
City Electronics LLC

**Parts Authority
Software Requirements Specification
For Computer Parts Store**

Version 1.0

Parts Authority	Version: 1.0
Software Requirements Specification	Date: 03/20/2021
42069	

Revision History

Date	Version	Description	Author
26/2/21	1.0	Purpose Definitions/Acronyms/Abbrev.	Ashraq Khan
26/2/21	1.0	Edited Introduction Added Overview + Scope Added Overall Description	Azward Shameem
26/2/21	1.0	Use Case Model Survey Assumptions and Dependencies Edited Overview	David Diop
26/2/21	1.0	Use Case Model Survey & Report Supplementary Requirements	Dewan Tahmid

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Software Requirements Specification

1. Introduction

The purpose of this system is to provide an interactive online computer store with the convenience that other competitors may not have. Parts Authority is an online marketplace suited for customers to view or purchase computer electronics and for computer parts companies to list their products. Furthermore, we also have an internal section for our clerks and manager to choose delivery service and maintain stability within the store.

1.1 Purpose

The purpose of this software is to provide an environment where users can pick and choose what parts they want to use to make their PC, or select a pre-built PC.

Upon starting the app, the user is met with an attractive homepage that displays suggested systems to choose from. These include:

- 3 suggested systems hand picked by store manager
- 3 popular computers rated by number of sales

The software intends to give customers an easy way to navigate parts of their own liking at their own pace if they choose to not go for a pre-built PC. The parts provided will depend on whether the user desires a business, scientific computing, gaming, or other purpose. Upon making the choice, the user can personalize their hardware and software by picking from a selection of items. Supported products include choosing an OS, computer architecture, CPU, GPU, RAM, hard disk, battery, monitor, and antivirus or office software.

While searching for listings of computers and parts, users can read or participate in discussion forums regarding product feasibility, customer service, and/or reviews. This gives users the ability to make a change in the store based on their choices and likings, and it gives us an opportunity to improve customer service and satisfaction.

1.2 Scope

The scope of Parts Authority is to allow for an interactive online store experience to its users' by offering them a plethora of purchasable electronics from our store. To accomplish this, the online store will contain a section for the visitor, registered guest, computer parts company and delivery company.

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1.3 Definitions, Acronyms, and Abbreviations

CPU	Central Processing Unit
GPU	Graphical Processing Unit
GUI	Graphical User Interface
MySQL	Type of Structured Query Language Relational Database Management System
OS	Operating System
PC	Personal Computer
PyQT5	Widget toolkit for designing GUIs in Python
RAM	Random Access Memory

1.4 References

1. Pycharm - <https://www.jetbrains.com/help/pycharm/python.html> - Published by JetBrains
2. PyQt5 - <https://doc.qt.io/qtforpython-5/contents.html> - Published by the QT group
3. MySQL - <https://dev.mysql.com/doc/> - Published by MySQL AB

1.5 Overview

Each user section has its own in-depth description of what the service has to offer in the categories below. There are specific details on what each group of users can benefit from the Parts Authority software. The documentation below will entail the use-case model survey, assumptions and dependencies, use case reports, and supplementary requirements.

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2. Overall Description

The general use case of the Parts Authority store is for customers and companies to buy and sell their products. Each computer parts company should be able to list their items by setting a picture and the price of the product, while the visitor or registered guest can view or purchase the products. In addition, the store clerks have the option to select delivery companies and explain their choice and store managers can oversee the store clerks' choices and lastly the delivery company can see the products they need to ship and post updates on shipping.

2.1 Use-Case Model Survey

There are 6 users or groups that this online store application can be used by. First are the general users. They can either be unregistered visitors or registered customers. In order to buy from the store, a visitor must be a registered customer. There are more permissions that a registered customer has such as leaving reviews and complaints in the discussion forum. A visitor can view this forum but not post in it. Next are the online store managers. This includes the store clerk or the super user, store manager. The store manager controls basically everything about the online store, including the set and look of the store homepage and banlists. The store clerk has less permissions and manages the sellers or those who provide service to the online store. Computer parts companies and delivery companies provide these services and are the last type of use case. Computer parts companies provide the computers and parts to sell to the store while the delivery companies update the delivery status for a purchased item.

