6-3 Assignment: Interpreting UML Diagrams

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CS-255

Both the UML Activity Diagram and the UML Sequence Diagram show the process of money being withdrawn from an ATM. The activity diagram focuses on an unidentified user interacting with the ATM. The sequence diagram identifies the user, the ATM, and adds the bank as an object in the process. The sequence of actions begins with entering a card, entering a pin, having the pin verified, request an amount, verification of funds, dispensing of the funds, printing a receipt and ending the transaction.

Between the two diagrams, the whole withdraw process is well covered, but each diagram is missing elements that is contained in the other. The activity diagram does not include the entering of the card action while the sequence diagram fails to verify sufficient funds before dispensing cash and doesn’t include receipt generation. From a logic perspective, the process ends when something isn’t correct. The pin should be allowed 3 attempts before ending the transaction and the bank should be notified if this happens. The same should be done for dispensing cash. Instead of the transaction ending if there are insufficient funds, it should display and error with the account balance and the user should decide whether to withdraw an available amount or end the transaction. I have redesigned the UML Activity Diagram to reflect these changes.

ATM Withdraw - UML Activity Diagram

Diagram

Description automatically generated