

C-S 341 Software Engineering

Spring 2019

Project Description

Shopping Cart Software

Description of the problem:

The aim of this project is to develop a shopping cart software. A customer can browse or search items, add an item to or remove an item from his/her shopping cart, and edit item's quantities in the shopping cart. The check out procedure requires promotion code if applies, shipping address, tax calculation and credit card information. An administrator can add an item to or remove an item from the system, and edit the item's description and quantity in the system. The software should also have promotion occasionally.

The following minimal set of functionalities must be included:

- Register a customer into the system.
- Modify the registered customer's profile.
- Browse, search, add, remove or edit items in the system or shopping cart
- Apply promotion code when check out if the promotion is valid
- The tax rate will be calculated based on the credit card's billing address.
- There should be at least three types of users: admin, registered customer, and guest.

A graphical user interface must be developed for this software. The interface must consist of multiple screens for different tasks. For example, there should be a welcome screen to start with which displays the various functionalities of the software. If one chooses to login or register to the system, there must be a separate window/screen that displays the requested information. The number of screens, the screen layout, the type of information to be displayed etc. all depend on your design.

You can associate a database with your product, if you wish; however, it is not required.

Project Deliverables:

During the life cycle of this project, the following documents must be delivered.

Deliverable	Description	Mark	Due Date
Document 1	Product Overview and Project Plan	10	Feb. 8, 2019 (Friday)
Document 2	Functional Requirements/Use Case Models/User Stories, including Assumptions	15	Feb. 15, 2019 (Friday)
DEMO 1	First Demo	10	March 11, 2019 (Monday)
Document 3	Architectural Design (UML Diagrams)	10	April 5, 2019 (Friday)
DEMO 2	Second Demo	15	April 15, 2019 (Monday)
Document 4	Updated Documents 2 & 3	15	May 3, 2019 (Friday)
DEMO	Final Project Demo	15	May 8, 2018 (Wednesday)
Document 5	Well-commented source code	5	May 10, 2019 (Friday)
Document 6	User manual or online help system	5	May 10, 2019 (Friday)

This is a team project for this course. Each team consists of three or four students. The project work involves developing software (program, documents, user manual etc.) for a given problem. The students should form the teams by themselves. In exceptional situations, the instructor will help in forming the teams. It is highly recommended to join with students who have different background and interests. By this way, a student will learn more on technical aspects as well as skills to work in different environments. Group work itself is an important software engineering skill.

Once joined in a team, no student is allowed to change teams until the project is completely finished (commitment!). Each member in a team will get the same mark for the project. In order to avoid conflicts on work assignments, the team members are expected to equally contribute to the project. In addition, **every document must be accompanied by a signature page that confirms that all members of the team agree to accept the same mark given to the team.** Submissions without the signature page will not be evaluated and consequently, the team may lose marks for that submission. The team members must meet regularly; all discussions must be recorded and submitted to the instructor.

In addition to the above deliverables, the following documents must also be submitted; these documents will be evaluated to check for equal contribution from each team member. However, these documents will not carry any mark towards the grade. Failure to submit any of these documents will affect the grades of all members in the team.

- Meeting logs. Each team is expected to meet at least a couple of times before submitting a deliverable. The minutes of each meeting (called the meeting log) must be recorded in a predefined format and must be submitted along with the deliverables.
- Signature pages. Each deliverable must accompany a signature page. This page must contain the team identification, the names of all team members, the identification of the deliverable, the date of submission and the following sentence: "We, the team members, agree to share the mark for this document equally among ourselves." The signature must be signed by all the team members. The purpose of this signature page is to avoid potential conflicts in work-sharing, if they occur.
- Team member evaluation report. This document must be submitted at the end of the project separately by each team member. Each member must evaluate the contribution made by every other member in the team. The instructor will evaluate the contribution made by each team member. It is expected to have a close match between the project plan and the team member evaluations, even though in some cases there will be some changes in the work assignment during the development of the project.

IMPORTANT: All documents must be typed. No hand-written documents will be accepted.