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**A&K Custom PC**

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**An Online Computer Store  
Software Requirements Specification  
For Building and Purchasing Computers  
Version 1.0**

A&K Custom PC	Version: 1.0
Software Requirements Specification	Date 03/24/2023
1st Draft	

## Revision History

Date	Version	Description	Author
03/23/2023	1.0	Introduction, Overall Description and Supporting Information	Anthony Yang
03/24/2023	1.0	Specific Requirements	Kristina Ilyovska

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# Software Requirements Specification

## 1. Introduction

### 1.1 Purpose

The purpose of this report is to provide a detailed overview of A&K Custom PC, an online computer store, including its users, features and goals. This serves as the guiding document to develop the software product in a systematic and efficient way. The first section defines the scope of the product and terminologies used. The second section describes the users along with the dependency and assumptions made. The third section describes the functionalities in detail with use cases and supplementary requirements to outline how users interact with each other and with the system. Finally, the report includes screenshots of the mid-fidelity prototype designed in Figma with personalized screens for each user.

### 1.2 Scope

The software product, A&K Custom PC, is an online computer store that can be accessed by guests, ordinary users and privileged users. The goal of the store is to allow ordinary users to build and purchase computers and computer parts. For computers, ordinary users can either customize compatible components or purchase suggested computer builds set up by privileged users on the home page. Guests can browse all available items, but can't make purchases unless they convert to ordinary users. To collect user feedback on items, guests and ordinary users can provide comments. To ensure ordinary users' satisfaction over their purchase, they can rate their purchases on a scale from 1 to 5. They can also communicate with privileged users which both parties can either compliment or complain about each other with justifications. When commenting or communicating, the system will penalize any user for inappropriate language. Since different users have different features, their user experience will be personalized.

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### 1.3 Definitions, Acronyms, and Abbreviations

Terms	Definitions
ReactJS	React is an open-source front-end Javascript library for building user interfaces based on UI components.
Firebase	Firebase is a flexible, scalable database for mobile, web and server development.
Guest	A non-registered user who can view the customized computer builds and use limited features.
Ordinary User	A registered user who can purchase customized computer builds and use all features except those of privileged users.
Privileged User	A user who works for the store (employee or owner) and can make changes to the system.

### 1.4 References

1. Meta and Community. (n.d.). React.js Documentation. Retrieved from <https://reactjs.org/docs/getting-started.html>
2. Google. (n.d.). Firebase documentation. Google. Retrieved from <https://firebase.google.com/docs>

### 1.5 Overview

The following sections will describe the users and the dependency and assumptions. In addition, the specific functionalities will be depicted through use case diagrams to show the interactions between users and the system with the use cases described in detail.

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## 2. Overall Description

### 2.1 Use Case Model Survey

Users	Role
Visitor	A user who can browse the website and did not sign up to become a customer.
Customer	A user whose sign up application was approved by either a store employee or owner and can purchase computer builds.
Store Employee	A user who works for the store and can suggest computer builds.
Store Owner	A user who owns the store and have jurisdiction over all decisions.

