

Deliverable-2

1. a. User Stories:

#	Stakeholder Category	Role	User Story	Acceptance Criteria (Given–When–Then)	Corresponding U Case(s)
US-1	Internal Operational	Customer Service Officer (CSO)	<i>As a customer service officer, I want to create and manage customer profiles so that customer data remains accurate and up to date.</i>	Given I am logged in as a CSO and viewing a profile; When I add, edit, or deactivate a customer; Then the system validates the data, prevents duplicates, and confirms the update.	UC-1 Create & Manage Customer Profile
US-2	Internal Operational	Teller	<i>As a teller, I want to perform deposits and withdrawals efficiently so that I can serve customers quickly and reduce queue times.</i>	Given I'm authenticated and viewing a customer's account; When I enter a deposit or withdrawal amount; Then the system validates it, updates the balance, and records the transaction instantly.	UC-2 Process Customer Transaction (Deposit/Withdrawal)
US-3	External Operational	Customer	<i>As a customer, I want to transfer funds between my accounts so</i>	Given I am logged in with valid accounts and	UC-3 Transfer Funds Between Accounts

#	Stakeholder Category	Role	User Story	Acceptance Criteria (Given–When–Then)	Corresponding U Case(s)
			<i>that I can manage my money conveniently online.</i>	sufficient funds; When I enter a transfer amount and confirm; Then the system moves funds atomically and provides a confirmation message.	
US-4	External Operational	Customer / Loan Applicant	<i>As a customer, I want to apply for a loan online so that I don't have to visit the bank in person.</i>	Given I am authenticated and eligible; When I fill and submit a loan request form; Then the system records it as Pending and notifies me of submission.	UC-4 Apply for Loan
US-5	Internal Executive	Credit Officer / Admin	<i>As a credit officer, I want to review and decide on loan applications so that I can approve or reject requests based on customer creditworthiness.</i>	Given I have access to pending loan applications; When I open and review an application; Then I can approve or reject it, and the system updates the loan status with a decision date.	UC-5 Review & Decide Loan Application (Approve/Reject)
US-6	External Operational	Customer / Admin	<i>As a user, I want to view my transaction history.</i>	Given I am logged in and	UC-6 View Transaction History

#	Stakeholder Category	Role	User Story	Acceptance Criteria (Given–When–Then)	Corresponding U Case(s)
			<i>transaction history and download account statements so that I can track my financial activity easily.</i>	select an account and date range; When I request a statement; Then the system displays all relevant transactions and allows export as PDF/CSV.	& Generate Statement
US-7	Internal Executive / System Automation	System Scheduler (on behalf of Admin)	<i>As the banking system, I want to automatically calculate and post monthly interest so that account balances remain accurate without manual work.</i>	Given it is the scheduled monthly trigger time; When the scheduler runs; Then the system calculates interest for all eligible accounts, posts entries, and logs the outcome.	UC-7 Accrue & Post Monthly Interest
US-8	External Operational / System	System & Customer	<i>As the system, I want to detect when an account balance becomes negative so that I can alert the customer immediately to avoid overdraft issues.</i>	Given an account's balance changes; When the balance drops below zero; Then the system flags the event, creates an overdraft alert, and	UC-8 Overdraft Detection & Alert

#	Stakeholder Category	Role	User Story	Acceptance Criteria (Given–When–Then)	Corresponding U Case(s)
				notifies the customer.	

1. b. Use Cases:

Use Case: UC-1 — Create & Manage Customer Profile

Type: External event

Primary Actor(s): Customer Service Officer (CSO) / Admin

External Event: A new customer application or an edit request for an existing profile requires system response.

Trigger: CSO/Admin submits form to create or modify a customer record.

Preconditions: User is authorized; customer exists (for edit); data-entry screen accessible.

Postconditions: Customer profile created or updated; audit log entry written.

Event-Decomposition Checklist:

1. **External Event:** Actor initiates creation or edit of customer data.
2. **Use Case Name:** Create & Manage Customer Profile.
3. **Preconditions:** Authorization, customer existence (if edit).
4. **Trigger:** Submission of create/edit request.

Use Case: UC-2 — Process Cash Transaction (Deposit/Withdrawal)

Type: External event

Primary Actor(s): Teller / Customer

External Event: Teller receives a cash deposit or withdrawal request.

Trigger: Teller submits transaction.

Preconditions: Account active; amount > 0.

Postconditions: Account balance updated; transaction record with timestamp created.

Event-Decomposition Checklist:

1. **External Event:** Customer requests deposit or withdrawal.
2. **Use Case Name:** Process Cash Transaction.

-
3. **Preconditions:** Valid account, sufficient funds for withdrawal.
 4. **Trigger:** Teller executes transaction.
-

Use Case: UC-3 — Transfer Funds Between Accounts

Type: External event

Primary Actor(s): Customer

External Event: Customer initiates a fund transfer between accounts.

Trigger: Transfer form submitted.

Preconditions: Authenticated; valid source/destination; sufficient balance.

