Team A

Online Computer Store
Software Requirements Specification
For Online Computer Store

Version 1.0

Revision History

Date	Version	Description	Author
3/24/21	1.0	Create use case diagram	Luigi Vingo
3/30/21	1.0	Updated use case diagram and sec 3	Cindy Weng Zhu
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Software Requirements Specification

1. Introduction

1.1 Purpose

This document serves to provide a detailed description of our project, which is to create an online computer store that incorporates functions that are convenient and unique to our store. The following report will include an overview of the overall description, purpose, usage, and explain the development concepts of the project. This includes the use-case model for our project, any assumptions or dependencies, the use-case report, along with the functional and non-functional requirements of the project. Additionally, this document will serve as a tool for our developmental team to better understand the full scope of this application.

1.2 Scope

The software will be an online computer store that can be used by any visitors or browsers of the site, people who are registered customers, the clerks of the computer store, the managers and superusers, the companies that sell computer parts, and finally the delivery companies. This system will be designed to provide the users with the familiarity of any online computer store but with added features that make our application more convenient and comprehensive to use. These familiar features include a home page with suggested items, popular items, and all the products, including their OS, purpose, architecture, different hardware parts, and any ratings/reviews. In terms of added features, this system design facilitates communication between customers using a discussion forum, along with communication between customers and store clerks to discuss products. Complaints can also be made by customers toward other customers, store clerks, or delivery companies, which may either result in a warning, suspension, or a reversal of the complaint. Since there are different users of the site, the functionality of the system will differ based on the type of user. The functionalities for the different types of users are specified in the use-case model survey.

1.3 Definitions, Acronyms, and Abbreviations

Actor: Any user that interacts with the system.

Ordinary User: Standard users of the system, such as customers.

Privileged User: Users who are not customers, such as store clerks.

Home Page: The default landing page of the website.

Listing Page: The presentation of a list of products based on a category or search query.

Purchase: The process of buying a product or service.

Discussion Forum: A tool to allow users to have asynchronous conversations in the form of posted messages.

1.4 References

IEEE. *IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications.* IEEE Computer Society, 1998.

1.5 Overview

The following sections of the documentation discusses the use-case and functionality of the software as a whole. The Overall Description includes the use-case model survey which incorporates brief descriptions of all use cases and actors, along with applicable diagrams and relationships. The last section titled Specific Requirements explains the use-case reports and supplementary requirements, which corresponds to both functional and non-functional requirements.

2. Overall Description
2.1 Use-Case Model Survey

Actors:

Ordinary Users:

Visitor: This is anyone visiting the website who is not a registered user, or has not logged in.

Registered User: This is a registered user who has set up a form of payment for a purchase.

Privileged Users:

Clerk: This is a salesclerk user who provides customer service for the Registered Users and finalizes their purchases.

Delivery Company: This is a delivery company user who bids on delivery of each sale and provides tracking information upon winning the delivery job.

Manager: This is a Manager user who oversees delivery option choices, complaints, and discussion board misuses.

Computer Company: This is a computer company user who provides customer service for Ordinary users about their respective products.

Use Cases:

Homepage:

Register: This is a function which is accessible to a visitor to apply to be a registered customer. The normal case is that the visitor does not have an account and their payment method is accepted. Exceptional cases include the visitor already being a registered user, or the visitor being on the avoid list. Another exceptional case is that the visitor is on the avoid list and has already received a denial message.

Login: This a function which is accessible to all users Ordinary and Privileged to Login to their respective accounts. They will gain access to their respective functions. The normal case is the user provides a valid username and password. Exceptional cases are the user provides a wrong username and/or password.

Manage: This is a function accessible to a Manager user to manage the 3 suggested computer systems and display the 3 most popular computer systems. The ordinary case is that the selected computer systems are valid in the system. The exceptional case is that a system which is displayed on the homepage is no longer listed anywhere on the website.

Account Management:

Update User Account Information: This is a function accessible to registered users to update their contact, payment, and personal information. The ordinary case is that the user enters valid information for each input. The exceptional case is that the user enters an invalid or unacceptable input for any one or multiple inputs.

View Past Purchase History: This is a function accessible to the registered user, store clerk, and manager to view each customer's past purchase history. There is only an ordinary case which is that the purchase history becomes available to the registered user, clerk, and manager.