2.2 Assumptions and Dependencies

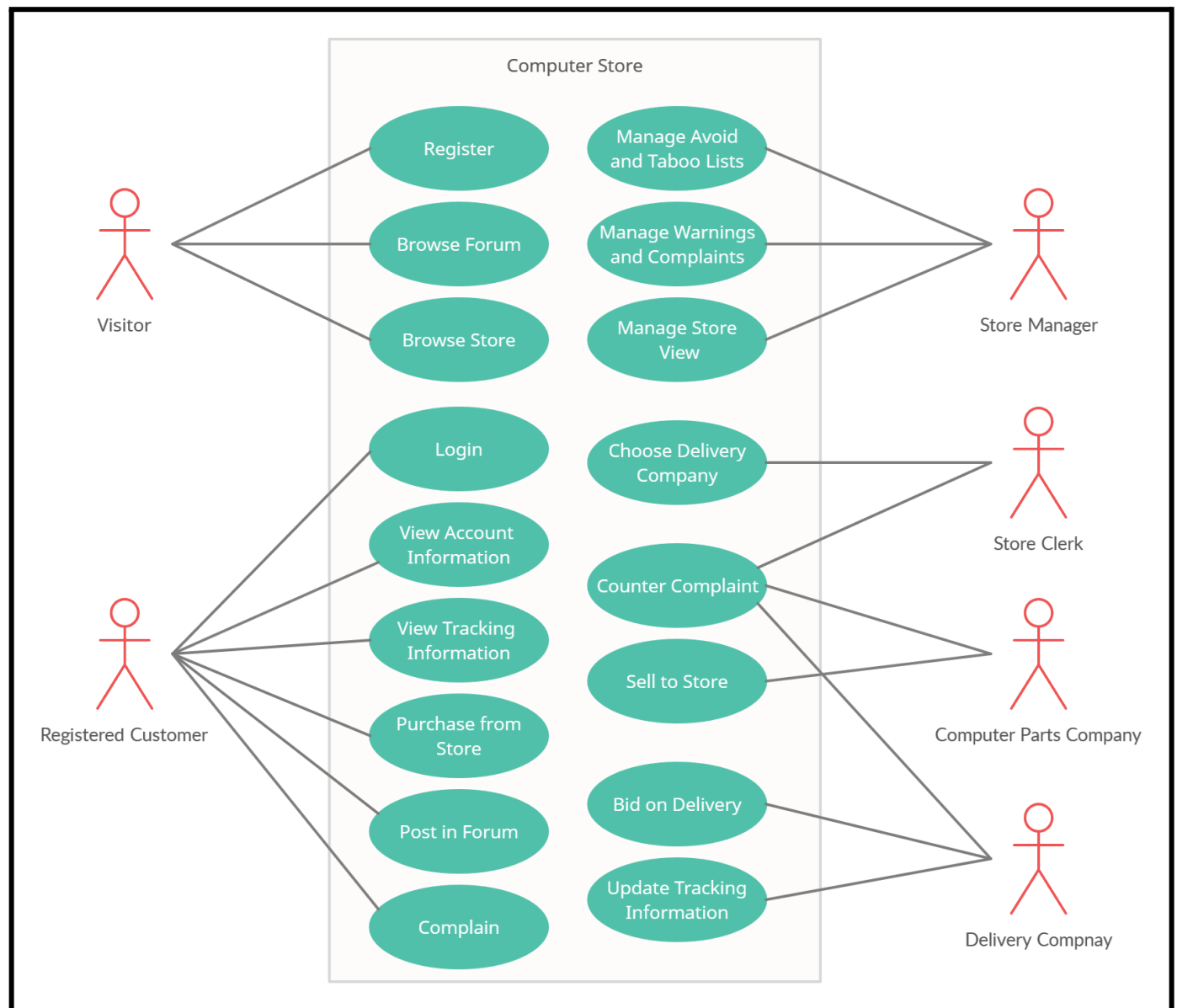
This application assumes the user has Python 3 installed along with the associated PyQt5 libraries. The user must also have MySQL installed into their system to store the information from the store. Since our GUI will be fullscreen, we also assume that the user has a 1920x1080 screen resolution.

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3. Specific Requirements

3.1 Use-Case Reports

Figure 1. Use Case Model



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Use Case Model Description

- Visitor
 - Browse store with computer and parts listings
 - Browse discussion forum
 - Can apply to become a Register Customer using a valid email
 - Email cannot be in the taboo list
- Registered Customer
 - Must provide valid email and working credit/debit card
 - Can make purchases from store
 - Post in discussion forum
 - Can complain about clerks or delivery companies
 - View account information
 - Purchased items
 - Address
 - Email
 - Tracking Information or Delivery Status
 - Complaints received or filed
- Store Clerk
 - Choose delivery company for purchased item from user
 - Can counter a complaint from registered customer
- Store Manager
 - Manages avoid list and complaints
 - Able to remove registered customers, clerks, and delivery company
- Delivery Company
 - Bid with other delivery companies for each item in store
 - Provide tracking information and delivery status to registered customer
 - Can counter a complaint from registered customer
- Computer Parts Company
 - Provides store with computers and computer parts
 - Chooses prices

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3.2 Supplementary Requirements

Delivery System

- ENQUEUE: If the user successfully purchases an item, their order is queued into the delivery system.
- DEQUEUE: If the delivery company successfully delivers the item, the order is dequeued. If the delivery is a failure, the user has the choice of cancelling to dequeue. Otherwise, the delivery company will re queue the purchased item.
- BID: Delivery companies can make bids against other delivery companies on who will deliver the item for a given price.
- CHOOSE: Store clerics can choose which delivery company will deliver the user's order.
- UPDATE TRACKING INFORMATION: Delivery companies can update tracking information for purchased items (shipped, out for delivery, etc.).
- VIEW TRACKING INFORMATION: Registered customers can view the tracking information for their purchased item.

Discussion Forum

- COMPLAIN: Registered customers can complain about clerks, delivery companies, and computer parts companies, and/or other customers.
 - COUNTER: Those who received complaints can provide a counter with their side of the story.
 - JUDGE: Store manager decides how to deal with these complaints using warnings or bans.
 - WARNINGS: 3 warnings and the user will have limited use of application/store
 - BANS: Banning a user or company will have different effects
 - Registered Customers cannot purchase items from the store
 - Computer Parts Company cannot sell items to the store
 - Delivery Companies cannot bid on delivery price for item
 - APPEAL: Banned users or groups can appeal directly to the store manager who judges whether to unban or not.
- REVIEW: Customers who have successfully purchased an item may leave an optional rating or review beneath the product listing
- VIEW: Unbanned users and groups can view the discussion forum
- POST: Unbanned registered users can post in the discussion forum
- DELETE: Author of post can delete their own post. Store managers can delete any post if they choose.