Sprawozdanie 1

Julia Ołowniuk

Security systems in a bank

1. Topic description:

Let's start with what security systems in a bank are. They are integrated computer systems that provide protection for customer data, as well as bank systems and infrastructure from threats. They are crucial for the functioning of banks because financial security is one of the most important aspects for customers and financial institutions.

Before introducing the security system, the company operated on traditional security methods such as physical protection, surveillance cameras, locks, and alarms. Physical protection involved hiring security guards who monitored entrances and exits from buildings and guarded valuable documents. Surveillance cameras were placed in different locations in the company, and the recorded image was archived and viewed by security personnel. Locks and alarms protected doors and windows from intrusion. Additionally, to ensure the security of transactions, bank employees had to verify the identity of customers using documents and apply various procedures such as monitoring transactions, reporting suspicious activities, etc. These procedures were time-consuming and required significant effort.

These methods were effective to some extent but did not provide complete protection against modern threats such as hacking attacks or data theft. Physical protection was insufficient because it did not protect against cyber threats. Surveillance cameras and locks were easy to bypass by outsiders, increasing the risk of data or money theft. Therefore, I decided to introduce security systems to the bank. Of course, security systems also require monitoring, but they work much faster and often have more capabilities.

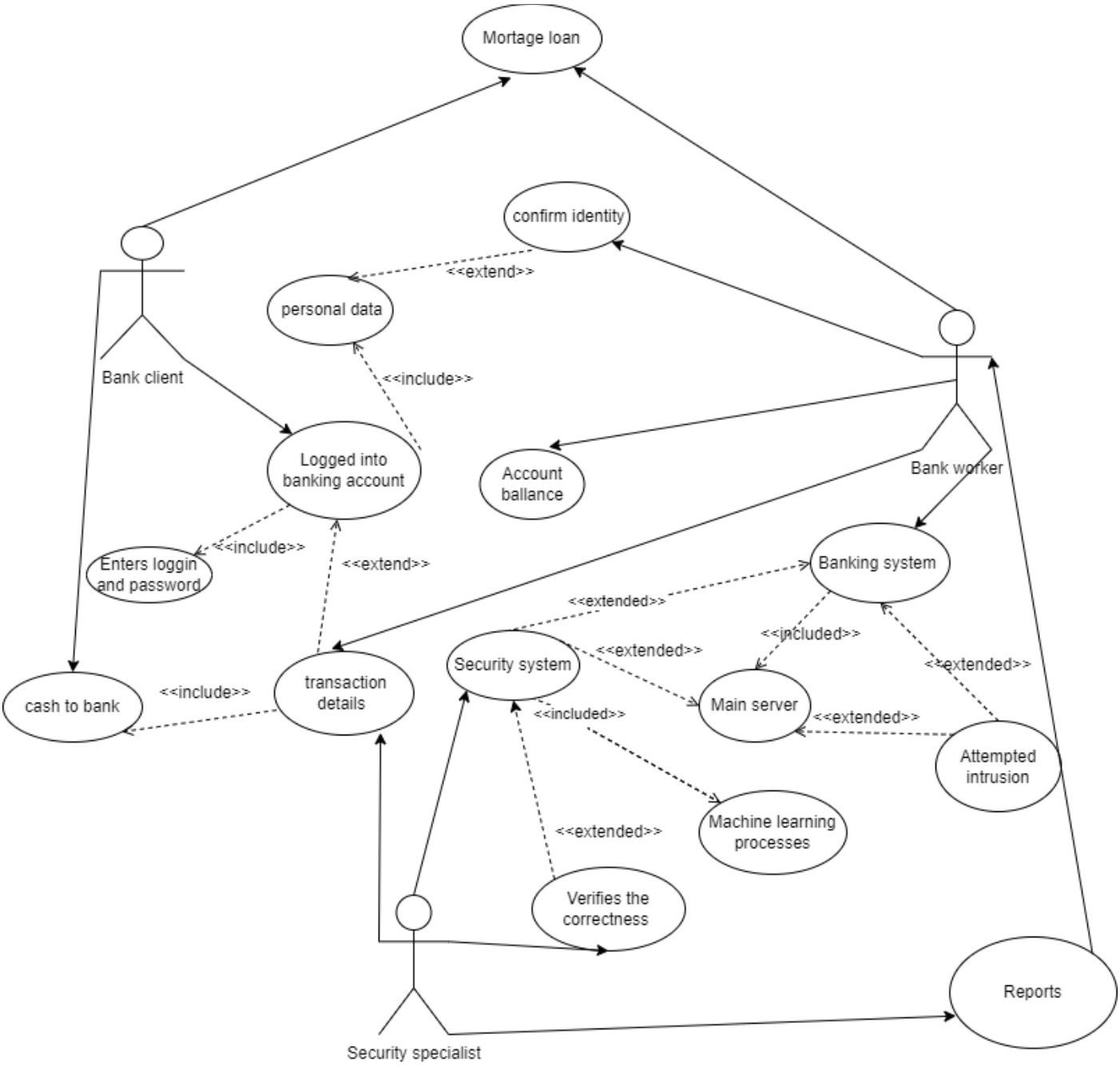
One of the most important improvements achieved through the security system is the automation of many procedures, which allows for time and cost savings. For example, the security system can automatically verify the customer's identity using biometrics or other technologies, allowing for faster and more effective customer identity verification. In addition, the security system can monitor transactions and detect irregularities such as suspicious transactions or attempts at intrusion, allowing for quick response and minimizing damage.

