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***Team A***

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***Online Computer Store  
Design Report  
For Online Computer Store***

***Version 1.0.1***

<i>Team A</i>	<i>Version: 1.0.1</i>
<i>Design Report</i>	<i>Date: 04/27/2021</i>

## ***Revision History***

<b><i>Date</i></b>	<b><i>Version</i></b>	<b><i>Description</i></b>	<b><i>Author</i></b>
4/20/21	1.0.1	Create and update basic layout for GUI screens, and prototype using Figma. Work on section 4 of report.	Cindy Weng Zhu
4/21/21	1.0.1	Draw petri-nets for three use case (Section 2.2 of report)	Luigi Vingo
4/24/21	1.0.1	Draw E-R diagram (Section 3 of report)	Nayma Labonna
4/25/21	1.0.1	Work on section 6 of report and create login/register GUI screen.	Nour Elabbasy
4/27/21	1.0.1	Draw sequence class diagram of entire system (Section 1 of report.	Narayan Khanal

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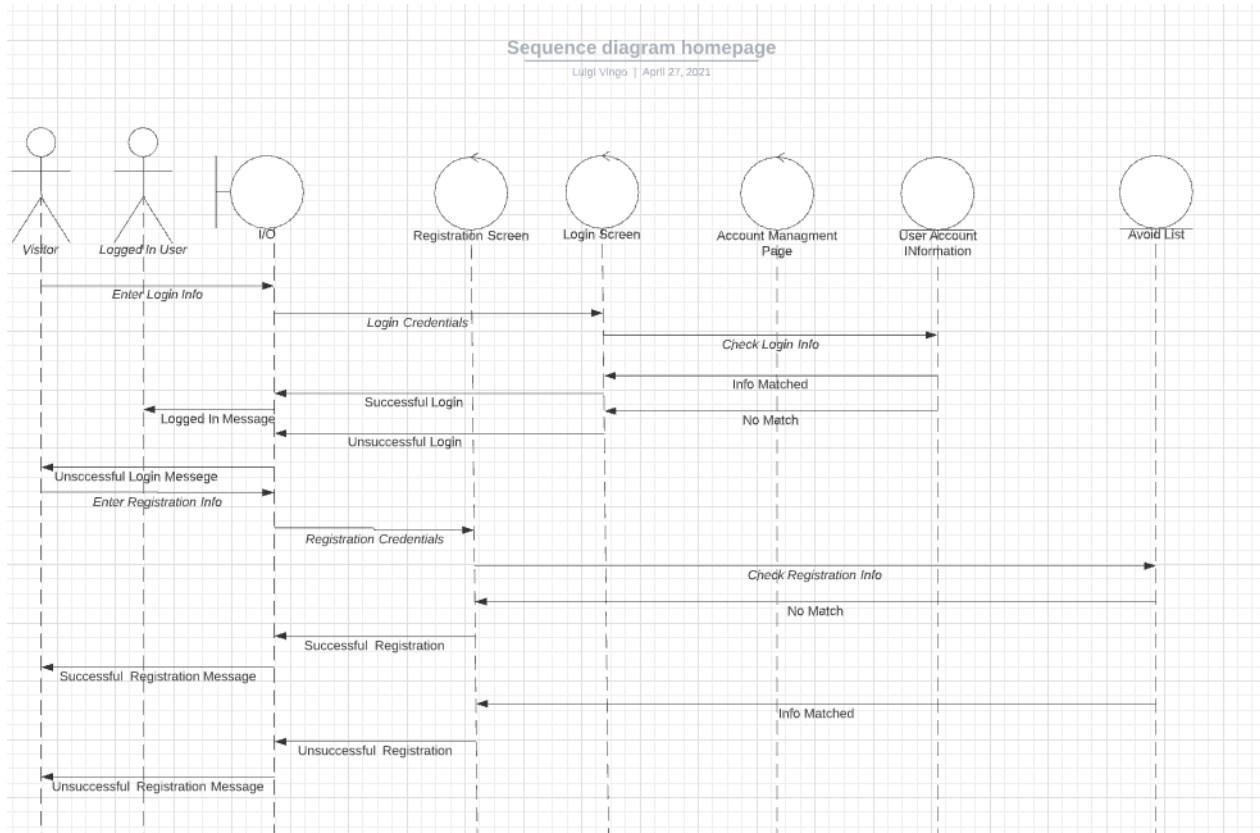
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# Design Report

## 1. Introduction

### 1.1 Sequence Class Diagram



## 2. Use Cases

### 2.1 Use-Case Model

**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.

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**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.

