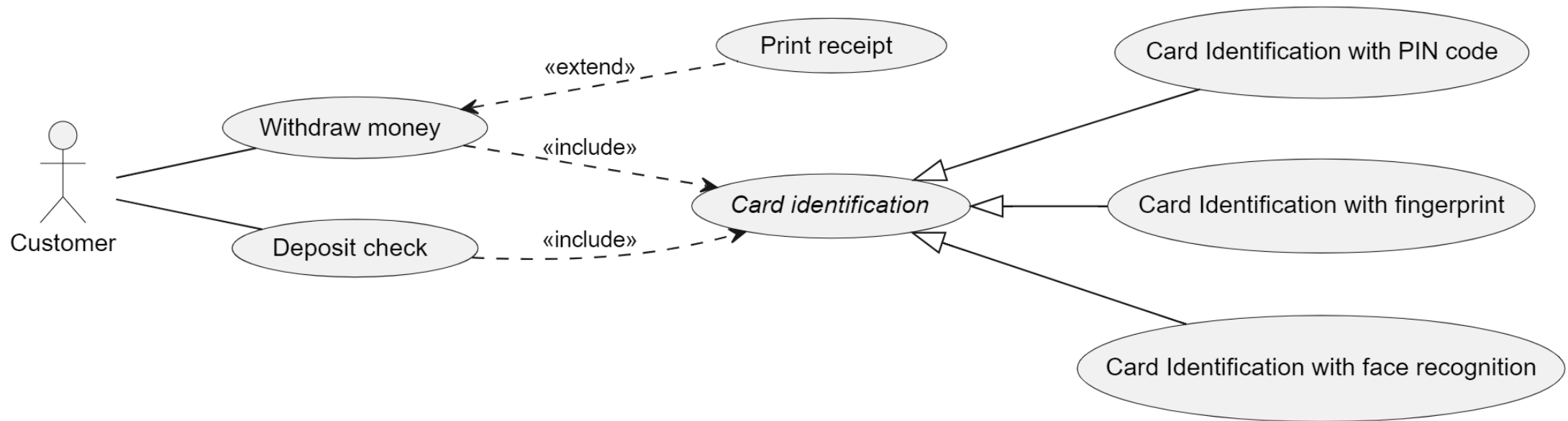


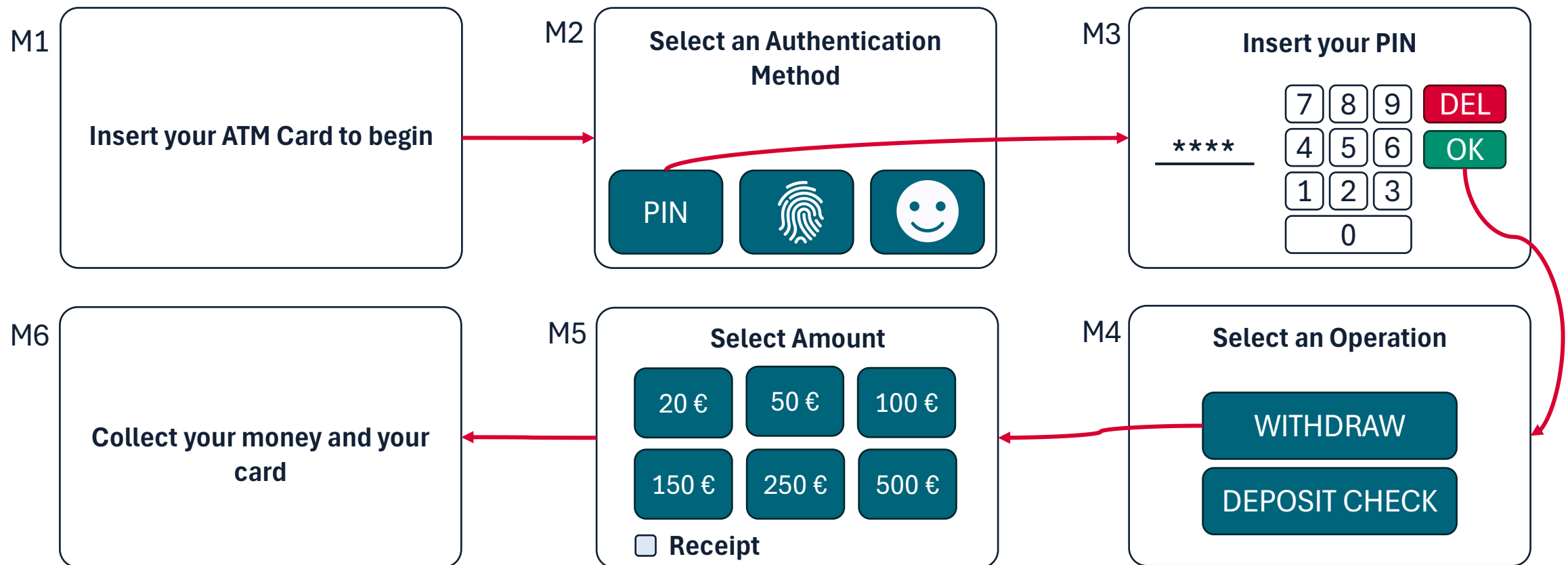
# Example: ATM System



- Suppose we want to describe the **Withdraw money** use case, using a fully-dressed format

# Example: Mockups

- It may be useful to design some mockups of the system



# Example: Fully-dressed Use Case

<b>USE CASE #1</b>	<b>Withdraw money</b>		
<b>Goal in Context</b>	A customer wants to withdraw money from the ATM		
<b>Preconditions</b>	The customer has an account at the Bank and owns a bank card		
<b>Success End Condition</b>	The system keeps track of the withdrawal operation and erogates the requested money		
<b>Failed End Condition</b>	No transaction is made		
<b>Primary Actor</b>	Customer		
<b>Trigger</b>	Customer walks up to the system and touches the screen to activate it		
<b>Main Scenario</b>	<b>Step n.</b>	<b>Customer</b>	<b>System</b>
	1	Touches screen	
	2		Shows M1
	3	Inserts card	
	4		Shows M2

# Example: Fully-dressed Use Case

USE CASE #1	Withdraw money		
Main Scenario	Step n.	Customer	System
	5	Touches «PIN» button	
	6		Shows M3
	7	Inserts PIN	
	8		Shows M4
	9	Touches «Withdraw» button	
	10		Shows M5
	11	Touches «50 €» button	
	12		Erogates money, Ejects card, Shows M6

# Example: Extensions

- What can go wrong?
  - PIN might not be correct
  - Customer might not have enough money in their account
  - ATM might not have enough cash reserves to erogate the required money
  - Card might be flagged as stolen
  - Card might be unreadable
  - ...
- What could go differently?
  - Customers might authenticate themselves using their fingerprint or face recognition
  - Customers might opt-in to get the printed receipt

# Example: Extensions

- Each of these scenarios should be detailed using extensions

Extension #1 (customer inserts an invalid PIN)	Step	Customer	System
	7a <wrong PIN is inserted>	Inserts PIN	
	8a		Shows M7 and terminates UC

M7

**Invalid PIN – Authentication denied.  
Recover your card from the tray.**

# Example: Extensions

Extension #2 (customer does not have enough money)	Step	Customer	System
	11b	Selects «500€» button	
	12b		Shows M8
	13b	Clicks ok	
	14b		Return to step 10 of the Main Scenario

M8

**Your balance is smaller than the amount you are trying to withdraw. Select a smaller amount.**

OK