### 2.2 Assumptions and Dependencies

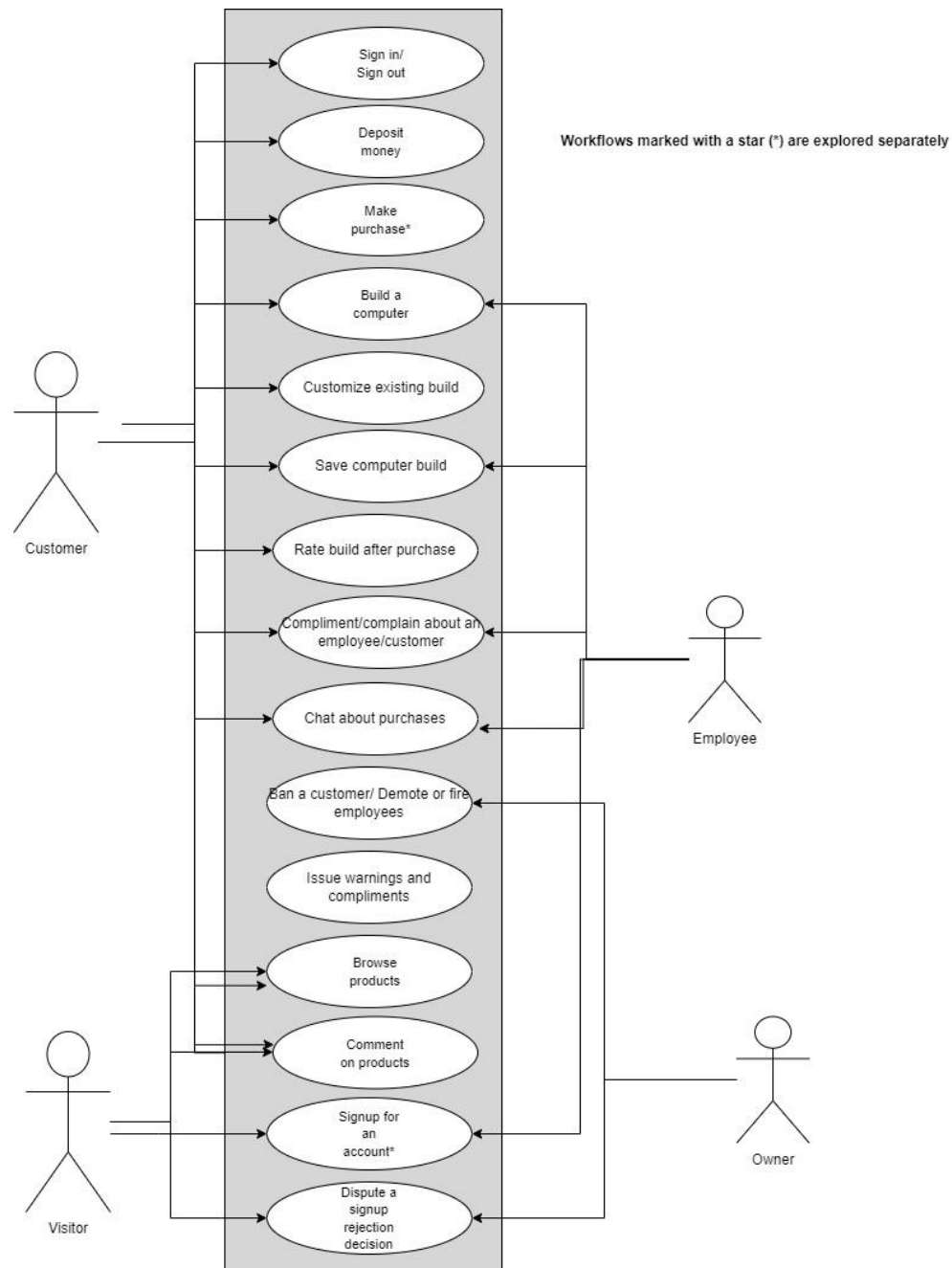
The dependency of the software product is that fake information for the computer parts will be used which the system is able to detect if they satisfy the hardware constraint. The information along with other data will be stored and updated in Firebase. Meanwhile, the software product will be developed using ReactJS and it will communicate with Firebase to retrieve and authenticate data.

There were several assumptions made of the system. One assumption is that customers can sign out of their account at any time. Another assumption is that the store owner can communicate with a visitor if the visitor wanted to dispute their rejected sign up application. In certain cases, the store owner can override the rejection and approve the sign up application.