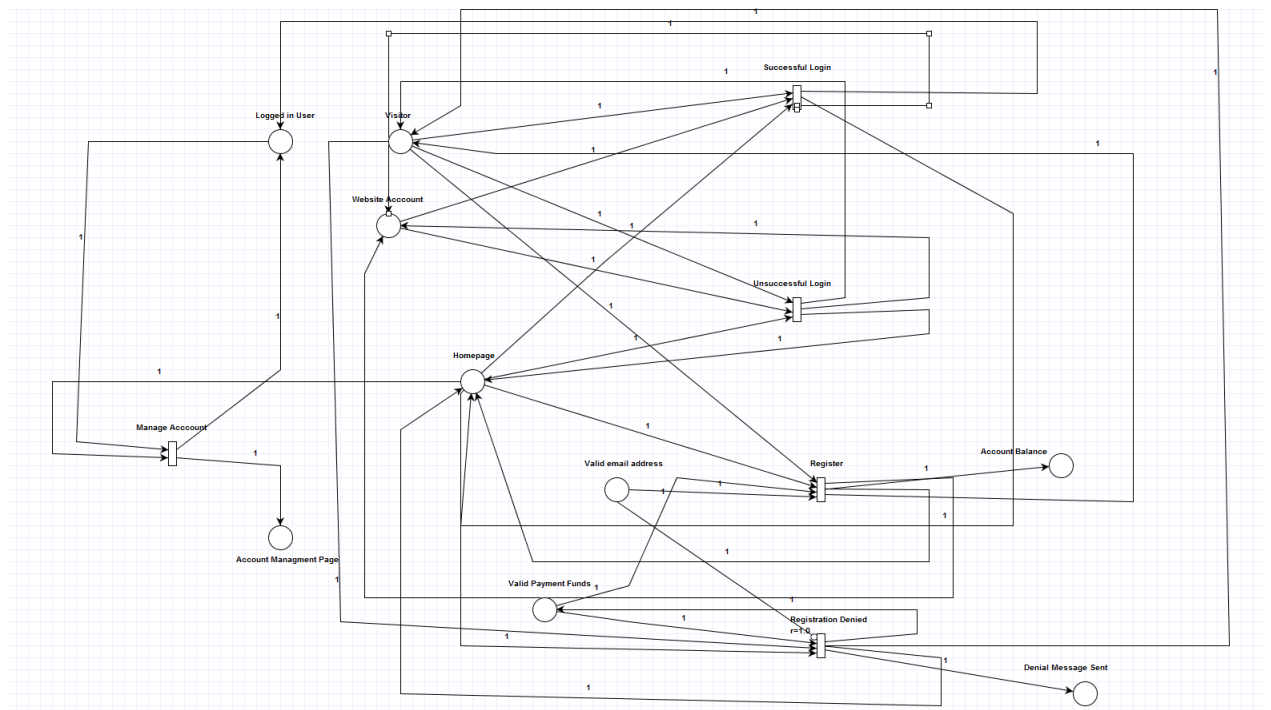
**Manage Discussion:** A manager can manage the discussion forum.

