Software Engineering Group Project Update of UML Use-Case, Sequence, Class, & State Diagram

CS 3773-01T

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Group 1

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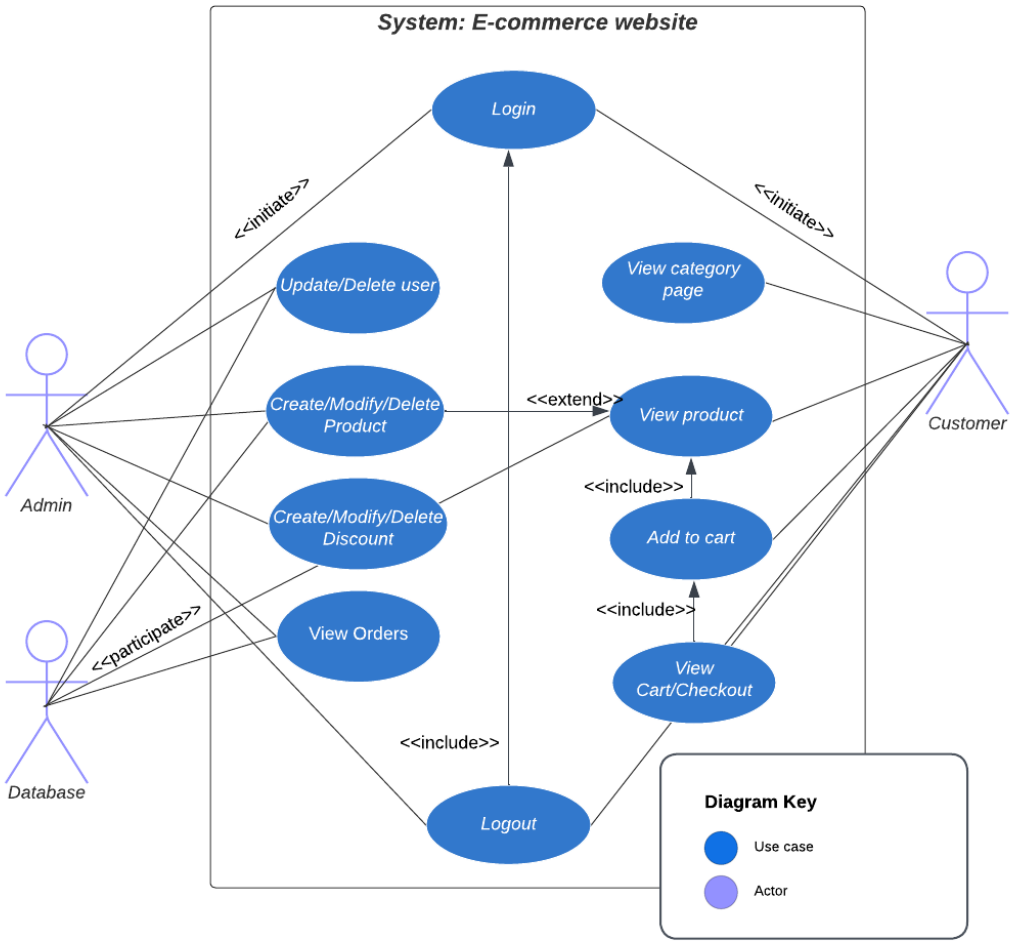
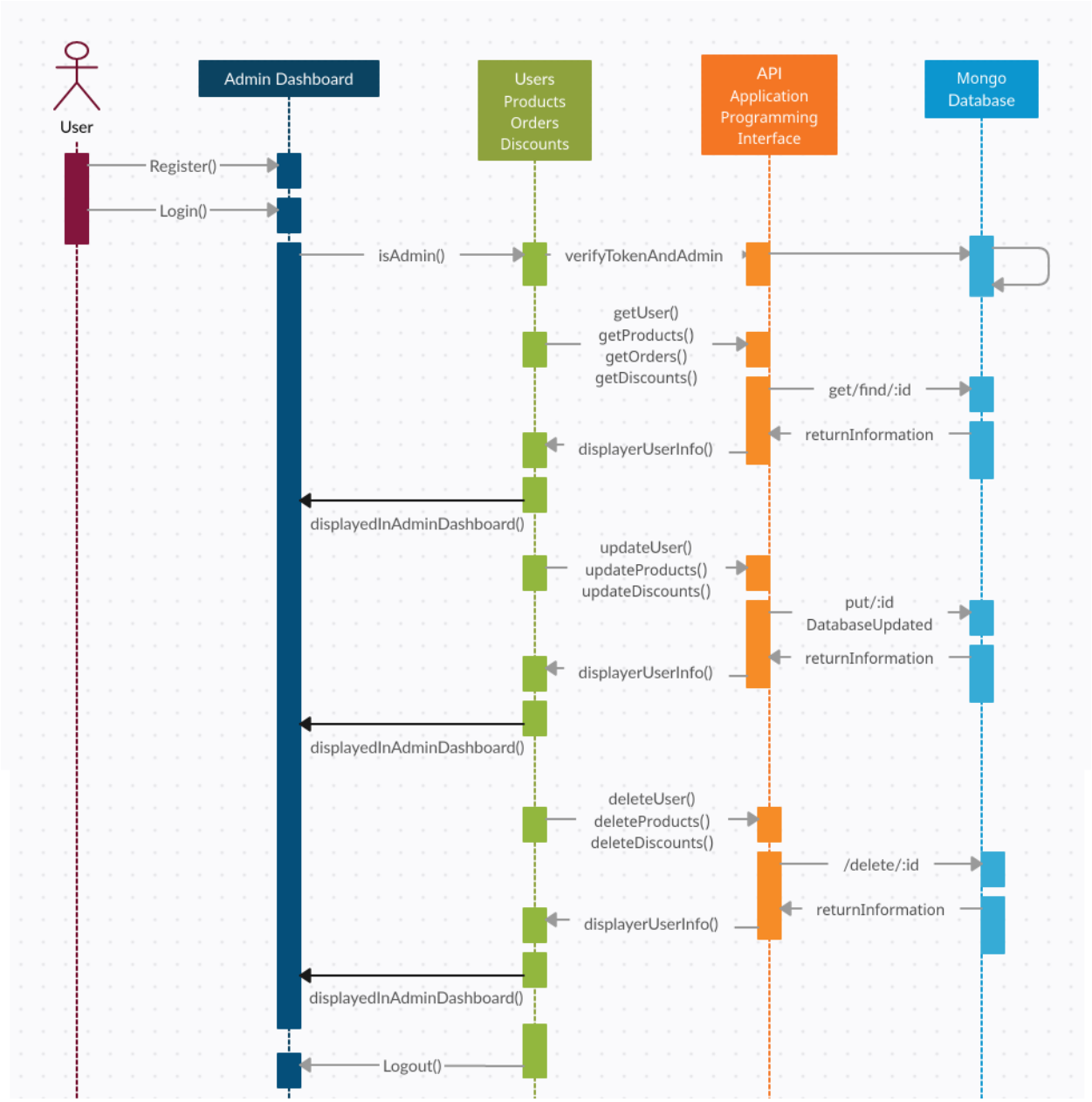
UML Use-Case Diagram



