Costumer System Requirements:

1.

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| --- | --- |
| UC Name | SignIn |
| Summary | Customers use their credentials to sign into their bank account. |
| Dependency | N/A |
| Actors | Primary Customer |
| Preconditions | The customer must have already created an account with the bank. |
| Description of the Main Sequence | The customer accesses the login page.  The customer inputs their username and password.  The system verifies the credentials and grants access. |
| Description of the Alternative Sequence | N/A |
| Non functional requirements | The sign-in process must be secured with encryption, and the system must be capable of handling high volumes of simultaneous login requests. |
| Postconditions | The customer is logged into their account. |

2.

|  |  |
| --- | --- |
| UC Name | UpdatePassword |
| Summary | Customers securely update their account password. |
| Dependency | CustomerSignIn |
| Actors | Primary Customer |
| Preconditions | The customer is logged into their account. |
| Description of the Main Sequence | The customer navigates to the account settings.  The customer selects the option to change their password.  The customer inputs their current password and then the new password.  The system verifies and updates the password. |
| Description of the Alternative Sequence | N/A |
| Non functional requirements | Password changes must comply with security policies, including complexity requirements and secure transmission. |
| Postconditions | The customer’s password is updated. |

3.

|  |  |
| --- | --- |
| UC Name | ViewBalance |
| Summary | Customers check the balance of their accounts. |
| Dependency | CustomerSignIn |
| Actors | Primary Customer |
| Preconditions | The customer is logged into their account. |
| Description of the Main Sequence | The customer selects the account they wish to view.  The system displays the current balance of the selected account. |
| Description of the Alternative Sequence | N/A |
| Non functional requirements | Account balance displays must be real-time and accurate. |
| Postconditions | The customer has viewed their account balance. |

4.

|  |  |
| --- | --- |
| UC Name | ReviewHistory |
| Summary | Customers review the transaction history of their accounts. |
| Dependency | CustomerSignIn |
| Actors | Primary Customer |
| Preconditions | The customer is logged into their account. |
| Description of the Main Sequence | The customer selects 'Transaction History' from the account menu.  The system displays a list of recent transactions. |
| Description of the Alternative Sequence | N/A |
| Non functional requirements | Transaction history must be presented in a clear, chronological order, and the system should allow filtering and searching of transactions. |
| Postconditions | The customer has accessed their transaction history. |

5.

|  |  |
| --- | --- |
| UC Name | DepositFunds |
| Summary | Customers deposit funds into their account. |
| Dependency | CustomerSignIn |
| Actors | Primary Customer |
| Preconditions | The customer is logged in and has a valid method for deposit. |
| Description of the Main Sequence | The customer initiates a deposit transaction.  The customer selects an account and enters the amount to deposit.  The system processes the deposit and updates the account balance. |
| Description of the Alternative Sequence | If the deposit is made at an ATM, the customer must insert cash or checks. |
| Non functional requirements | Deposits must be processed in a timely manner, and the system must provide immediate confirmation to the customer. |
| Postconditions | The deposit is reflected in the customer’s account balance. |

6.

|  |  |
| --- | --- |
| UC Name | WithdrawFunds |
| Summary | Customers withdraw funds from their account. |
| Dependency | CustomerSignIn |
| Actors | Primar Customer |
| Preconditions | The customer is logged in and has sufficient funds available. |
| Description of the Main Sequence | The customer requests a withdrawal.  The customer selects an account and specifies the amount.  The system processes the withdrawal and dispenses funds if at an ATM or confirms the transaction online. |
| Description of the Alternative Sequence | If a customer uses a teller for the withdrawal, the teller processes the transaction. |
| Non functional requirements | The system must securely process the withdrawal and have anti-fraud measures in place. |
| Postconditions | The withdrawal amount is deducted from the customer’s account balance. |

7.

|  |  |
| --- | --- |
| UC Name | TransferMoney |
| Summary | Customers transfer money between their own accounts. |
| Dependency | CustomerSignIn |
| Actors | Primary Customer |
| Preconditions | The customer is logged in and owns multiple accounts with the bank. |
| Description of the Main Sequence | The customer initiates a transfer between accounts.  The customer selects the source and destination accounts and enters the transfer amount.  The system processes the transfer and updates both account balances. |
| Description of the Alternative Sequence | N/A |
| Non functional requirements | The system must handle transfers instantly and securely, with all necessary fraud prevention checks. |
| Postconditions | The transferred funds are deducted from one account and added to another. |