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

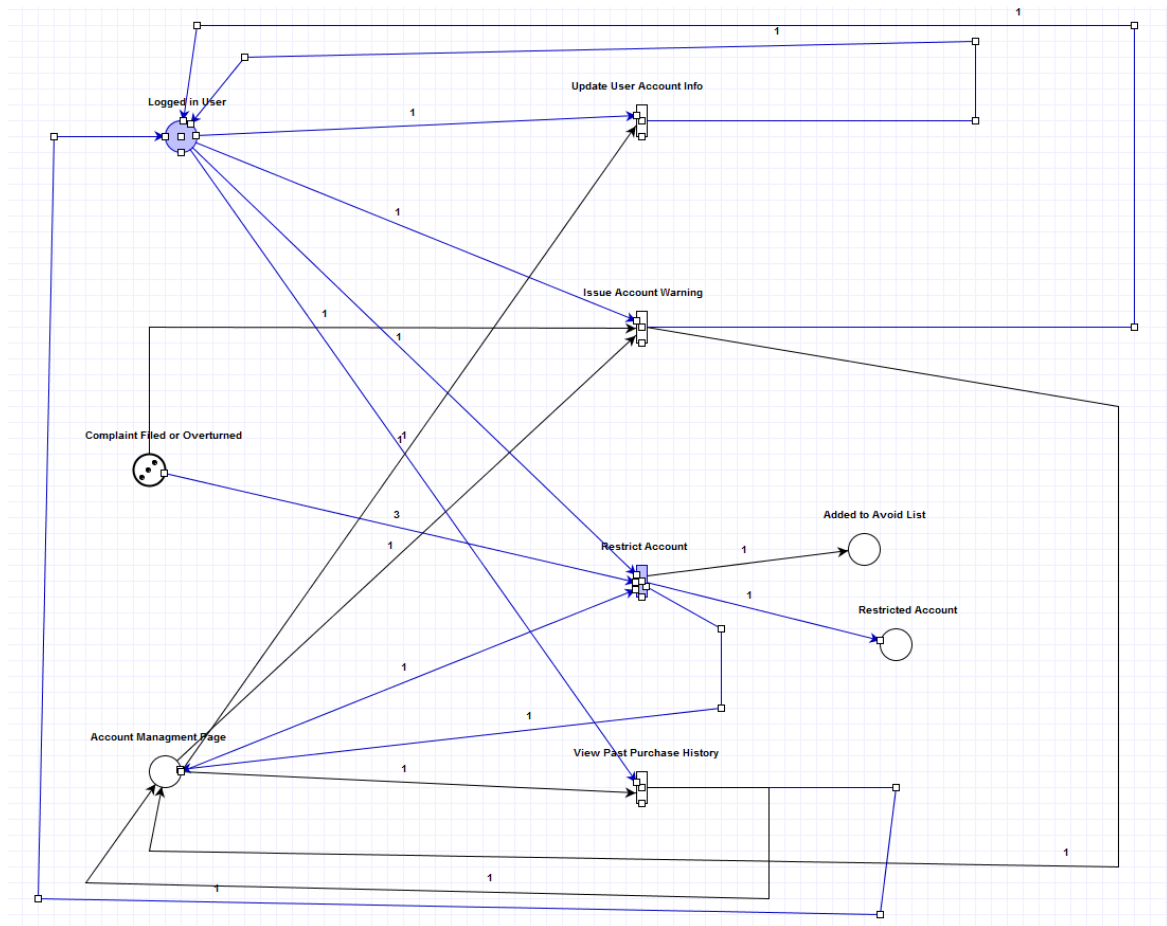
## 2.2 Petri-nets

Homepage

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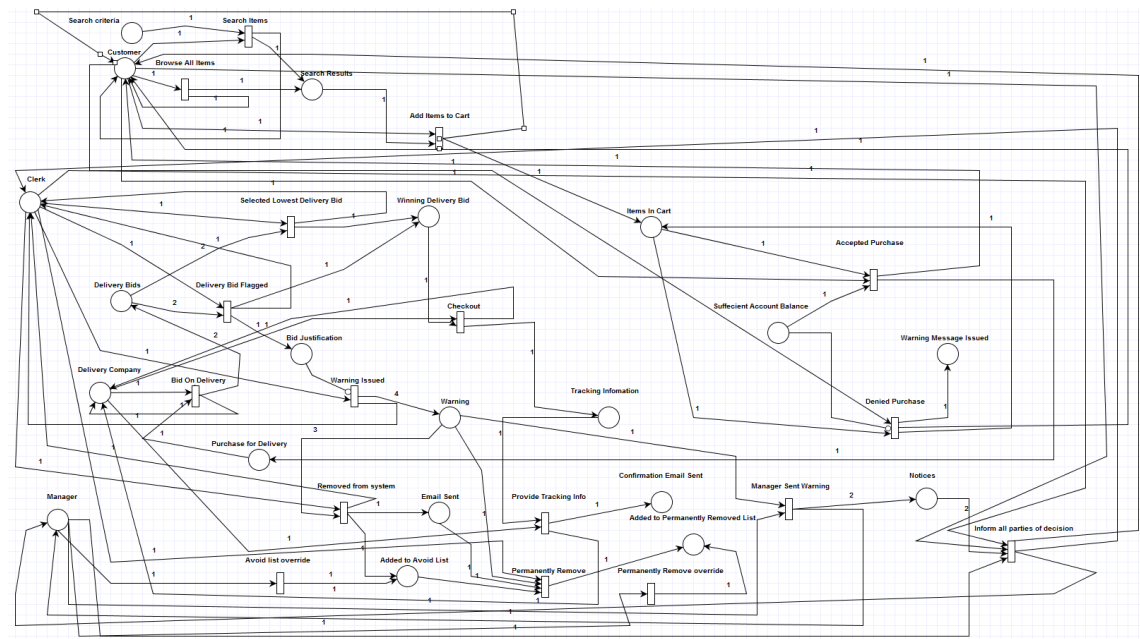


