

# kizivat-kuna-pastva

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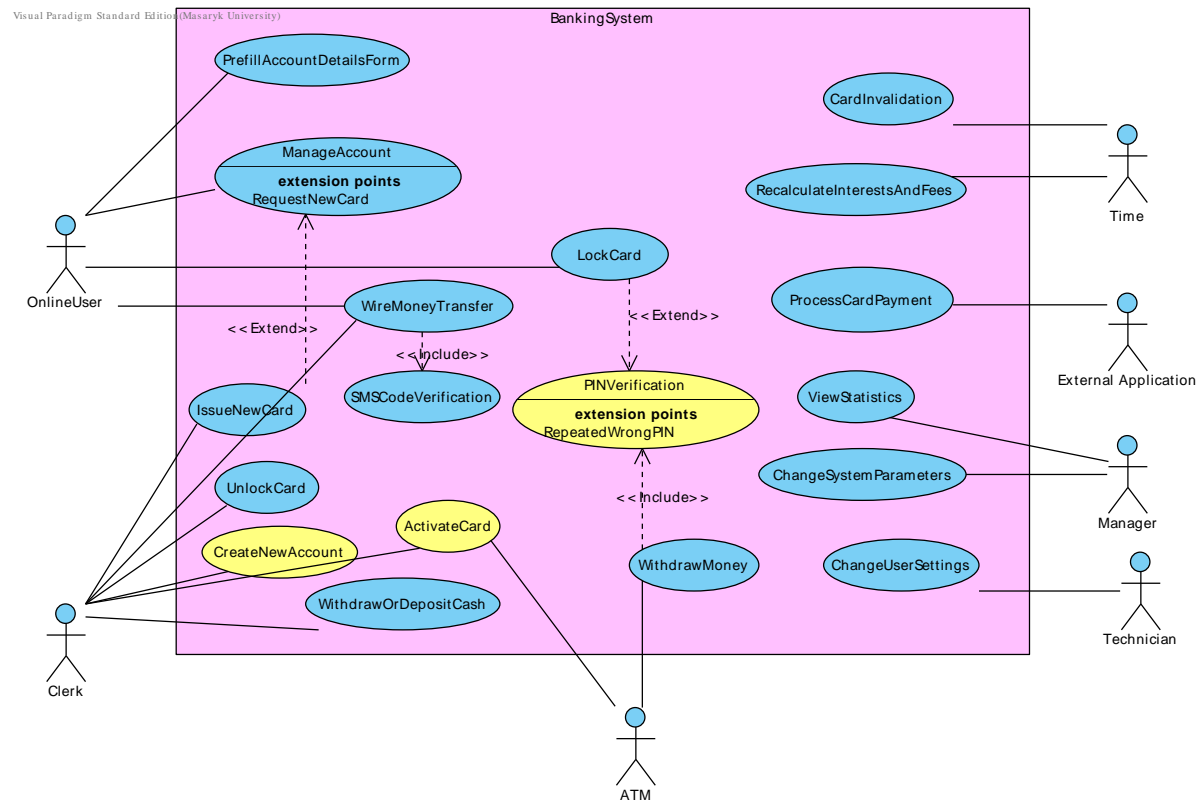
Banking System..... 6

# Stereotypes

UseCase		
Tagged Value Definitions	<b>Level</b>	
	Type	Enumeration
	Enumeration Values	Summary, User, Subfunction
	<b>Complexity</b>	
	Type	Enumeration
	Enumeration Values	Low, Medium, High
	<b>Use Case Status</b>	
	Type	Enumeration
	Enumeration Values	Name Only, Initial, Base, Complete, Deferred
	<b>Implementation Status</b>	
	Type	Enumeration
	Enumeration Values	Scheduled, Started, Partially Complete, Complete, Partially Deferred
	<b>Preconditions</b>	
	Type	Multi-line Text
	<b>Post-conditions</b>	
	Type	Multi-line Text
	<b>Author</b>	
	Type	Text
	<b>Assumptions</b>	
	Type	Multi-line Text

requirement		
Tagged Value Definitions	Text	
	Type	HTML
	ID	
	Type	Text
	source	
	Type	Text
	kind	
	Type	Enumeration
	Enumeration Values	Functional, Performance, Interface
	verifyMethod	
	Type	Enumeration
	Enumeration Values	Analysis, Demonstration, Inspection, Test
	risk	
	Type	Enumeration
	Enumeration Values	High, Medium, Low
	status	
	Type	Enumeration
	Enumeration Values	Proposed, Approved, Rejected, Deferred, Implemented, Mandatory, Obsolete
Include		
Extend		