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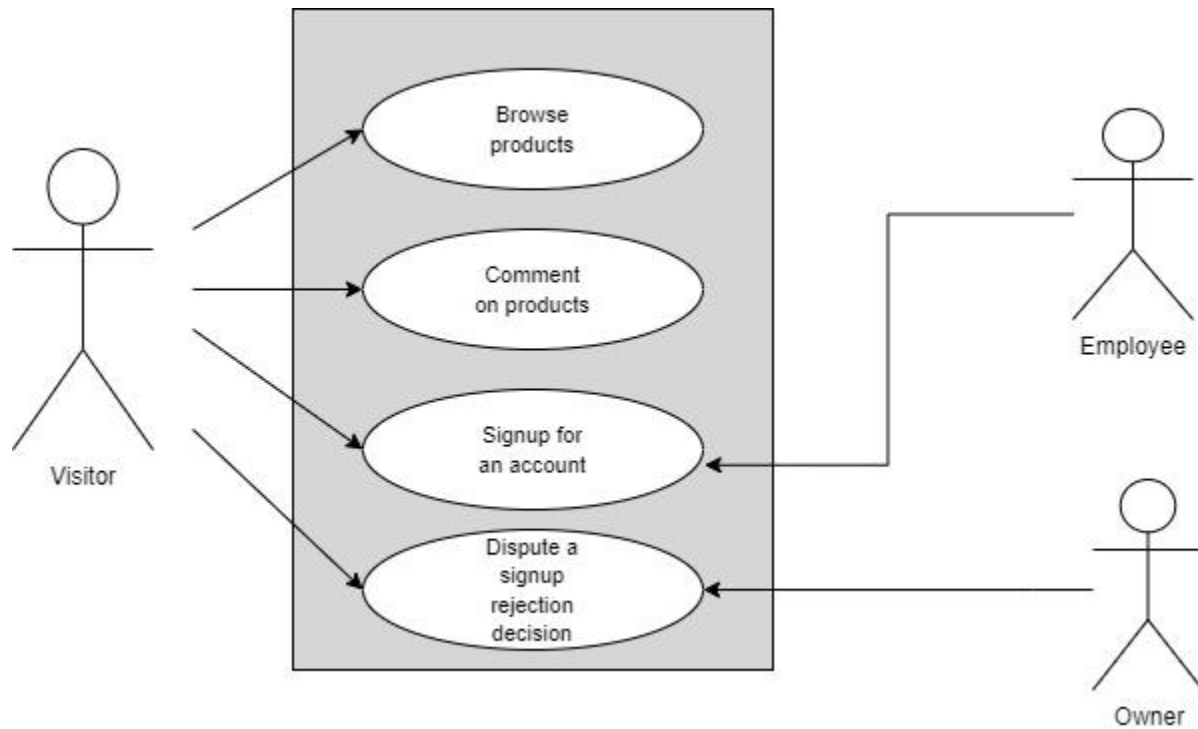
### 3. Specific Requirements

#### a. Full System Use Case Diagram



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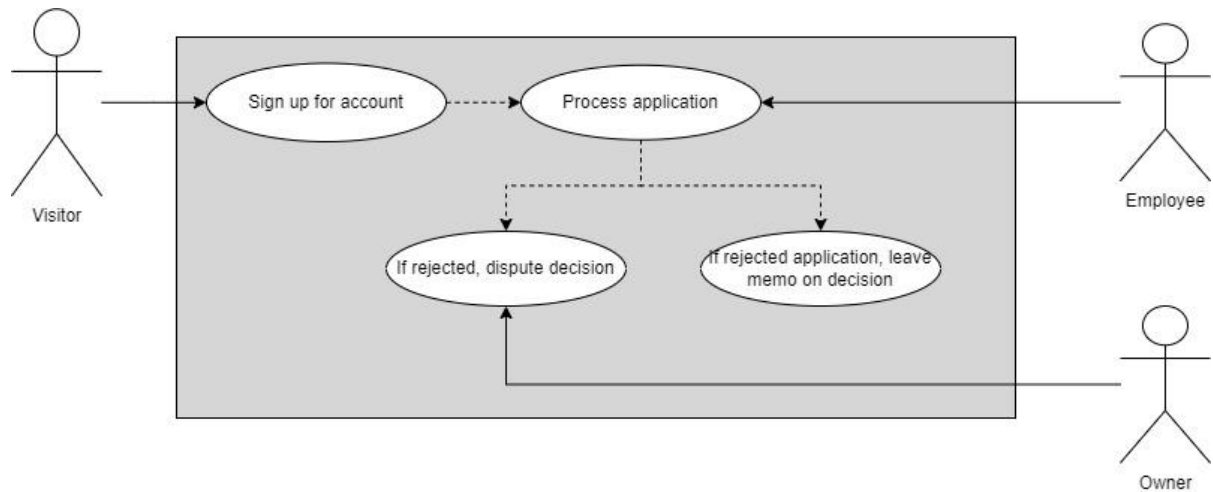
## b. Visitor Use Case Diagram



