

SOFE 3650 - Fall 2021
Software Design and Architectures
Project progress report

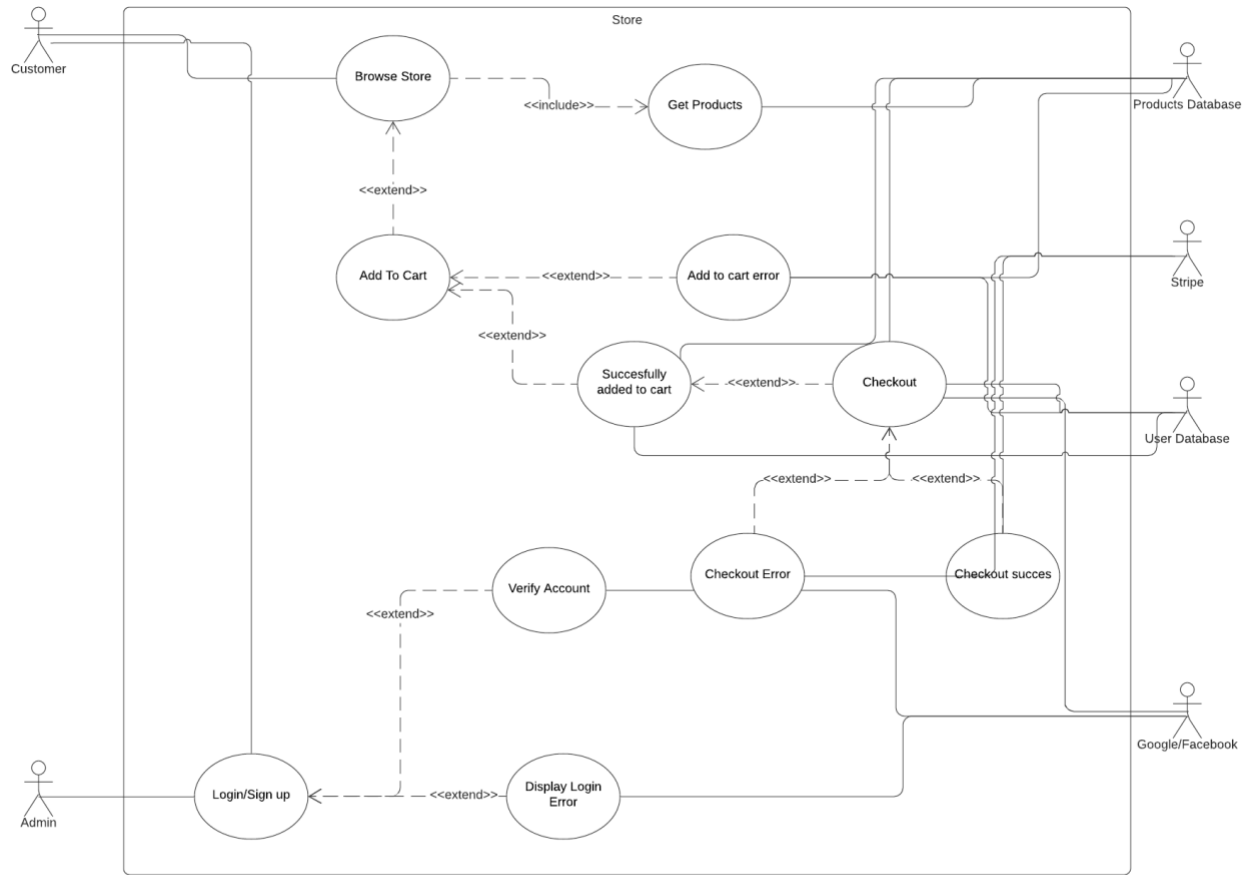
Electronics Online Store

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| Use Case | Description |
|---------------------------------|--|
| Browse Store UC-1 | This is the bread and butter of our store. This is where the user can browse our selection of products available for purchase. The products and their associated information is stored on our database and subsequently fetched and displayed from our frontend. |
| Get Products UC-2 | This is where the frontend of our application will fetch our products and their associated information in order to display it. |
| Add to cart UC-3 | The user can select a product to add to their cart along with a quantity. The cart will update the cost accordingly if the products are available in their requested quantity. |
| Add to cart error UC-4 | If the items are no longer available. |
| Successfully added to cart UC-5 | If the item is available, it will be added to the user's cart and the cart will be updated accordingly. |
| Checkout UC-6 | This is where the user can begin the checkout process. Final checks of the product's availability as well confirmation that the user is logged. |
| Checkout Success UC-7 | If the user is logged in, the items are in stock, and the user payment has gone through successfully then their purchase is confirmed here. |
| Checkout Success UC-8 | If any of the above conditions are not met, then there will be a relevant checkout error presented to the user. |
| Login/Sign up UC-9 | Here users and admins can login and sign up using their google or Facebook accounts. |
| Login Error UC-10 | If google or Facebook login was unsuccessful, an appropriate error will appear. |
| Verify account UC-11 | If google or Facebook login was successful, the user or admin will be logged in with the appropriate permissions. |

| Id | Quality Attribute | Scenario | Associated Use Case |
|------|-------------------|---|--------------------------------------|
| QA-1 | Security | When a user makes a payment, their payment information and transaction must be processed in a secure and lawful manner. All regulations must be followed during this process. | UC-6, UC-7, UC-8, UC-9, UC-10, UC-11 |
| QA-2 | Performance | The user must have a seamless experience when accessing the website. All interactions must be executed elegantly with accurate and performant functionality through a beautiful UI. | All |
| QA-3 | Availability | The Databases and third-Party services must be always available 24/7. | All |
| QA-4 | Modifiability | All components of the system must be modularized and separated systems. For example, the payment processor that we chose, stripe, should be swappable with another with another service like square with relative ease. | All |

| ID | Constraint |
|-------|--|
| CON-1 | The application must run as intended on Chrome, Firefox, Safari and Edge |
| CON-2 | All the users purchase history must be stores |
| CON-3 | Before processing a payment, the system must be certain that the item/items being purchased are in stock |
| CON-4 | A relational database must be used |
| CON-5 | User should be tracked on the website to create a model of their interests for marketing purposes |
| CON-6 | The user must be informed about this tracking and storing of information and must be presented with an option to opt out |