# Use Case Diagram Banking System



## Summary

Name	Documentation								
OnlineUser									
Clerk									
ATM									
Time									
External Application									
Manager									
Technician									
UnlockCard									
LockCard									
PINVerification									
	<table> <tr> <td>Use Case ID</td><td>1</td></tr> <tr> <td>Brief Description</td><td>UC1 verifies the PIN number of card</td></tr> <tr> <td>Primary Actors</td><td>ATM</td></tr> <tr> <td>Secondary Actors</td><td>Customer</td></tr> </table>	Use Case ID	1	Brief Description	UC1 verifies the PIN number of card	Primary Actors	ATM	Secondary Actors	Customer
Use Case ID	1								
Brief Description	UC1 verifies the PIN number of card								
Primary Actors	ATM								
Secondary Actors	Customer								

	<b>Preconditions</b>	Card is activated and unlocked
	<b>Main Flow of Events</b>	<ol style="list-style-type: none"> <li>UC is evoked when card is inserted into ATM</li> <li>WHILE number of attempts <math>\leq 3</math> AND access is not allowed <ol style="list-style-type: none"> <li>System prompts the user to enter PIN code</li> <li>User enters PIN code into ATM</li> <li>System compares PIN code to database entry</li> <li>IF PIN matches database entry <ol style="list-style-type: none"> <li>Allow ATM to access user data</li> </ol> </li> </ol> </li> <li>IF access is not allowed <ol style="list-style-type: none"> <li>extension point(LockCard)</li> </ol> </li> </ol>
	<b>Alternative Flows</b>	
	<b>Post-conditions</b>	ATM has access to user data or the card is locked
● IssueNewCard		
● CardInvalidation		
● ActivateCard	<b>Use Case ID</b>	2
	<b>Brief Description</b>	UC2 activates the card
	<b>Primary Actors</b>	Clerk, ATM
	<b>Secondary Actors</b>	Customer
	<b>Preconditions</b>	Card is not activated
	<b>Main Flow of Events</b>	<ol style="list-style-type: none"> <li>UC is evoked when card activation is requested</li> <li>Actor enters card information</li> <li>Specified card is marked as active in database</li> </ol>
	<b>Alternative Flows</b>	Card does not exists or is not valid
	<b>Post-conditions</b>	Card is activated
● WithdrawMoney		
● WithdrawOrDepositCash		
● SMSCodeVerification		

• ManageAccount	Includes transfer history and card requests	
• WireMoneyTransfer		
• CreateNewAccount	<b>Use Case ID</b>	3
	<b>Brief Description</b>	UC3 creates new account
	<b>Primary Actors</b>	Clerk
	<b>Secondary Actors</b>	Customer
	<b>Preconditions</b>	
	<b>Main Flow of Events</b>	<ol style="list-style-type: none"> <li>1. UC is evoked when customer requests opening an account</li> <li>2. Customer presents his/her personal ID</li> <li>3. IF customer didn't pre-register online <ol style="list-style-type: none"> <li>3.1. Clerk fills in customer's personal data</li> <li>3.2. Clerk fills in requested account type</li> <li>3.3. Clerk fills in requested currency</li> </ol> </li> <li>4. Customer signs the documents</li> <li>5. IF customer is not registered in the bank yet <ol style="list-style-type: none"> <li>5.1. Clerk creates new user account for the customer</li> <li>5.2. System saves the new user account</li> </ol> </li> <li>6. System saves the newly created bank account in database</li> <li>7. Bank account is assigned to customer's user account</li> <li>8. Account login information is given to customer</li> </ol>
	<b>Alternative Flows</b>	
	<b>Post-conditions</b>	Account is created
• PrefillAccountDetailsForm		
• ChangeUserSettings		
• ChangeSystemParameters		
• ViewStatistics		
• ProcessCardPayment		
• RecalculateInterestsAndFees		
📱 BankingSystem		

## Documentation

### Functional Requirements

- FR001 A clerk will be able to create an account for a customer using customer's ID.