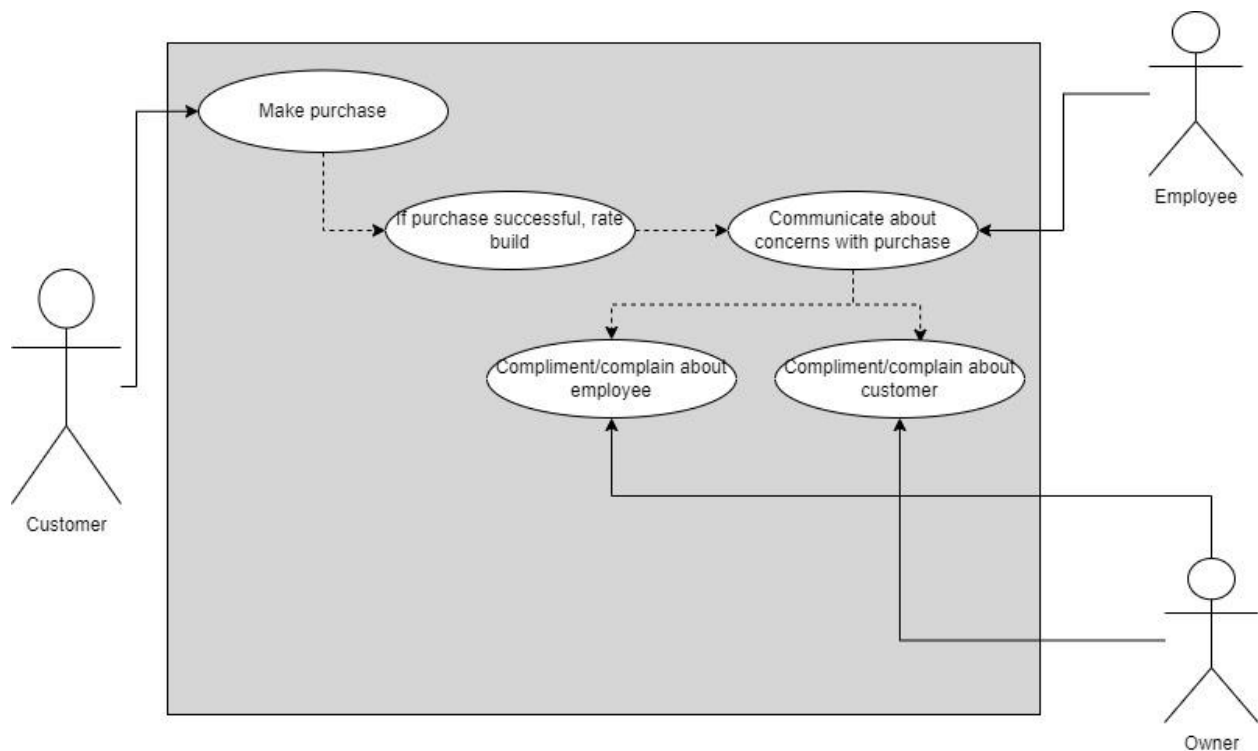


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### c. Sign Up Use Case Diagram



### d. Make a Purchase Use Case Diagram



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### 3.1 Use Case Reports

Since the entire system use case diagram is complex, each user including visitor, customer, store employee and store owner will be discussed separately. Sign up and making a purchase workflows will also be discussed separately as they involve multiple users.