8.

|  |  |
| --- | --- |
| UC Name | ManageAccountSettings |
| Summary | Customers personalize their account settings and preferences. |
| Dependency | CustomerSignIn |
| Actors | Primary Customer |
| Preconditions | The customer is logged into their account. |
| Description of the Main Sequence | The customer accesses the 'Settings' section.  The customer updates preferences such as account notifications, language, and display options.  The system confirms and applies the new settings. |
| Description of the Alternative Sequence | N/A |
| Non functional requirements | Settings changes must be applied in real-time and must be retrievable in the event of a session timeout or technical issue. |
| Postconditions | The customer's new preferences are saved and in effect. |

9.

|  |  |
| --- | --- |
| UC Name | ReportIssues |
| Summary | Customers report issues or flag unauthorized transactions for review. |
| Dependency | CustomerSignIn |
| Actors | Primary: Customer |
| Preconditions | The customer has identified a potential issue or unauthorized transaction. |
| Description of the Main Sequence | The customer navigates to the 'Help' or 'Support' section.  The customer selects the option to report an issue or flag a transaction.  The customer provides details of the issue or identifies the specific transaction.  The system logs the issue and provides the customer with a tracking number or confirmation. |
| Description of the Alternative Sequence | N/A |
| Non functional requirements | The reporting feature must be easily accessible and secure, ensuring the customer's information is protected. |
| Postconditions | The reported issue is registered in the system and queued for review by bank staff. |

10.

|  |  |
| --- | --- |
| UC Name | AccessSupportServices |
| Summary | Customers access various support services provided by the bank. |
| Dependency | CustomerSignIn |
| Actors | Primary Customer |
| Preconditions | The customer requires assistance with a bank product or service. |
| Description of the Main Sequence | The customer selects the 'Contact Us' or 'Support' option.  The customer chooses the type of support needed (e.g., live chat, email, phone).  The system connects the customer with the appropriate support channel. |
| Description of the Alternative Sequence | If initial support channels are not available, the customer is provided with options to schedule a call or leave a message. |
| Non functional requirements | Support services must be accessible 24/7, and the system must maintain a high level of service quality and response time. |
| Postconditions | The customer has been assisted, and their inquiry or issue has been addressed. |

Security Staff System Requirements:

1.

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| --- | --- |
| UC Name | Security Measures Implementation |

|  |  |
| --- | --- |
| UC01 | Safeguarding Against Malicious Attacks |
| Summary | Ensure the system is protected from malicious attacks to maintain the integrity and confidentiality of customer data. |
| Dependency | None |
| Actors | System Administrator, Security Analyst |
| Preconditions | The system is operational and connected to the network. |
| Description of the Main Sequence | 1. Implement firewalls and intrusion detection systems to monitor and filter incoming and outgoing network traffic.  2. Regularly update and patch system software to address known vulnerabilities.  3. Conduct security audits and penetration testing to identify and address potential weaknesses. |
| Description of the Alternative Sequence | N/A |
| Non-functional requirements | - The system must be capable of detecting and responding to security incidents in real-time.  - All communication between system components must be encrypted to prevent eavesdropping.  - Access to sensitive data must be restricted based on the principle of least privilege. |
| Postconditions | The system is actively monitoring for security threats, and measures are in place to respond to any detected incidents. |

2.

|  |  |
| --- | --- |
| UC Name | Access Control for Customer Data |
| Summary | Restrict unauthorized access to customer data to maintain confidentiality and comply with privacy regulations. |
| Dependency | UC01 |
| Actors | System Administrator, Customer Service Representative |
| Preconditions | User authentication and authorization mechanisms are in place. |
| Description of the Main Sequence | 1. Implement role-based access control to limit access to customer data based on user roles and responsibilities.  2. Enforce strong authentication mechanisms such as passwords, biometrics, or multi-factor authentication.  3. Log and monitor user activities to detect and prevent unauthorized access attempts. |
| Description of the Alternative Sequence | N/A |
| Non-functional requirements | - Access to customer data must be logged and auditable for accountability purposes.  - Passwords must adhere to complexity requirements and be regularly rotated.  - Access control policies must be regularly reviewed and updated to reflect changes in user roles and organizational structure. |
| Postconditions | Access to customer data is restricted to authorized users only, and all access attempts are logged for auditing purposes. |

3.

