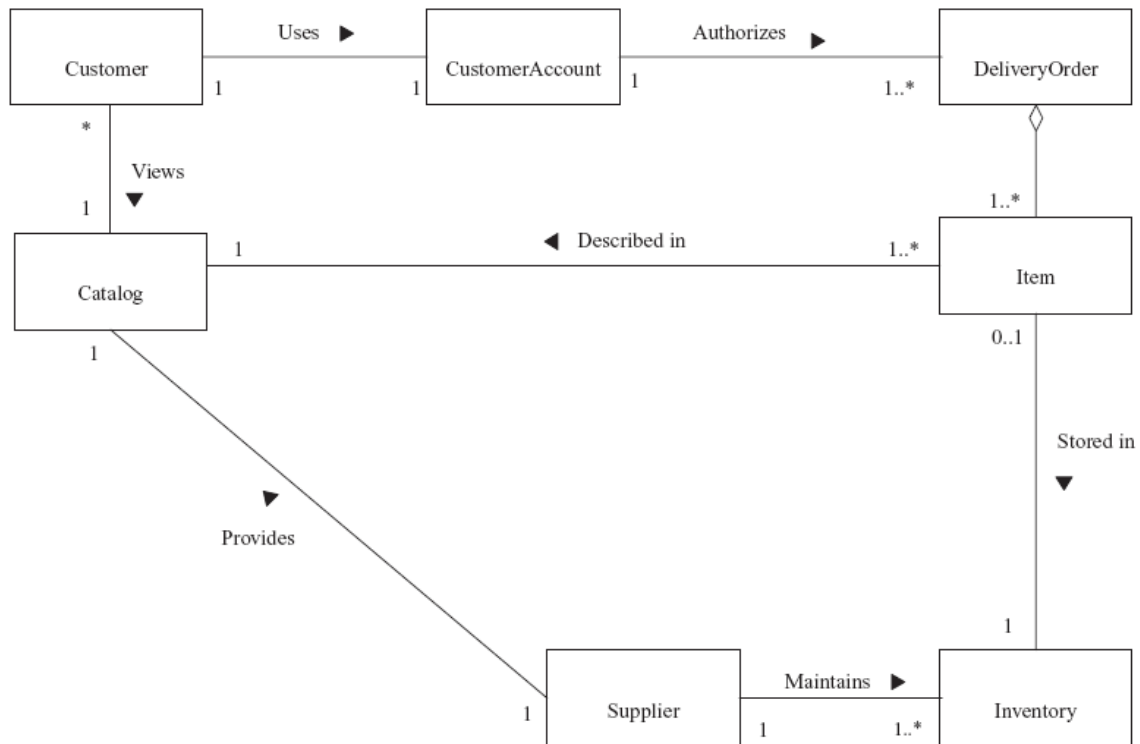
- Identify and draw classes (with attributes) for this system.
- Draw conceptual static model for this system based on the classes identified in part (a).
- Draw collaboration diagram for each of the use case identified in the previous assignment for this system.

Solution:

(a) Classes:

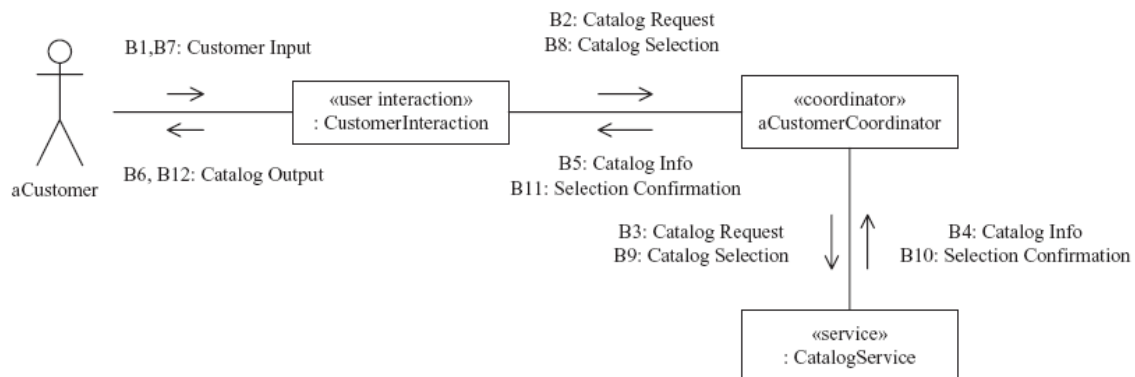


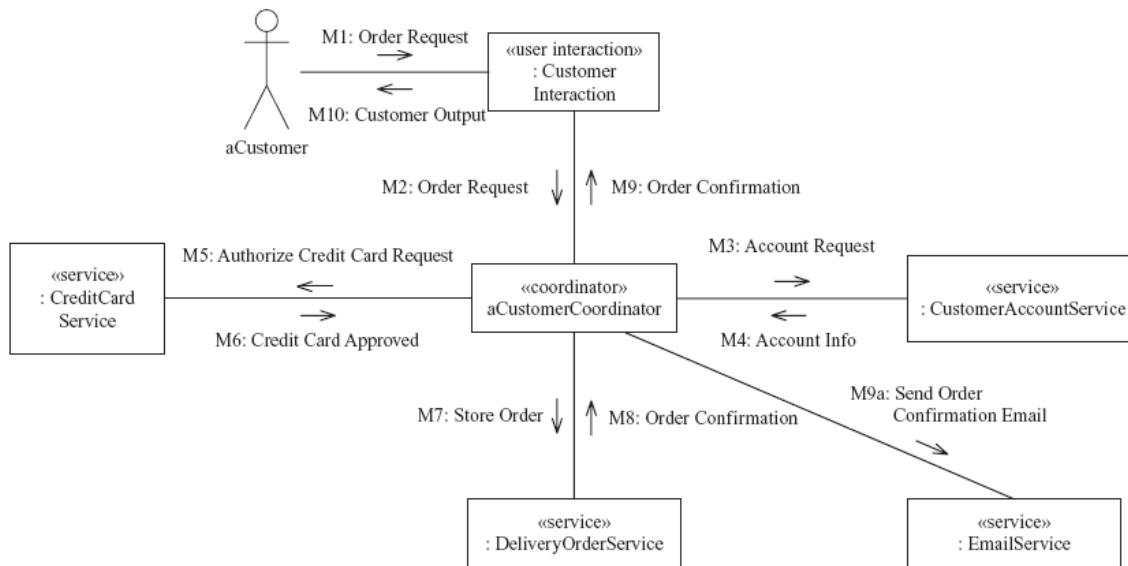
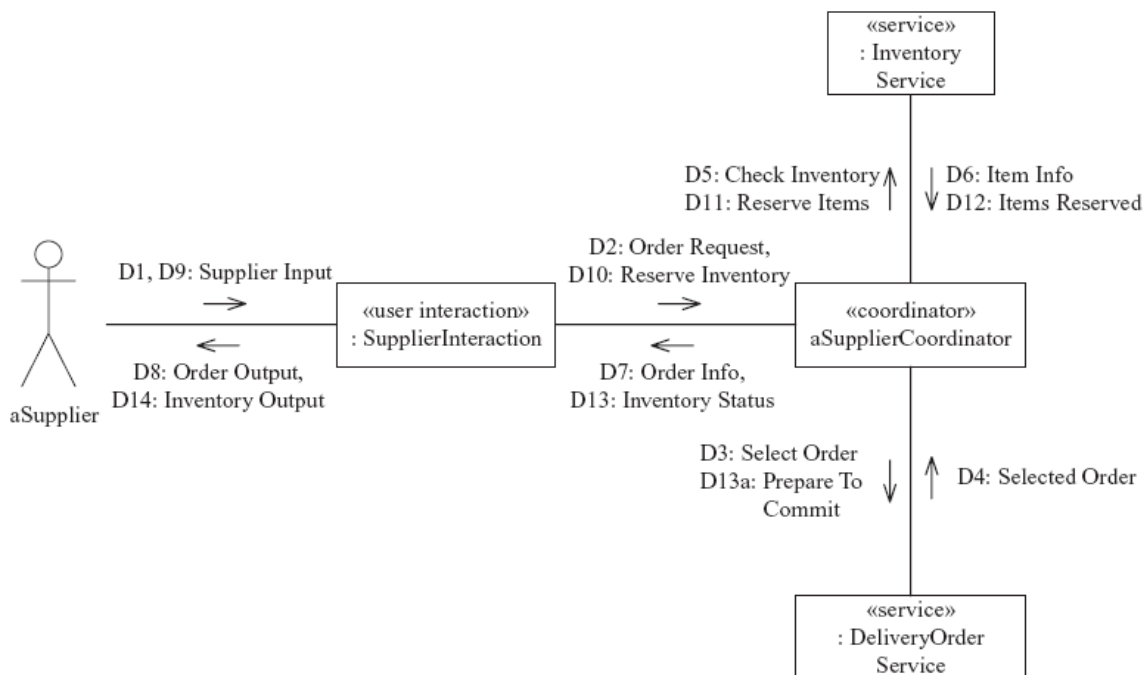
(b) Conceptual static model:

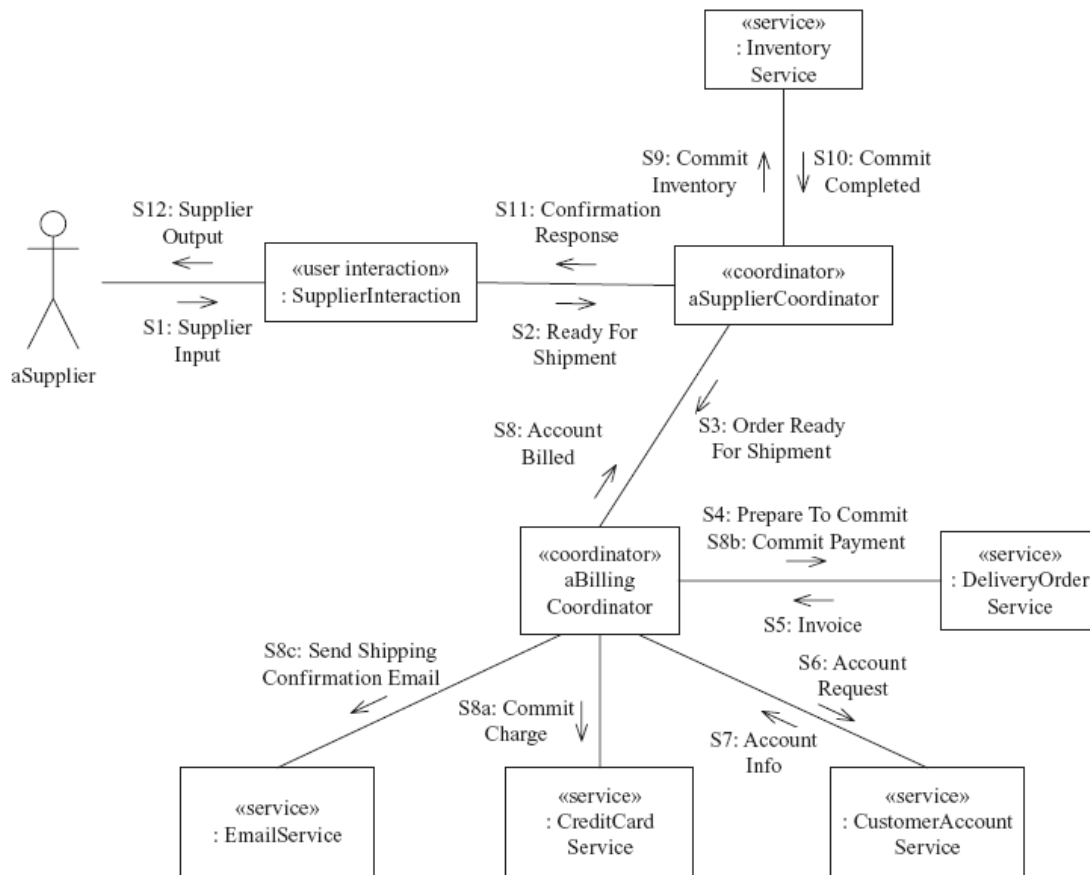


(c) Collaboration diagrams:

Collaboration diagram for the Browse Catalog use case



Collaboration diagram for the Make Order Request use caseCollaboration diagram for the Process Delivery Order use case

Collaboration diagram for the Confirm Shipment and Bill Customer use case**Question 2: Total Points (5+15=20)**

Read the paper " **Bridging the Gap: Empowering Use Cases with Task Models**" and answer the following questions:

- What is the difference between use cases and task models?
- How we can integrate uses cases and task models? And what are the benefits?

Solution:

Research-paper based question.

Question 3: Total Points (10)

Read the paper " **Improving Software Quality from the Requirements Specification**" and elaborate how one can identify which requirements, when implemented, will most affect software quality?

Solution:

Research-paper based question.

Question 4: Total Points (5+10=15)

Read the paper "**Requirements Engineering and Agile Software Development**" and answer the following questions:

- (a) What is the difference between traditional software processes and Agile methods?
- (b) How traditional requirements engineering approaches differ for Agile software development?

Solution:

Research-paper based question.