#### a. Visitor Use Cases

Use Case	Description
Browse products	The Visitor can freely browse the available products without having an account.
Comment on products	The Visitor can freely comment on all products without having an account.
Sign up for account	The Visitor can sign up for an account and be converted to a Customer. This feature is reviewed in greater detail <a href="#">below</a> .
Communicate with owner to dispute account sign up rejection	The Visitor can dispute a decision that rejects their account creation with the Store Owner. This feature is reviewed in greater detail <a href="#">below</a> .

#### b. Customer Use Cases

Use Case	Description
Sign in	The Customer can sign in their existing account.
Sign out	The Customer can sign out of their existing account.
Deposit money	The Customer can deposit money in their store account to use for purchases.

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Make a purchase	The Customer can make a purchase. This feature is reviewed in greater detail <a href="#">below</a> .
Build a computer	The Customer can build a computer.
Customize existing build	The Customer can change an existing build.
Save build	The Customer can save a build.
Rate build after purchase	The Customer can rate a build after they have purchased it.
Compliment or complain about an Employee	The Customer can compliment or complain about an interaction of a Store Employee or a build that the Store Employee has created.
Browse products	Same as Visitor, the Customer can browse products freely.
Comment on products	Same as Visitor, the Customer can comment on products.

### c. Store Employee Use Cases

Use Case	Description
Build a computer	The Store Employee can create computer builds. Similarly to the Customer, they can create builds, change them and save them.
Compliment or complain about a Customer	The Store Employee can compliment or complain about an interaction with the Customer to the Store Owner.
Chat with Customer	The Store Employee can chat with a Customer. They have a way to interact directly with each other.
Process Signup application	The Store Employee reviews a Visitor account sign up application and issues a decision whether or not the Visitor can be converted to

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	a Customer. The Store Employee can leave notes on their decision. This feature is reviewed in greater detail <a href="#">below</a> .
Add memo to application	The Store Employee can leave memos on denied account signup applications for the Store Owner to review.

#### d. Store Owner Use Cases

Use Case	Description
Demote, promote or fire an Employee	The Store Owner can demote, promote, or fire a Store Employee based on the ratings of the builds they have created or their interactions with Customers.
Issue a warning or give a compliment to a Customer if referred by an Employee	More details <a href="#">below</a> .
Issue a warning or give a compliment to an Employee if referred by a Customer	More detail <a href="#">below</a> .
Communicate with Visitor in case of signup rejection	The Store Owner can communicate with a Visitor when the Visitor initiates an account signup rejection.
Review notes Employee left	The Store Owner can review notes that the Store Employee has left on signup decisions.

#### e. Sign Up Use Cases

Use Case	Description
Visitor signs up for an account	The Visitor can sign up for an account.
Employee processes Visitor signup application	The Store Employee reviews and processes every signup application manually.

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Employee approves Visitor signup application	The Store Employee can approve a Visitor signup application and convert the Visitor to a Customer.
Employee denies Visitor signup application	The Store Employee can deny a Visitor signup application.
Employee leaves notes on denied signup applications	The Store Employee can leave notes for the Store Owner to review when they deny a Visitor signup application.
Visitor disputes denied signup application with Owner	The Visitor can file a dispute with the Store Owner if their signup application was denied by the Store Employee.
Owner reviews notes on denied signup applications left by Employee	The Store Owner can review the notes that the Store Employee left when denying a Visitor signup application.

