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CS-255

**Module Six Assignment**

These diagrams show the basic steps of using an ATM to withdraw cash. The activity diagram on the left walks through the process: you start by entering your PIN, the system checks if it’s correct, then asks for the amount you want. If that amount is available, the ATM dispenses the cash, generates a receipt, and prints it. The sequence diagram on the right shows how the user, ATM, and bank system communicate with each other during this process, like the user entering their card and PIN, the ATM asking the bank to verify the PIN, confirming it’s valid, asking for the withdrawal amount, and then dispensing the money. The key info being passed back and forth includes the PIN, the validation result, the withdrawal amount, and the confirmation that cash was dispensed.

One problem here is that there’s no clear way for the user to cancel the transaction once they’ve started it. For example, if you enter your PIN but then change your mind about making a transaction, there’s no step in the flow to exit cleanly. Adding a “Cancel” option at multiple stages, like after the PIN check, would make the process of using this ATM more user-friendly.

Another problem is that the sequence diagram omits an important step, which is checking the account balance before giving out cash. The sequence diagram doesn’t show the ATM communicating to the bank if there’s enough money in the account. Adding that check to the back-and-forth between the ATM and bank would make the design more accurate and realistic. The below reconstructed UML sequence diagram reflects my suggestion.

A diagram of a bank

AI-generated content may be incorrect.