|  |  |
| --- | --- |
| UC Name | Data Backup to Secure Location |
| Summary | Ensure data integrity and availability by regularly backing up critical data to a secure offsite location. |
| Dependency | None |
| Actors | Backup Operator, System Administrator |
| Preconditions | The system is operational and connected to the backup infrastructure. |
| Description of the Main Sequence | 1. Schedule regular automated backups of customer data to a secure offsite location.  2. Encrypt backup data during transmission and storage to prevent unauthorized access.  3. Test data restoration procedures periodically to ensure backups are reliable and up-to-date. |
| Description of the Alternative Sequence | N/A |
| Non-functional requirements | - Backup processes must be designed to minimize impact on system performance and availability.  - Backup data must be stored in a geographically separate location to mitigate the risk of data loss due to disasters. |
| Postconditions | Critical data is regularly backed up and stored securely offsite, ensuring its availability in the event of system failures or data corruption. |

Admin System Requirements:

**1.**

|  |  |
| --- | --- |
| **UC Name** | **User Management System** |
| **Summary** | **The system should allow the admin to efficiently manage user accounts, including creating new accounts, modifying existing accounts, and deactivating or suspending accounts when necessary.** |
| **Dependency** | **N/A** |
| **Actors** | **Primary Actor: Admin** |
| **Preconditions** | **The admin needs to have access to the designated administrative module of the banking application.** |
| **Description of the Main Sequence** | 1. **The admin logs into the administrative module of the banking application.** 2. **The admin navigates to the user management section.** 3. **The admin performs actions such as creating, modifying  or deactivating user accounts as needed.** |
| **Description of the Alternative Sequence** | * **Authentication Failure**   + **Prompt admin to re-enter credentials.**   + **Offer assistance for resolving authentication issues.** * **Slow Data Retrieval:**   + **Display loading indicator or delay message.**   + **Provide troubleshooting tips or connection check.** * **Data Display Error:**   + **Show error message.**   + **Offer troubleshooting steps or support contact.** |
| **Non-functional requirements** | * **Performance: Actions related to user management should be completed within 5 seconds.** * **Security: Only authenticated admins should have access to user management functionalities.** |
| **Postconditions** | **The admin successfully manages user accounts within the banking application.** |

**2.**

|  |  |
| --- | --- |
| **UC Name** | Transaction Monitoring and Reporting |
| **Summary** | **The admin should have access to comprehensive transaction monitoring tools to oversee all financial activities within the system.** |
| **Dependency** | **N/A** |
| **Actors** | **Primary Actor: Admin** |
| **Preconditions** | **The admin needs to have access to the designated administrative module of the banking application.** |
| **Description of the Main Sequence** | **The admin logs into the administrative module of the banking application.**  **The admin navigates to the transaction monitoring section.**  **The admin views real-time transaction data and generates transaction reports as needed.** |
| **Description of the Alternative Sequence** | * **Authentication Failure:**   + **Prompt admin to re-enter credentials.**   + **Offer assistance for resolving authentication issues.** * **Slow Data Retrieval:**   + **Display loading indicator or delay message.**   + **Provide troubleshooting tips or connection check.** * **Data Display Error:**   + **Show error message.**   + **Offer troubleshooting steps or support contact.** |
| **Non-functional requirements** | * **Performance: Transaction data should be updated in real-time with a maximum delay of 10 seconds.** * **Security: Transaction data should only be accessible to authenticated admins.** |
| **Postconditions** | **The admin successfully monitors transactions and generates reports within the banking application.** |

**3.**

|  |  |
| --- | --- |
| **UC Name** | **Customer Support Integration** |
| **Summary** | **The admin should have access to customer support functionalities within the banking application to provide assistance to users as needed.** |
| **Dependency** | **N/A** |
| **Actors** | **Primary Actor: Admin** |
| **Preconditions** | **The admin needs to have access to the designated administrative module of the banking application.** |
| **Description of the Main Sequence** | * **The admin logs into the administrative module of the banking application.** * **The admin navigates to the customer support section.** * **The admin accesses user transaction histories, resolves user inquiries or complaints, and escalates issues if necessary.** |
| **Description of the Alternative Sequence** | * **Authentication Failure:**   + **Prompt admin to re-enter credentials.**   + **Offer assistance for resolving authentication issues.** * **Slow Data Retrieval:**   + **Display loading indicator or delay message.**   + **Provide troubleshooting tips or connection check.** * **Data Display Error:**   + **Show error message.**   + **Offer troubleshooting steps or support contact.** |
| **Non-functional requirements** | * **Performance: Accessing user transaction histories should take no longer than 5 seconds.** * **Security: Customer data accessed by the admin should be encrypted and only accessible to authenticated admins.** |
| **Postconditions** | **The admin successfully provides support to users within the banking application.** |