Postconditions: Debit/credit applied atomically; transaction logged; optional notification queued.

Event-Decomposition Checklist:

1. **External Event:** Customer request for inter-account transfer.
 2. **Use Case Name:** Transfer Funds Between Accounts.
 3. **Preconditions:** Authenticated session; valid account pair.
 4. **Trigger:** Submission of transfer form.
-

Use Case: UC-4 — Apply for Loan

Type: External event

Primary Actor(s): Customer / Loan Officer

External Event: Customer submits a loan application.

Trigger: Application form submitted.

Preconditions: Customer active; all required fields complete.

Postconditions: Loan created with status *Pending*; request date stored.

Event-Decomposition Checklist:

1. **External Event:** Loan request requiring system response.
 2. **Use Case Name:** Apply for Loan.
 3. **Preconditions:** Valid customer; form completeness check.
 4. **Trigger:** Submit application.
-

Use Case: UC-5 — Review & Decide Loan Application (Approve/Reject)

Type: External event

Primary Actor(s): Credit Officer / Admin

External Event: Officer reviews a pending loan and makes a decision.

Trigger: Approve/Reject action on pending loan record.

Preconditions: Loan application in *Pending* status; officer authorized.

Postconditions: Loan status set to *Approved* or *Rejected*; decision date stored; repayment schedule created if approved.

Event-Decomposition Checklist:

1. **External Event:** Officer decision event.
 2. **Use Case Name:** Review & Decide Loan Application.
 3. **Preconditions:** Pending loan exists; authorization validated.
 4. **Trigger:** Decision submitted.
-

Use Case: UC-6 — View Transaction History & Generate Statement

Type: External event

Primary Actor(s): Customer / Admin

External Event: Customer/Admin requests account history or statement.

Trigger: History or statement request submitted.

Preconditions: Account exists; requester authorized.

Postconditions: Transactions fetched and displayed; optional export generated.

Event-Decomposition Checklist:

1. **External Event:** Request for account statement.
 2. **Use Case Name:** View Transaction History & Generate Statement.
 3. **Preconditions:** Authorization; valid account.
 4. **Trigger:** Request initiated.
-

Use Case: UC-7 — Accrue & Post Monthly Interest

Type: Temporal event

Primary Actor(s): System (Scheduler)

Temporal Event: Occurs monthly at configured time (e.g., last day 23:59 Africa/Cairo).

Trigger: Scheduler job fires automatically.

Preconditions: Eligible accounts exist; interest rules configured.

Postconditions: Interest postings created; balances updated; logs and admin summary recorded.

Event-Decomposition Checklist:

1. **Temporal Event:** Time-based interest calculation requirement.
 2. **Use Case Name:** Accrue & Post Monthly Interest.
 3. **Preconditions:** Rules & accounts available.
 4. **Trigger/Time:** Monthly schedule (23:59 last day).
-

Use Case: UC-8 — Overdraft Detection & Alert

Type: State event

Primary Actor(s): System / Customer

State Event: Account balance changes from ≥ 0 to < 0 .

Trigger: Balance transition detected at transaction commit.

Preconditions: Account active; alert channels configured.

Postconditions: Overdraft alert created; notification sent; event logged.

Event-Decomposition Checklist:

1. **State Event:** System detects balance state change.
 2. **Use Case Name:** Overdraft Detection & Alert.
 3. **Preconditions:** Valid account; alert mechanism enabled.
 4. **State Change:** Balance $\geq 0 \rightarrow$ Balance < 0 .
-

2. Event–Use Case Mapping Table

Event Type	Event (Description)	User / Stakeholder (Event Source)	Corresponding Use Case(s)
External	New customer applies or CSO/Admin edits existing profile	Customer Service Officer (CSO) / Admin	UC-1: Create & Manage Customer Profile

