## Case Study # 01:CASH WITHDRAWL

**Functional Requirements:**

| **No.** | **Requirement Name** | **Description** |
| --- | --- | --- |
| 1 | **User Authentication** | The system shall verify the user’s identity using a valid card number and PIN before allowing any transaction. |
| 2 | **Account Selection** | The system shall allow the customer to select the type of account (savings, current, etc.) from which cash will be withdrawn. |
| 3 | **Balance Verification** | The system shall check the available balance to ensure sufficient funds before processing the withdrawal. |
| 4 | **Cash Withdrawal Processing** | The system shall allow the user to enter a withdrawal amount and confirm it before proceeding. |
| 5 | **Cash Dispensing** | The system shall dispense the exact cash amount requested by the user. |
| 6 | **Account Update** | The system shall automatically update the customer’s account balance after cash is withdrawn. |
| 7 | **Transaction Receipt Printing** | The system shall generate and print a receipt containing transaction details such as date, time, amount, and remaining balance. |
| 8 | **Error Handling** | The system shall display appropriate error messages (e.g., “Insufficient Balance,” “Invalid PIN,” or “Card Blocked”). |
| 9 | **Session Timeout** | The system shall automatically end the session if the user does not respond within a specific time limit. |
| 10 | **Transaction Logging** | The system shall record all withdrawal transactions for auditing and monitoring purposes. |

**Non-Functional Requirements:**

| **No.** | **Requirement Name** | **Description** |
| --- | --- | --- |
| 1 | **Security** | The system must ensure encrypted communication and secure PIN verification to protect customer data. |
| 2 | **Performance** | The system should process authentication and withdrawal within a few seconds for user convenience. |
| 3 | **Reliability** | The system should operate continuously with minimal downtime and handle power or network failures gracefully. |
| 4 | **Usability** | The interface should be simple, guiding customers step-by-step through the withdrawal process. |
| 5 | **Maintainability** | The system should allow easy software updates, fault detection, and repair to ensure smooth operation. |