#### f. Make a Purchase Use Cases

Use Case	Description
Customer makes a purchase	The Customer can purchase a computer build they have created or an already existing computer build.
Customer can rate a build after purchase	The Customer can rate a computer build after they have purchased it.
Customer can chat with Employee about concerns with the purchase	The Customer can contact a Store Employee and chat with them directly about any concerns with their purchase.
System can deny purchase	The System checks whether or not the Customer has enough money in their account when making a purchase. The System denies a purchase if the Customer does not have enough money in their account.
System can issue warnings if purchase is	The System issues warnings to the Customer

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denied	when their purchase is denied.
Owner can issue warnings or compliments to Customer	The Store Owner issues warnings or compliments to the Customer when they are reported by the Store Employee following a conversation.
Owner can issue warnings or compliments to Employee	The Store Owner issues warnings or compliments to the Store Employee when they are reported by the Customer following a conversation.

## 3.2 Supplementary Requirements

### a. System Actions

Use Case	Description
Check computer builds	The System checks if all components in a computer build are compatible before a build is saved or purchased.
Prompt Customer to publicly share a build on the website	The System prompts a Customer to share their customized computer build as a “Suggested Build” on the website.
Deny purchases	The System can deny purchases that the Customer is trying to make if the Customer doesn’t have enough money in their store account.
Issue warnings for denied purchases	The System can issue warnings to the Customer if their purchase has been denied.
Issue a warning or give a compliment for a build	The System can issue warnings or give compliments to a Customer or a Store Employee for the computer builds they have created based on the builds’ ratings.
Remove computer configurations	The System can remove computer

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	configurations with the worst rating and issue a warning to the build creator (a Customer or a Store Employee).
Promote computer configurations	The System can promote computer configurations with the best rating and issue a compliment to the build creator (a Customer or a Store Employee).
Run a language check	The System runs a language check on all communication on the website (comments and messages), initiated by a Visitor, Customer, or Store Employee.
Replace taboo words in communication	The System replaces all taboo words in communication with appropriate number of * symbols.
Delete comments with taboo words	The System deletes comments by Visitors that contain any taboo words. The Visitor comments with any taboo words are not shown on the website. The Customer comments are shown if they have less than 3 taboo words. If the Customer comments have more than 3 taboo words, the comments are deleted and not shown on the website.
Issue warnings for comments with taboo words	The System issues warnings to Customers on comments containing taboo words. The System issues 1 warning for comments with less than 3 taboo words. The System issues 2 warnings for comments with more than 3 taboo words.

## 4. Supporting Information

Below are screenshots of some screens of the mid-fidelity prototype designed in Figma.

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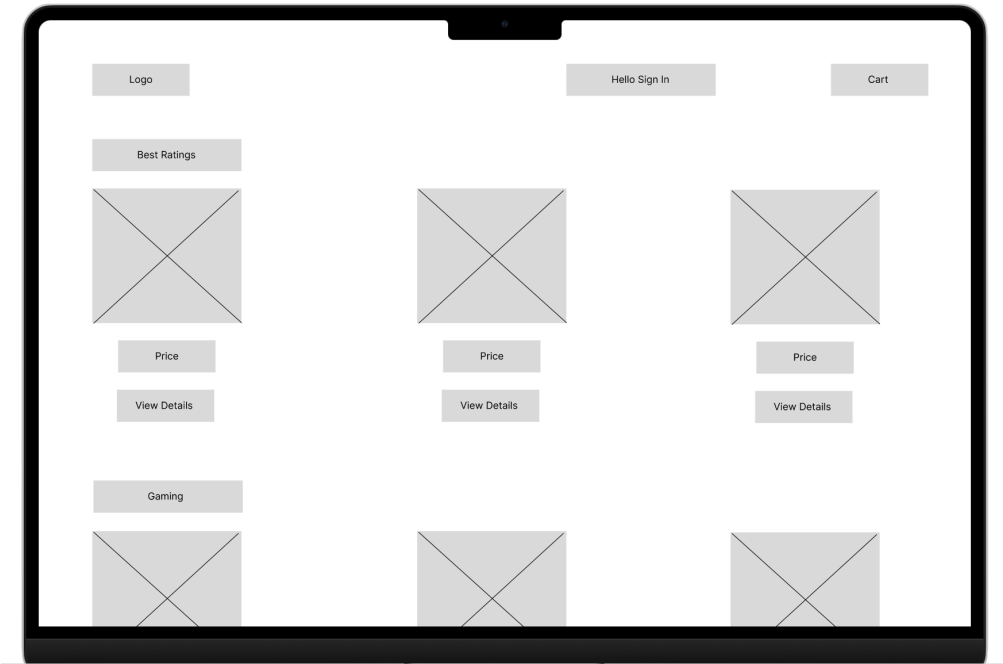