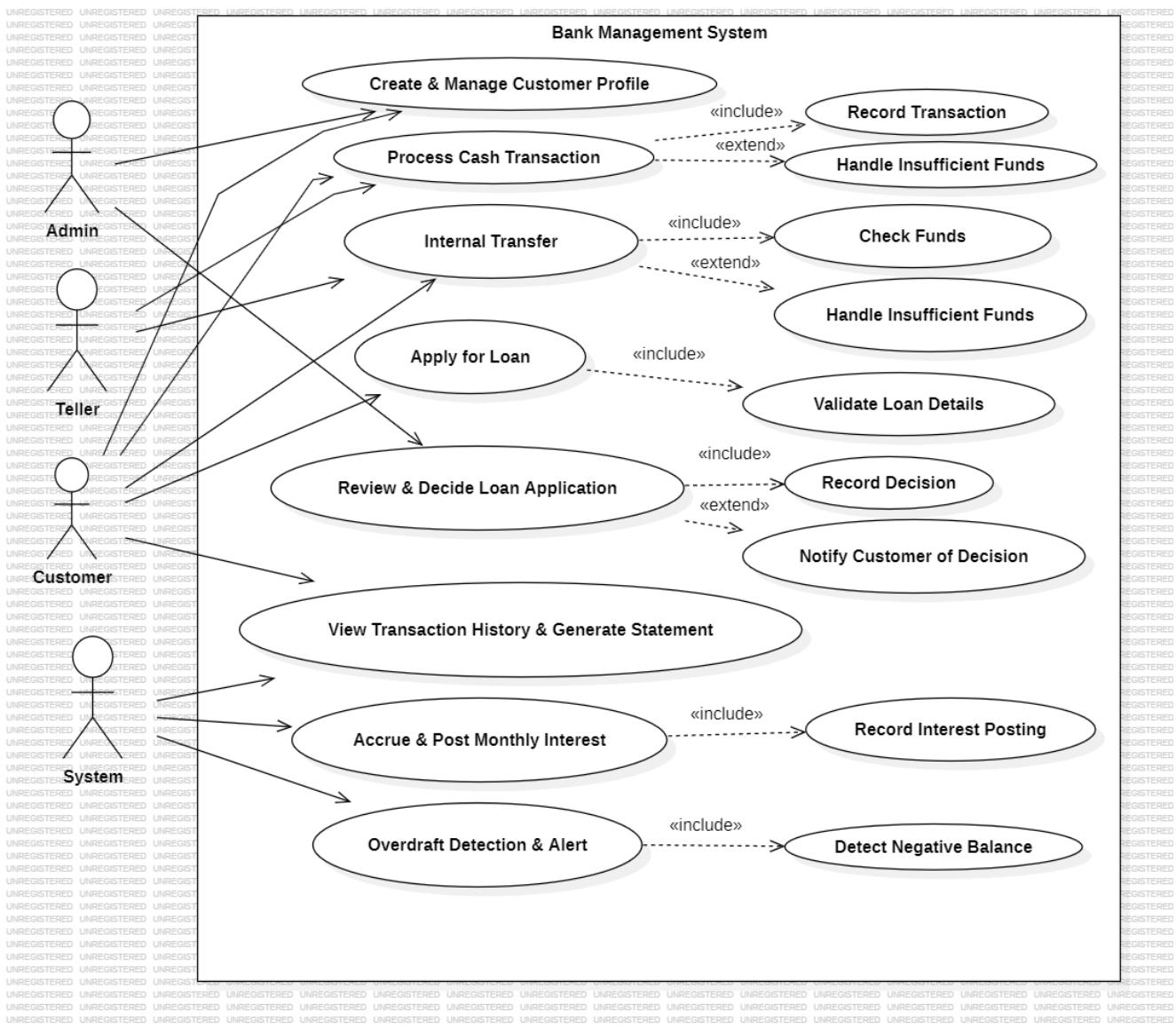
Event Type	Event (Description)	User / Stakeholder (Event Source)	Corresponding Use Case(s)
External	Teller receives request for cash deposit or withdrawal	Teller / Customer	UC-2: Process Cash Transaction (Deposit/Withdrawal)
External	Customer initiates transfer between accounts	Customer	UC-3: Transfer Funds Between Accounts
External	Customer submits loan application	Customer / Loan Officer	UC-4: Apply for Loan
External	Credit Officer/Admin decides to approve or reject pending loan	Credit Officer / Admin	UC-5: Review & Decide Loan Application (Approve/Reject)
External	Customer/Admin requests to view transaction history or generate statement	Customer / Admin	UC-6: View Transaction History & Generate Statement
Temporal	Monthly scheduled time reached for posting interest (e.g., last day, 23:59)	System Scheduler	UC-7: Accrue & Post Monthly Interest
State	Account balance changes from ≥ 0 to < 0 (overdraft detected)	System (automated detection) / Customer (recipient of alert)	UC-8: Overdraft Detection & Alert

3. Brief Use Case Description

Use Case Name	Primary Actor(s)	Trigger / Event Type	Brief Description (Goal)
Create & Manage Customer Profile	CSO / Admin	External – New or edit request	Create or update customer profiles to maintain accurate records.
Process Cash Transaction (Deposit/Withdrawal)	Teller / Customer	External – Deposit or withdrawal request	Handle deposits or withdrawals and update account balances.

Use Case Name	Primary Actor(s)	Trigger / Event Type	Brief Description (Goal)
Transfer Funds Between Accounts	Customer	External – Transfer request submitted	Transfer funds securely between valid accounts.
Apply for Loan	Customer / Loan Officer	External – Loan application submitted	Capture and validate customer loan requests for processing.
Review & Decide Loan Application (Approve/Reject)	Credit Officer / Admin	External – Decision on pending loan	Review pending loan applications and decide approval or rejection.
View Transaction History & Generate Statement	Customer / Admin	External – Statement or history request	Retrieve and display transaction history or generate account statements.
Accrue & Post Monthly Interest	System (Scheduler)	Temporal – Monthly scheduled job	Automatically calculate and post interest to eligible accounts.
Overdraft Detection & Alert	System / Customer	State – Balance becomes negative	Detect overdrafts and alert customers instantly.

4. UML Use Case Diagram



5. Jira Timeline

