**Description and Implementation of UML**

**Blackjack**

Our project is a Java-based implementation of Blackjack. It is meant to emulate the real casino environment with its own betting system, traditional two card draw, a shop, an assortment of difficulties, and supports up to multiple players. We wanted for our game to be simple, fun, and challenging for all types of players.

**Design Description**

Creating an account on our platform involves several essential tasks to facilitate new customer registration. Customers are required to provide their first and last name, email address, billing/shipping address, a form of payment, username, and password. To ensure a smooth user experience, we must handle scenarios such as checking for duplicate email addresses/usernames to prevent multiple accounts, validating input data to ensure accuracy, allowing account deletion, and providing an option to edit account information. For existing customers, we offer a seamless Sign In/Out process, allowing them to access their accounts using their username. To enhance security, we handle scenarios like incorrect password input, account lockout after multiple failed login attempts, account recovery options, and create a new account. While accessing their account they can view their orders.

The user can search for an item they wish to purchase. This includes handling partial matches, offering relevant suggestions, and supporting filters to refine searches by factors like price range and category. When customers find their desired items, they can add the item to their shopping cart for later purchase. We manage various scenarios, including handling out-of-stock items, allowing quantity updates, displaying real-time availability status, and providing options to remove items from the shopping cart, as well as saving the cart for future reference.

When in checkout, customers will be able to add payment methods, including credit/debit/gift cards. Furthermore, they can input their shipping address, email address, first and last name, and phone number. We handle potential issues involving incorrect addresses, validate the address details, check for insufficient funds, receive order confirmation emails to track their purchases, incorrect payment information, and ensure the secure storage of sensitive data to protect customer information. If the user already has an account the user can bypass this section, and the form will be automatically filled out.

Our platform strives to provide a user-friendly and secure experience throughout these essential tasks to meet our customers' needs.