Figure 1. Home Page



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Logo

Sign In

Email

Enter your email

Password

Enter your password

Sign In

New here? Become a customer today!

Create Account

*Figure 2. Sign In Page*

Logo

Sign Up

Your name

Enter your name

Email

Enter your email

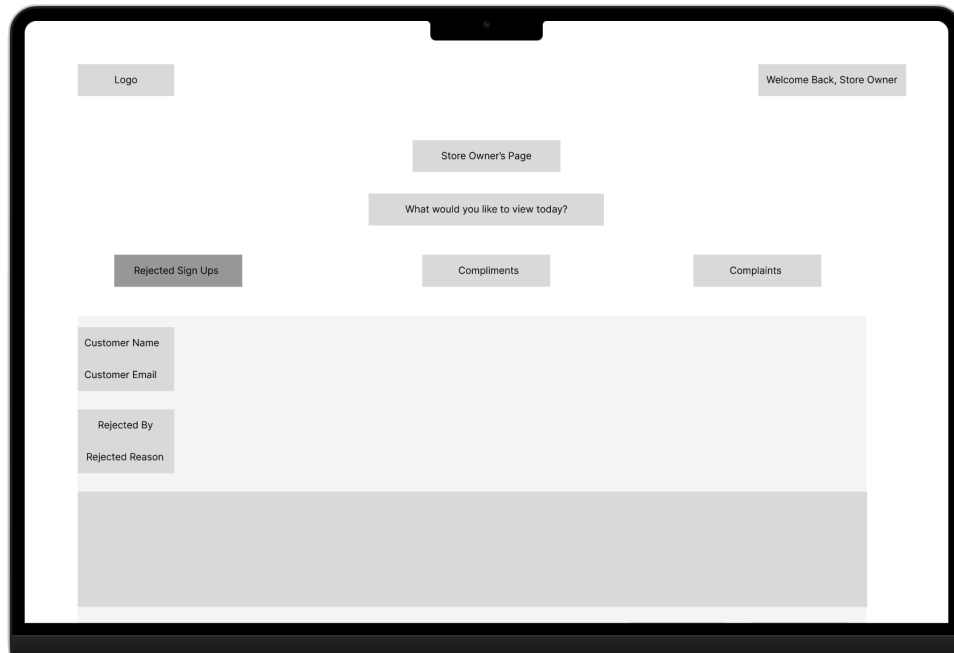