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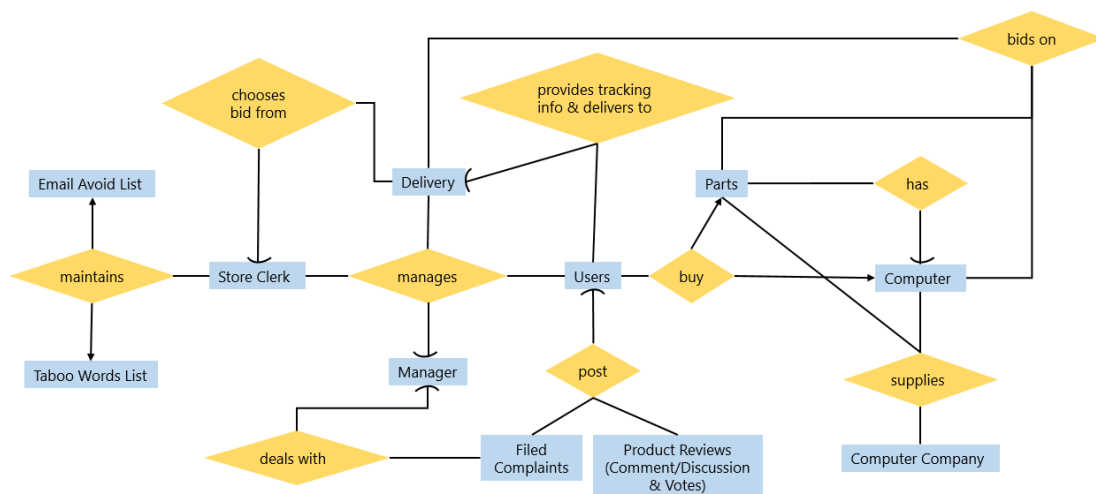


Purchases

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### 3. E-R Diagram





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#### **4. Detailed Design**

##### **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.*

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*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*

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*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.*

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*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.*

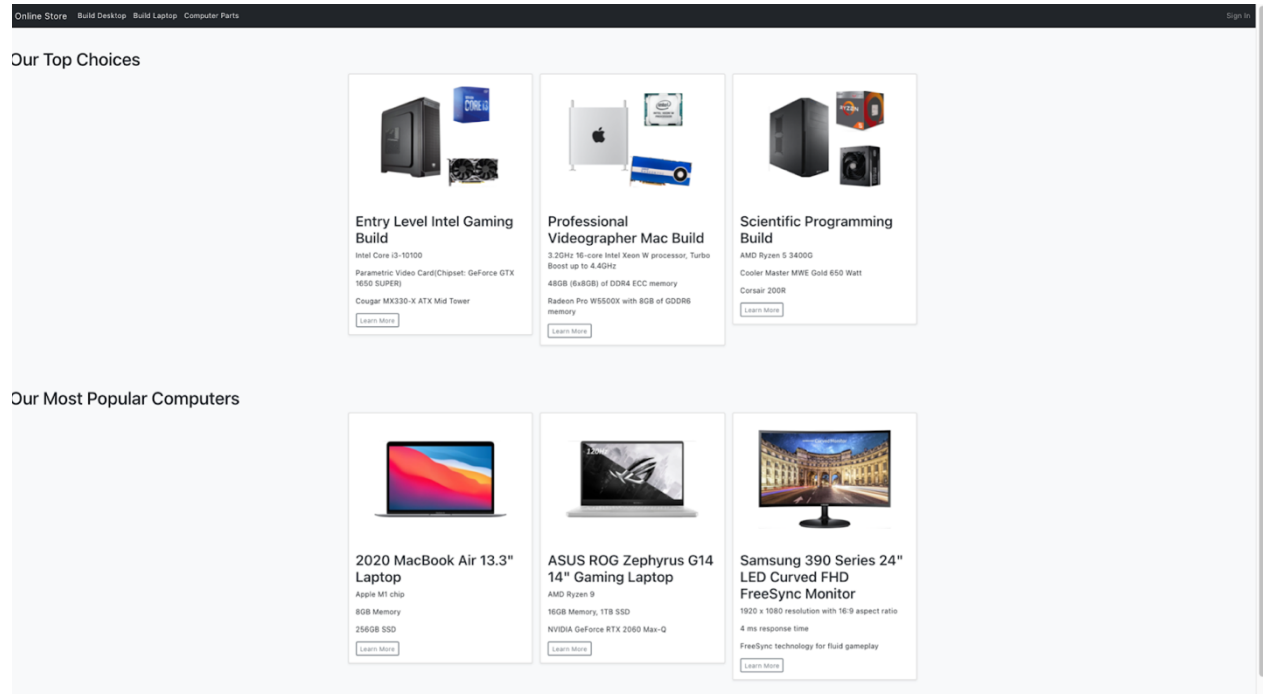
*Manage Complaint: This is a function accessible to the manager users to remove warnings when complaints have sufficient justification. The ordinary case is that the complaint does not have sufficient information to be removed and is kept in place or it does have sufficient information and is removed. 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.*

