Non-Functional Requirements

Speed  
-not too much of an issue, but shouldn’t be able to freeze  
-Should not be too slow either, to allow other customers to use the machine without waiting too long.

Size  
-Not an issue either as long as the hardware has enough memory space to accommodate it.

Ease of use  
-organize the UI  
-Must be simple and easy to use for people with or without any technical experience.

Reliability  
-Should not fail during a transaction.

Robustness  
-Do not allow for data corruption. Save nothing unless confirmed proper operation.

Portability  
-not required past the single identical line of ATMs

System Functional Requirements

Card reading  
-system needs to be able to take card info and find a matching account  
-the provided pin must match the found account  
-no more than 5 attempts at entering correct pin before lockout  
 -display a get assistance message

UI  
-a welcome screen   
-options:  
 -see account information  
 -withdraw funds  
 -deposit funds  
 - print receipt  
 - transfer funds  
 -quit/end session  
-welcome screen needs a space for bank promos  
-each screen needs a back button  
-on exit there is a prompt for donating to charity

Data  
-confirm that cash was dispensed before changing funds when withdrawing  
-be able to use exception handling in case something goes wrong  
 -in which case don’t change the balance or dispense money  
-reduce the users balance by an additional 1% of their withdrawn amount  
-verify that there are enough funds available into the machine to satisfy the customer’s needs

Security  
-protect against system cracking  
-do not allow for any kind of withdrawing without a card, sufficient balance, or unauthorized accounts  
-in the case of insufficient funds, tell this to the user and prompt for a new amount. Don’t withdraw  
 -they can input a new amount or quit  
-in some way implement a protection for forced withdraws by muggers. Add a discrete security button that notifies authorities and security (it should do it without displaying any confirmation)

Records  
-save a copy of each transaction’s information (receipts) to a file showing amount withdrawn, remaining balance, and data and time along with a transaction number  
-receipts printed to the customer should say something nice

Constraints

-phone connection for alert button  
-card or manual identification entry necessary to access system  
-write code in Java, develop using Git