- FR002 A customer will be able to pre-fill a registration form online and then, visiting a bank, a clerk will be able to finish the account creation using the form.
- FR003 Only when creating an account a customer will be able to choose a type of the account (current or saving account), account currency (CZK or EUR).
- FR004 A timer will be periodically (at the end of the month) computing fees and interests for the past month.
- FR005 A clerk will be able to set a money transfer after a customer's request.
- FR006 A customer can set a money transfer using a online interface (internet banking).
- FR007 Every online money transfer must be authorized by a code which will be sent to the user's cell phone via SMS
- FR008 Every transaction code is valid for 5 minutes
- FR009 Transaction is canceled if wrong code is submitted 3 times
- FR010 A client can view his/her transfer history using the internet banking.
- FR011 Card payments at shops or online will be processed by the external system.
- FR012 Money in cash can be deposited or withdrawn in person at the bank's cash desk, served by bank cashier.
- FR013 Money in cash can be withdrawn from an ATM using a card.
- FR014 Card can be delivered to a customer by post (including authorization PIN sent separately) or he/she can pick it up at the bank.
- FR015 The card can be only activated by a clerk or through an ATM.
- FR016 Card has a validity date. After the date the card will be invalidated.
- FR017 Card can be blocked by a customer through online banking.
- FR018 A clerk can unblock a card that is blocked.
- FR019 Bank managers can view system statistics.
- FR020 Bank managers can change system parameters.
- FR021 Technicians can maintain the system and change user settings.

### Non-Functional Requirements

- NFR001 Every ATM has a working connection to the bank server.
- NFR002 SMS authorization code will be sent in less than 30s after request.
- NFR003 Card activation and lock/unlock has to take effect in less than a minute after request.
- NFR004 A transaction details must be available for up to 10 years after transaction.
- NFR005 There must be a redundant copy of every server and connection element.
- NFR006 In case of hardware failure, system must switch to the redundant copy in less than 30s.
- NFR007 Every bank employee is authenticated using a USB token and a password.
- NFR008 Creating a new account can take up to 24h.
- NFR009 All system preferences and user data changes has to be saved as separate revisions in case of rollback.
- NFR010 An internal money transfer has to be completed in less than a day. A money transfer to any other bank has to be completed in less than a week.





## Details




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 **OnlineUser**

 **Clerk**








 **ATM**

-  **Time**
-  **External Application**
-  **Manager**
-  **Technician**

-  **UnlockCard**
-  **LockCard**
-  **PINVerification**






**Extension Points**

**RepeatedWrongPIN**

-  **IssueNewCard**
-  **CardInvalidation**
-  **ActivateCard**
-  **WithdrawMoney**
-  **WithdrawOrDepositCash**
-  **SMSCodeVerification**
-  **ManageAccount**

**Extension Points**

**RequestNewCard**

-  **WireMoneyTransfer**
-  **CreateNewAccount**
-  **PrefillAccountDetailsForm**
-  **ChangeUserSettings**
-  **ChangeSystemParameters**
-  **ViewStatistics**
-  **ProcessCardPayment**



# RecalculateInterestsAndFees

## BankingSystem

### Children

Name	Documentation																
RecalculateInterestsAndFees																	
ProcessCardPayment																	
ViewStatistics																	
ChangeSystemParameters																	
ChangeUserSettings																	
PrefillAccountDetailsForm																	
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		2.3. System compares PIN code to database entry 2.4. IF PIN matches database entry 2.4.1. Allow ATM to access user data 3. IF access is not allowed 3.1. extension point(LockCard)
	<b>Alternative Flows</b>	
	<b>Post-conditions</b>	ATM has access to user data or the card is locked
 LockCard		
 UnlockCard		