2.1 UML Use Cases

- Open bank account
- Close bank account
- Apply for Credit
- Make money-transfer online
- Withdraw money from ATM
- Check balance

- Customer
- Potential customer
- Bank employee
- Website
- Account-keeping system
- ATM
Use Case: Withdraw money from ATM

Actors: ATM, Customer, account-keeping system

Description:

After the ATM has finished the transaction for the previous customer, the ATM will show a “Welcome” message and ask the next customer to insert his/her card. If the card has been inserted, the card is read and the consistency of the card data is checked. Then, the customer is asked to enter the PIN. The ATM then checks if the entered PIN is correct by comparing it with the data read from the card. If the PIN was correct, then the customer can enter the amount of money (s)he wishes to withdraw from his/her account. If the amount has been entered and the customer has confirmed the amount, the ATM checks the balance of the account (check balance) by asking the account-keeping system of the bank. If the balance of the account is higher than the requested amount, then operation can continue. The ATM checks its money tray if enough money is still available. If this ok, the money is withdrawn from the account. Then the ATM asks the customer to take the card. If the card has been taken, the money can be issued to the customer.

Error Situations:

• card not readable
• card contains incorrect data
• wrong PIN number entered by customer
• account balance lower than requested money
• ATM does not have enough money
• ...

<<uses>>: check balance
2.2 UML Structure Diagram

Separated into detailed class description and structure diagram for better presentation. Normally, all information is in one diagram.
Additional descriptions (e.g. role names, association names, constraints) can be attached to associations.