CS255 – Week 6 – Interpreting UML Designs

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A diagram of a program

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The diagrams above detail one use case for the operation of an automated teller machine (ATM). These diagrams outline the flow and logic behind allowing a user to withdraw money from the ATM.

In the first diagram, we outline the decision logic behind the use case. The ATM must verify the PIN in order to allow access to the users accounts. If this is correct, the user is prompted for the amount to withdraw. As long as the users balance is above the request amount, the ATM dispenses the money and prints a receipt. Should the PIN be wrong or the amount be more than the user has, then the ATM breaks out of the normal loop and closes out the interaction. However, in the diagram above, it may be more efficient to return to the “Ask for amount” function if the user’s entered amount is invalid instead of exiting the process and requiring the user to start from the beginning.

In the second diagram, we follow the passing of information between the entities. Starting with the user providing the card (which holds the account information) and the ATM requesting the PIN. Once the user provides the PIN and the ATM verifies it with the bank, the ATM will then ask the user for the requested amount to withdraw. If that checks out, then the ATM dispenses the money to the user. A missed bit of information: after the ATM ask how much money will be withdrawn, it verifies with the bank if the amount is available. If the requested amount is valid, the bank will deduct that amount from the user’s account, and the ATM will dispense.

The modified sequence attached below.

A diagram of a bank

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