## **5. System Screens**

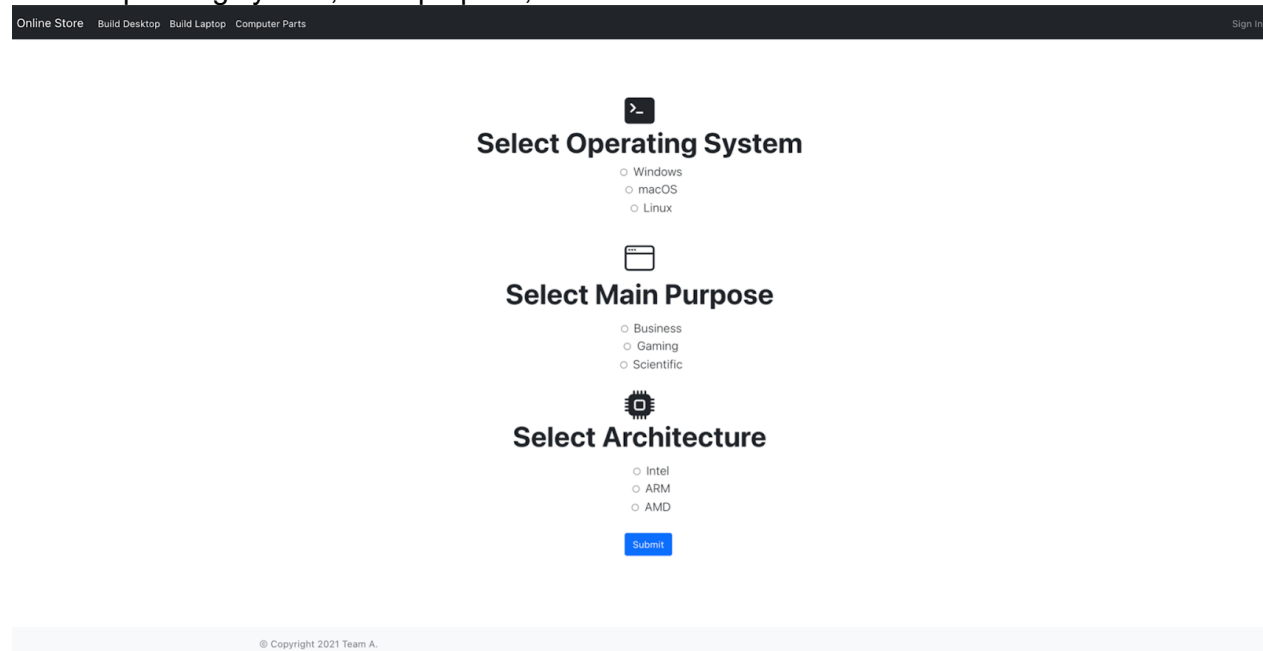
### **5.1 Major GUI Screens**

*Homepage showing top three choices by manager and three most popular computers.*