Issue Account Warning: This is a function accessible to the store manager to warn a registered user that their complaint was overturned, or to inform a clerk/delivery company they have a complaint filed against them. The ordinary case is that the manager issues the warning and the register customer, or clerk/delivery company sees it. The exceptional cases include that the warning is the third warning, and the registered customer is automatically removed from the system and added to the "avoid" list. Another exceptional case is that the warning is the third warning for the clerk or delivery company, and they are suspended.

Restrict account: This is a function accessible to the store manager to restrict a registered user/clerk/delivery company account before it has received 3 warnings. The ordinary case is that the manager suspends a clerk or delivery company. The exceptional case is that the manager suspends a registered customer, and they are sent a warning email to clean up their act.

Listing Page:

View Listings: This is a function accessible to all users Ordinary and Privileged to view   the listing of computers for sale. There is only an ordinary case which is that the listings are available for anyone to see.

Browse Listings: This is a function accessible to all users Ordinary and Privileged to view   the listing of computers for sale. There is only an ordinary case which is that the listings are available for anyone to see.

Make Purchase Options: This is a function accessible to a registered user to make selections for their computer system purchase. The ordinary case is that the registered user picks compatible parts. The exceptional case is the registered user wants a combination that is unavailable given other current specs.

Edit Listings: This is a function available to the manager to edit the listings of computer systems and parts. The ordinary case is that the manager edits the listing, and it is updated. The exceptional cases are that the edited listing is featured on the main page as a suggestion. Another exceptional case is that the edited listing is currently being processed as a selection by a registered user.

Purchases:

Submit Purchase: This is a function accessible to registered users to submit their purchase order once they have made their desired selections. The usual case is that the registered customers order is submitted without issue. The exceptional case is that the registered customers payment method does not have sufficient funds.

Bid on Delivery: This is a function accessible to a delivery company user to place a bid on delivering a purchase to the customer. The ordinary case is that the delivery company user bids on the job and if their bid is lowest, they win. The exceptional case is that the company provides the lowest bid and does not win.

Provide Tracking Information: This is a function available to a delivery company user to provide tracking information to a registered user and manager once they have won the bid to deliver the register users purchase. There is only an ordinary case which is that the delivery company provides tracking information to the registered user and manager.

Accept Purchase Delivery: This is a function accessible to salesclerk users to accept a purchase delivery option. The ordinary case is that the clerk picks the cheaper delivery option or choses another option with sufficient justification. The exceptional case is that the clerk does not pick the cheapest delivery option and does not give justification why and the clerk is issued a warning.

View Tracking Information: This is a function accessible to a registered user and manager user to view tracking information on a purchase provided by a delivery

company user. There is only an ordinary case which is that the registered user and manager user can view the provided tracking information.

Discussion Page:

View Discussion: This is a function accessible to all users Ordinary and Privileged to view the discussion boards. There is only an ordinary case which is that anyone can view the discussion boards.

Post Discussion: This is a function accessible to registered users and clerk users to post to a new discussion about the computer systems for sale on the website. The ordinary case is that the registered user or clerk user makes a post, and it is then viewable for everyone to see. The exceptional case is that the registered user or clerk user enters a word that is a taboo word, and that word is redacted, and the user is issued a warning.

React to Post: This is a function accessible to registered users and clerk users to post a reaction to a post already created. The ordinary case is that the registered user or clerk user makes a reaction, and it is then viewable for everyone to see. The exceptional case is that the registered user or clerk user enters a word that is a taboo word, and that word is redacted, and the user is issued a warning.

Manage Discussion: This is a function accessible to a manager user to determine a post or reaction taboo even though a word does not match a word in the taboo list. There is only an ordinary case the manager deems a post taboo, and the post is redacted, and the user is issued a warning.

Complaints Page:

File Complaint: This is a function accessible to a registered user to file a complaint about an item, clerk, or delivery company. The ordinary case is that the registered user makes a complaint and the user it is made against is informed. The exceptional case is that the user that the complaint was made against provides sufficient counter information and the manager clears the warning on their account.

View Complaint: This is a function accessible to the clerk or delivery company user the complaint was made against and manager users. There is only an ordinary case which is that the user the complaint was made against and the manager user can view the complaint.