Another important improvement is increasing the security of customer data. Security systems in banks provide protection for customer data against unauthorized access and data theft. This ensures that customers can be confident that their data is safe and protected.

Finally, security systems in banks allow for faster and more effective resolution of security-related issues such as hacking attacks, attempts to steal data, or financial fraud. This minimizes risk.

In summary, security systems in banks are crucial for ensuring financial security and protecting customer data. Improvements achieved through these systems include primarily the automation of many procedures and increasing the security of customer data. The introduction of a security system in a bank allows for faster and more effective operation, which translates into greater customer trust and minimizing financial risk. Thanks to security systems, banks can operate faster and more effectively, allowing for better results.

2. Use case diagram



3. Usage scenarios

No.	Scenario name	Bank client	Bank worker	Security specialist	System
1.	Client login	enters their login and password	not applicable	if the system fails to recognize the customer, despite their presence in the database, it will be fixed.	conducts the authorization process and positively or negatively confirms the client's access to their account
2.	Cash deposit	brings cash to the bank branch	accepts the deposit and enters the transaction details into the banking system if system does not work	verifies the correctness of the entered data	conducts the transaction authorization process and records it in the banking system
3.	Changing the client's password	logs into the internet banking system and changes the password	if the password is changed too many times within a short period of time, the client is contacted for identity verification	verifies if the system has not made a mistake	conducts the authorization process and records the password change in the banking system
4.	Application for a mortgage loan	submits a mortgage loan application at a bank branch	enters the application details into the banking system and conducts a preliminary client verification	monitors for errors in the contract entered by the system	the authorization process for the application and records it in the banking system.
5.	Money transfer order	enters recipient information and transfer amount	confirms the transaction	detects any attempted intrusions	monitors the customer's activity
6.	Checking transaction history	selects the "transaction history" option	not applicable	supervises to ensure no errors are displayed	authorizes access to customer data
7.	Monitoring client activity in the system	may be asked to confirm their identity.	receives a notification in case of any detected threats and	uses monitoring tools to detect suspicious customer	it helps with machine learning if there are any suspicious activities

			contants with client	activity in the system	
8.	Detecting attempted intrusion	may be asked to confirm their identity	informs the customer about suspicious activity and asks for identity confirmation	analyzes reports and takes appropriate action	detects unauthorized access attempts
9.	Viewing account balance	logs into the banking system, selects the "account balance" option, and receives information about their account balance	logs into the banking system, selects the client's account, and displays information about the account balance to them	ensures the confidentiality of the information	monitors the client's activity thanks to machine learning, detects any attempts of unauthorized access to account balance information, authorizes access to the client's data
10.	Managing client data	logs into the banking system, selects the "client data" option, and updates their personal or contact information	logs into the banking system, selects the client's account, and updates their personal or contact information	oversees whether any unauthorized changes have been made to the client's data	authorizes access to the client's data and protects it from unauthorized access or changes