**4.**

|  |  |
| --- | --- |
| **UC Name** | **Security and Compliance Management** |
| **Summary** | **The system should prioritize robust security measures to protect sensitive financial data and ensure compliance with regulatory standards.** |
| **Dependency** | **N/A** |
| **Actors** | **Primary Actor: Admin** |
| **Preconditions** | **The admin needs to have access to the designated administrative module of the banking application.** |
| **Description of the Main Sequence** | * **The admin logs into the administrative module of the banking application.** * **The admin navigates to the security and compliance section.** * **The admin ensures that security measures such as multi-factor authentication and encryption are in place and conducts regular security audits.** |
| **Description of the Alternative Sequence** | * **Authentication Failure:**   + **Prompt admin to re-enter credentials.**   + **Offer assistance for resolving authentication issues.** * **Slow Data Retrieval:**   + **Display loading indicator or delay message.**   + **Provide troubleshooting tips or connection check.** * **Data Display Error:**   + **Show error message.**   + **Offer troubleshooting steps or support contact.** |
| **Non-functional requirements** | * **Performance: Security measures should not significantly impact system performance.** * **Compliance: The system should adhere to relevant regulatory standards and guidelines.** |
| **Postconditions** | **The admin ensures that the banking application meets security and compliance requirements.** |

**5.**

|  |  |
| --- | --- |
| **UC Name** | **Customizable Reporting and Analytics** |
| **Summary** | **The admin should have access to customizable reporting and analytics tools within the banking application to gain insights into system performance and user behavior.** |
| **Dependency** | **N/A** |
| **Actors** | **Primary Actor: Admin** |
| **Preconditions** | **The admin needs to have access to the designated administrative module of the banking application.** |
| **Description of the Main Sequence** | * **The admin logs into the administrative module of the banking application.** * **The admin navigates to the reporting and analytics section.** * **The admin generates custom reports based on specific criteria, visualizes data trends, and uses analytics to optimize system efficiency.** |
| **Description of the Alternative Sequence** | * **Authentication Failure:**   + **Prompt admin to re-enter credentials.**   + **Offer assistance for resolving authentication issues.** * **Slow Data Retrieval:**   + **Display loading indicator or delay message.**   + **Provide troubleshooting tips or connection check.** * **Data Display Error:**   + **Show error message.**   + **Offer troubleshooting steps or support contact.** |
| **Non-functional requirements** | * **Performance: Generating reports and analyzing data should be completed within 10 seconds.** * **Usability: Reporting and analytics tools should be intuitive and user-friendly.** |
| **Postconditions** | **The admin gains insights into system performance and user behavior within the banking application.** |

Customer Support System Requirements:

|  |  |
| --- | --- |
| UC Name | **Customer Support Portal Access** |
| Summary | This use case involves users accessing the customer support portal or help desk for assistance with inquiries, issues, and account-related questions. |
| Dependency | None |
| Actors | **Primary Actor:** Registered User  **Secondary Actor:** Customer Support Agent |
| Preconditions | The user must be registered and logged into the bank management system.  The user must have an active account with the bank. |
| Description of the Main Sequence | User navigates to the "Customer Support" section of the bank management system.  System displays the customer support portal with options for live chat, email support, and phone support.  User selects the desired support channel (live chat, email, or phone).  **If live chat:**  System connects the user to a live chat session with a customer support agent.  User interacts with the support agent in real-time.  **If email:**  System opens a form for the user to fill out their inquiry or issue.  User submits the form, and system sends the email to the customer support team.  **If phone:**  System displays dedicated helpline numbers for different languages.  User selects the appropriate helpline number and calls for assistance. |
| Description of the Alternative Sequence | If the user's preferred language is not available:  User selects the closest available language option.  If necessary, user requests assistance in their preferred language through the selected language option. |
| Non-functional Requirements | The system shall offer language support for customer interactions in multiple languages.  Users shall be able to switch languages during an ongoing customer support session if needed. |
| Post Conditions | The user's selected language is used for all subsequent interactions within the customer support session.  These are two system requirements for the Customer Support module in the bank management system, outlined in the requested format. |