Password

Enter your password

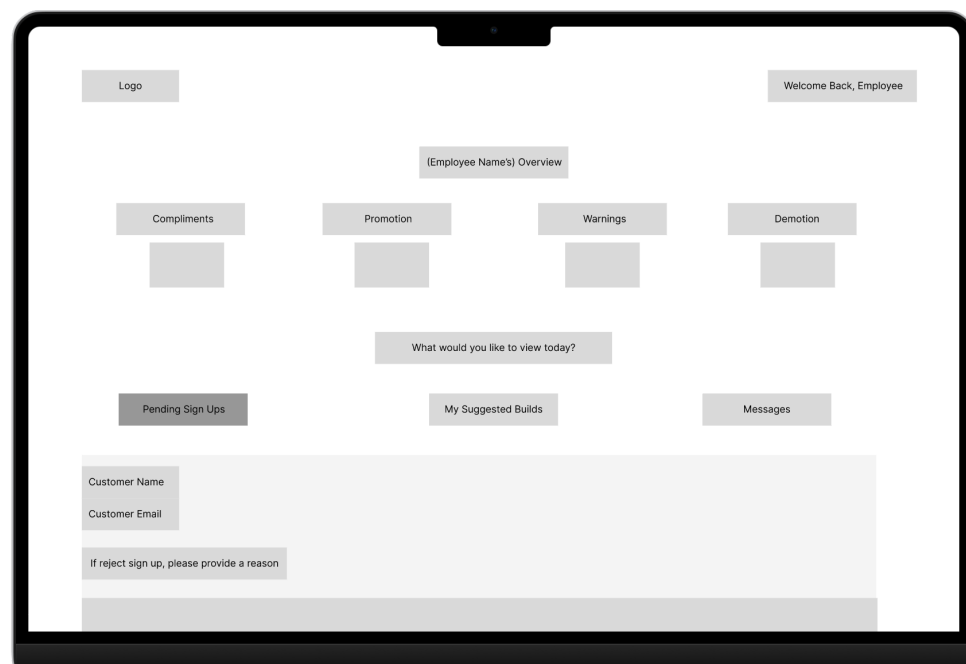
Sign Up

*Figure 3. Sign Up Page*

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*Figure 4. Store Owner's Page*



*Figure 5. Store Employee's Page*

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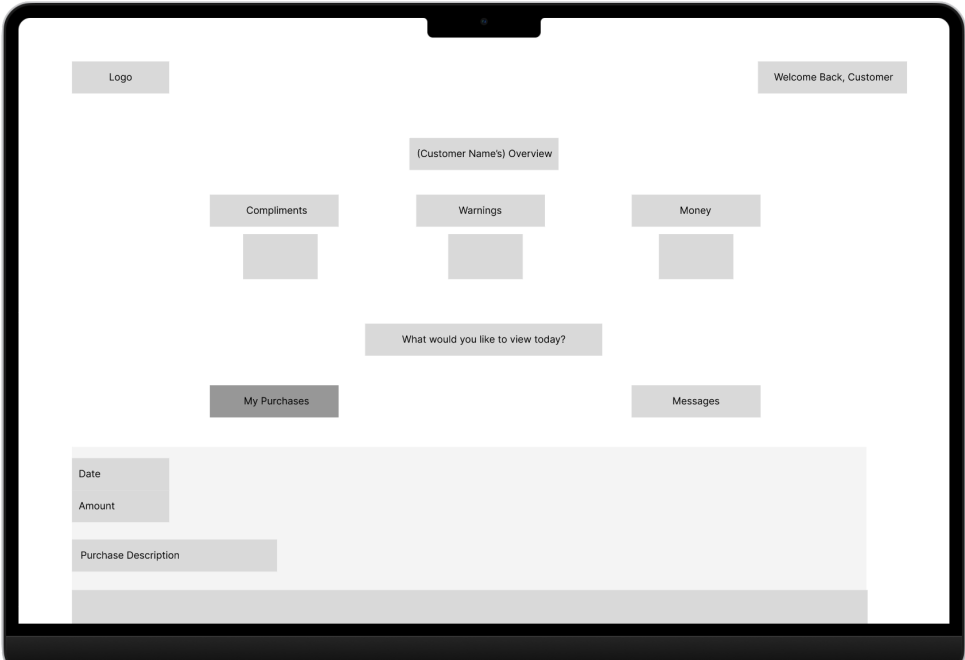


Figure 6. Customer's Page