Manage Complaint: This is a function accessible to the manager users to remove warnings when complaints have sufficient justification. The ordinary case is that the complaint does not have sufficient information to be removed and is kept in place or it does have sufficient information and is removed. The exceptional case is that the complaint is the third warning, and the account is either suspended and then reinstated, or indefinitely suspended until the issues are resolved.

2.2 Assumptions and Dependencies

A subsystem that is included and shown in the Use Case Diagram is the delivery subsystem. This subsystem is generated when a registered customer purchases an item where the delivery companies can bid on each item purchased allowing the store clerk to accept a bid from either company depending on its price. Registered customers who forget their log in password can restore it via a link sent to their email with instructions on how to recover their account. We are going to assume that the privileged users have a separate registration/log-in page or have already been created. For dependencies, every registered customer will have personal information registered with their account.

3. Specific Requirements

3.1 Use-Case Reports

Register: A visitor or browsers can register to become a registered customer.

Login: A registered customer can log in to their account.

Update Use Account Information: A registered customer can update their information - available money/credit, home address - in their user account

View Past Purchase History: A registered customer, a manager, and a store clerk can view past purchase history of the registered customer.

Issue Account Warning: A manager can issue a warning to a registered customer's account.

Restrict Account: A manager can restrict a registered customer's account.

View Listings: A visitor/browser and a registered customer can view the listings of computer parts.

Make Purchase Option: A registered customer can make a purchase option - provide a working credit card or deposit money to their account to make a purchase.

Edit Listings: A manager can edit the listings of computer parts.

Comment: A registered customer can comment on purchased items.

Vote: A registered customer can cast a vote on purchased items.

Submit Purchase: A registered customer can submit a purchase given the purchase option - credit card or money.

Bid Delivery: A delivery company can bid on each item available.

Accept Delivery Company: A store clerk can accept the delivery company based on the bidding.

View Tracking Information: A registered customer can view the tracking information of their purchases.

File Complaint: A registered user can file a complaint about purchased items, store clerks, and delivery companies in the complaints page.

View Complaint: A registered user, a store clerk, a computer company, a delivery company, and a manager can view the complaints they received.

Manage Complaint: A manager can manage a complaint.

Post Discussion: A registered customer and a store clerk can post in the discussion forum.

Manage Discussion: A manager can manage the discussion forum.

View Discussion: A registered user, a store clerk, a computer company, a delivery company, and a manager can view the discussion forum they received.

3.2   Supplementary Requirements

Register: A visitor/browser who wants to become a registered customer must create an account with a unique working email address. This email address is compared to a list of "avoid" email addresses that the store keeps track of. If such email address belongs to this list, a denial message will be displayed.

Submit Purchase: A registered customer can submit a purchase given the purchase option - credit card or money. If a purchase is successful, the purchase is moved to the delivery subsystem. Otherwise, give a warning message.

Accept Delivery Company: A store clerk can accept the delivery company based on the bidding. If the winning company's bidding price is not the lowest, the store clerk should provide justifications about their choice, otherwise the system will generate a warning on the store clerk for possible cheating and show it to the manager.

File Complaint: A registered user can file a complaint about purchased items, store clerks, and delivery companies in the complaints page. Store clerks and delivery companies can post their side of the information to clear any warning.

Manage Complaint: A manager can manage a complaint. The manager can decide to let the warning stay or be removed and inform all parties with his/her justifications. A clerk, computer and delivery company that received 3 standing warnings is suspended by the system automatically. A customer whose complaint is reversed will receive one warning. A thrice warned customer is removed from the system and put in the "avoid" list.

The store manager has the power to remove any customer and clerk with justifications, even with less than 3 warnings.

Suspended Customer: A suspended customer will be informed by email and given the last chance to clean up his/her account.

Maintain Taboo List: A store clerk and a manager maintain a list of "taboo" words that registered customers are not allowed to use in the discussion forum. one such violation will automatically generate one warning and the violating words are redacted by the manager.

4.   Supporting Information

Use Case Diagram

Link: https://lucid.app/lucidchart/invitations/accept/c111993d-ced7-4f05-b349-84d76607432a or Zoom in to view.