The above UML Use-Case Diagram covers a theoretical interaction between the admin, the database, and the customer. The customer and the front-end was added to give depth to the UML Use-Case Diagram and to better show the relationship between all aspects of the diagram. All functions begin and initiates with a login to simulate a beginning to the interactions. An admin can modify and delete users, products, discounts, and can view orders. The database participates in this by supplying those functions with information. This is extended to the customer who can see the changes the admin has made. At the conclusion of the session, the admin or the customer can logout, terminating the session.

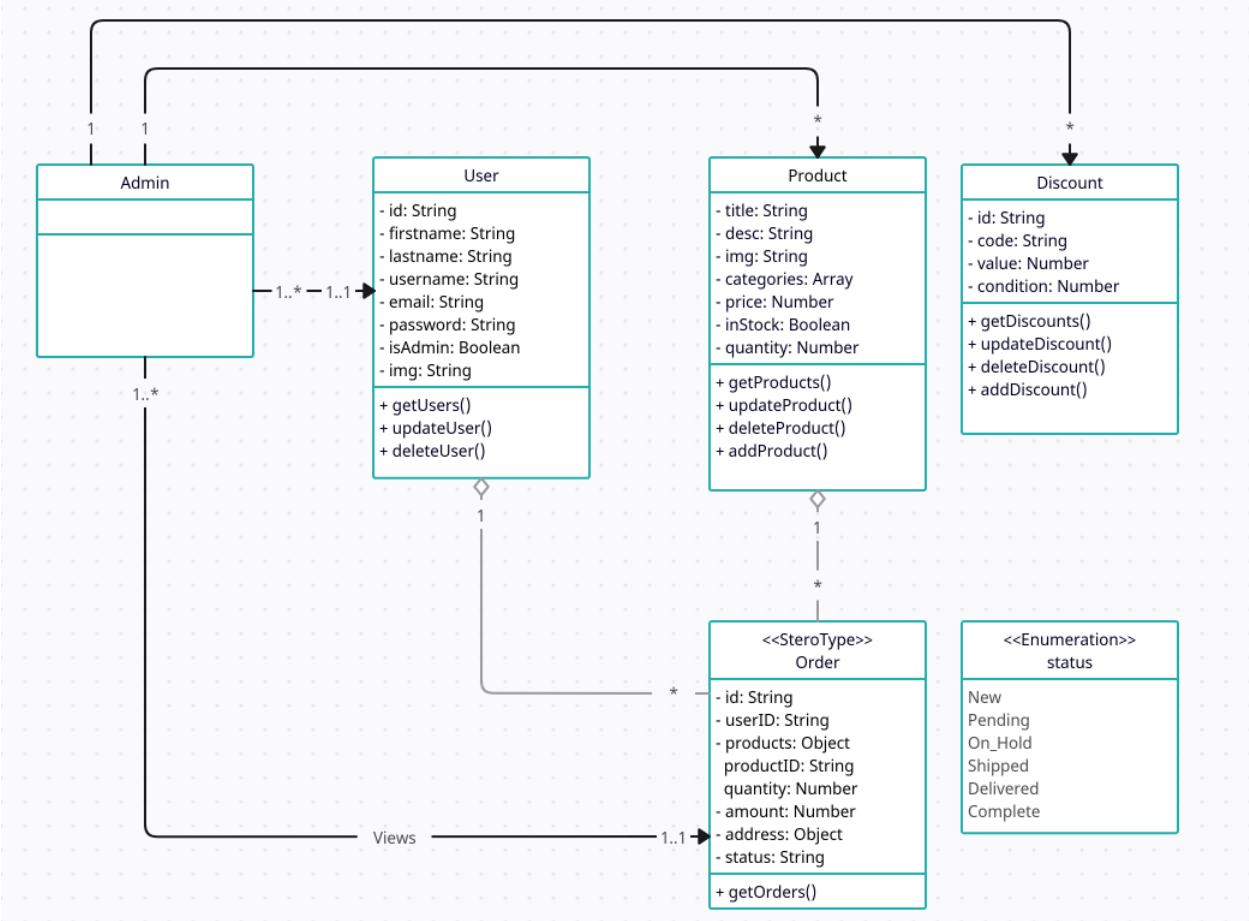
UML Sequence Diagram



The UML sequence diagram would have begun by prompting the user to register or log in. For demonstration purposes, this was kept in the Sequence Diagram. By logging in with an admin account through the e-commerce admin dashboard, it will then verify through the admin class if the account is valid and the password is valid. The homepage of the dashboard will be visible once the admin status is verified. To accurately represent the sequence, the admin was removed from the UML Sequence Diagram, between the Admin Dashboard and the various classes such as User and Products. From there, initiating either

the getUser(), getProducts(), getOrders(), or getDiscounts(). It will navigate to the respective portion collection in the database and retrieve the information. It will map through each item in the collection, return an ID, which will then populate the list. This repeats for all functions, sending the various API requests as indicated (get, put, delete). At the end of the session, the admin passes the logout() to the admin dashboard, terminating the session.