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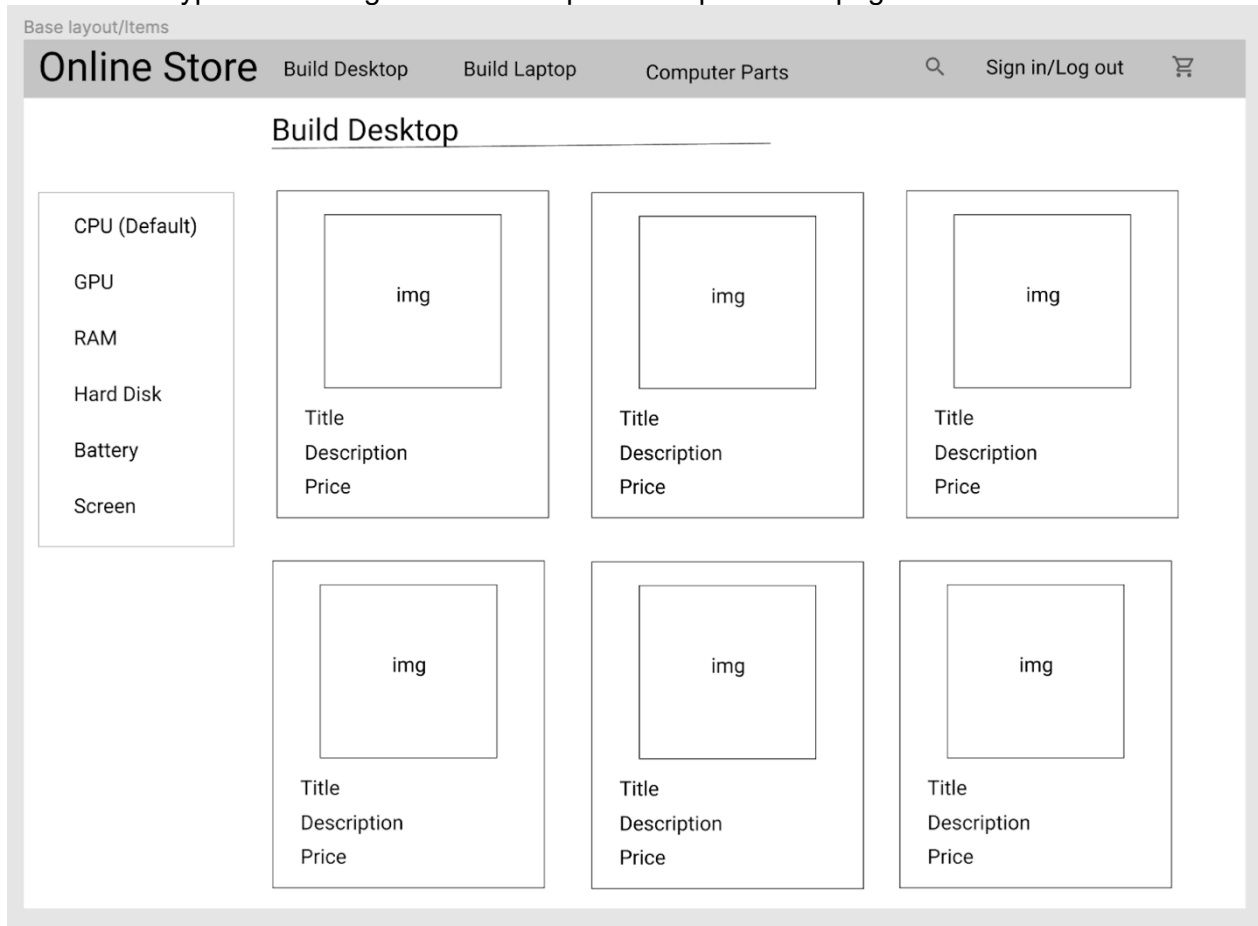
When clicking Build Desktop/Build Laptop/Computer Parts, user can choose the operating system, main purpose, and architecture.



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## 5.2 Prototype

Prototype done in Figma of the computer and parts next page based on choices



## 6. Group Meeting Minutes

The first meeting we had was in the very beginning when the project was finalized by the professor. We met to get to know each other and figure out what language and platforms we wanted to use for the project. We decided on using *Flask* for the backend and *React* for the frontend and then *MariaDB* for the database. Then the second meeting we had was to divide the phase 1 report to see what each person would do. We decided on the following:

**Luigi:** Use-case models

**Nour and Nayma:** intro

**Narayan:** Section 2

**Cindy:** Section 3

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Then we had our last meeting about phase 1 report and what each person was going to do. We decided on the following:

**Narayan:** Collaboration diagram

**Luigi:** Petri-net

**Nayma:** ER Diagram

**Cindy:** Part 4 and 5

**Nour:** Part 6

Throughout the whole process we were in constant communication on our group chat and if anybody needed anything we would all try and help. If we are unable to solve the problem through the *chat*, then we would hop on a quick zoom call. The only concern that we have realized is that not all of us are free at the same time so what we decided to do is that if there is a time that works for the majority of people then we will meet then and fill the other people *that could* not make it.

## 7. **GitHub Repository Address**

Address to Team A's Git Repository: <https://github.com/cindyweng18/online-store>