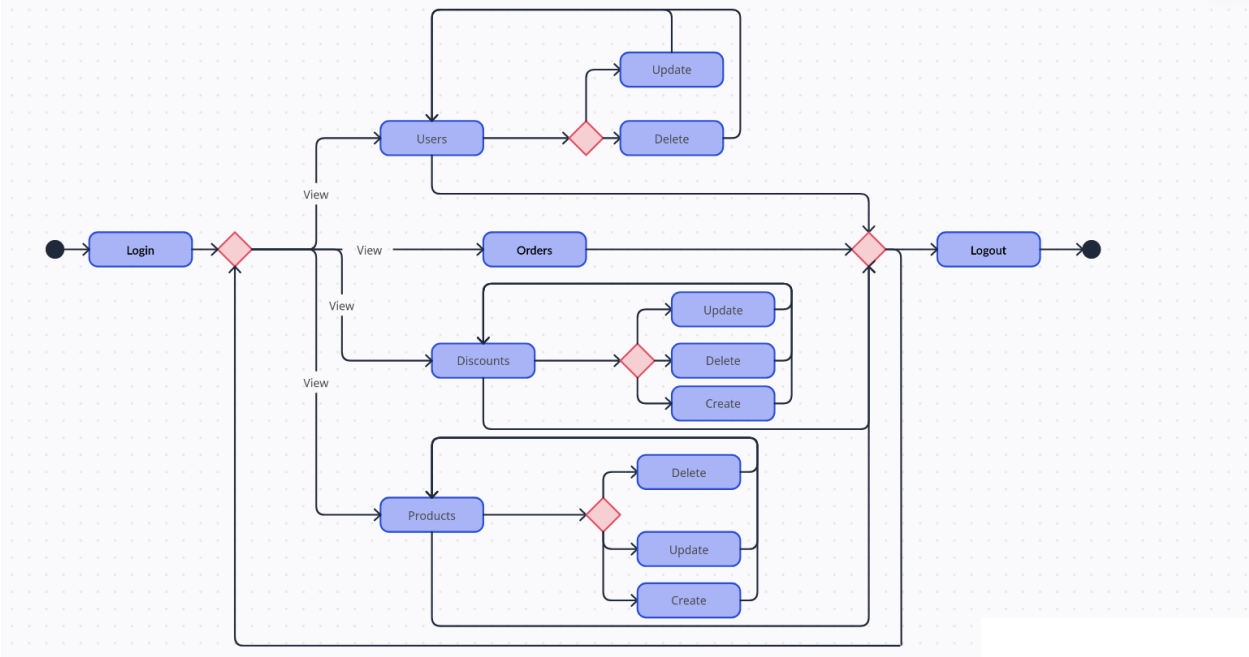
UML Class Diagram



The class diagram for the admin dashboard is much simpler than a class diagram of a front-end focused class diagram. This is due to the fact that the checkout model and the various classes linking to the checkout are not used in the admin dashboard. The class diagram begins with the admin user. Since there is no token authentication, the login, logout, and tokens were not included in admin. However, the admin is linked to all major classes such as the user, product, discount, and is able to view orders. The admin shares a 1 to many relationship with all classes. All classes have a similar relationship and similar functions. The user class includes the functions getUsers(), updateUser(), and deleteUser(). The variables reflect the model schema used in the application programming interface or

API. Product and Discount class are similar as well except that they include an add function. The order class is linked to both user and product since there includes information that is needed to populate the order class such as the user ID and the product ID.

UML State Diagram



The UML State Diagram begins with an administrator that has the permission to access the admin dashboard of the ecommerce website and is able to login. From there, the admin has a multitude of choices as shown above. The admin can view products, discounts, orders, and users. For example, if an admin chose to view products, they then have three more options that become available. The admin can choose to delete, update, or create a product. Despite any of these choices, the admin will be returned to the products or product list page. Once they are done with products, the admin can move ahead to either logout of the admin dashboard and terminate the session or return to the beginning to repeat the process or continue to view discounts, orders, or users. The steps here are similar to products. The UML State Diagram concludes once the admin logs out of the system. The login and logout are for demonstrational purposes to highlight the beginning and the ending of the UML State Diagram and have been removed in the actual implementation due to complexity with authentication tokens.