

# **Ishmael Madala Molelwane (CSE24-120)**

## **Part A: SYSTEM DOCUMENTATION**

### **1 Requirement Elicitation**

#### **1.1 Functional Requirement**

They describe what the banking system must do to meet user's needs. The Banking System must:

- Open Accounts for Customer**

The System must allow customers to open accounts online upon provision of personal details(name, surname, address and employment information for 'Cheque Account').

- Deposit Funds**

Customer must be able to deposit money into any of their accounts.

- Withdraw Funds**

Customers must be able to withdraw money from Investment and Cheque accounts only (Savings does not support withdrawals).

- Interest Calculation**

The system must automatically calculate and credit monthly interest to eligible accounts.

- Transaction History**

Customers must be able to view a detailed transaction history for each account, Including (date of transaction, type of transaction(deposit/withdraw), amount involved and balance after transaction).

- Login**

Customer must login securely to access their accounts.

- Eligibility Validation**

The system must enforce account specific rules:

- ✓ Investment account must start with BWP 500 deposit or more.
- ✓ Cheque amount require employment details.

#### **1.2 Non-Functional Requirements**

They define how the banking system performs and behave:

- **Security**

The system must protect customer data through secure login & encrypted storage.

- **Performance**

System must respond quickly to user action and handle multiple users simultaneously.

- **Usability**

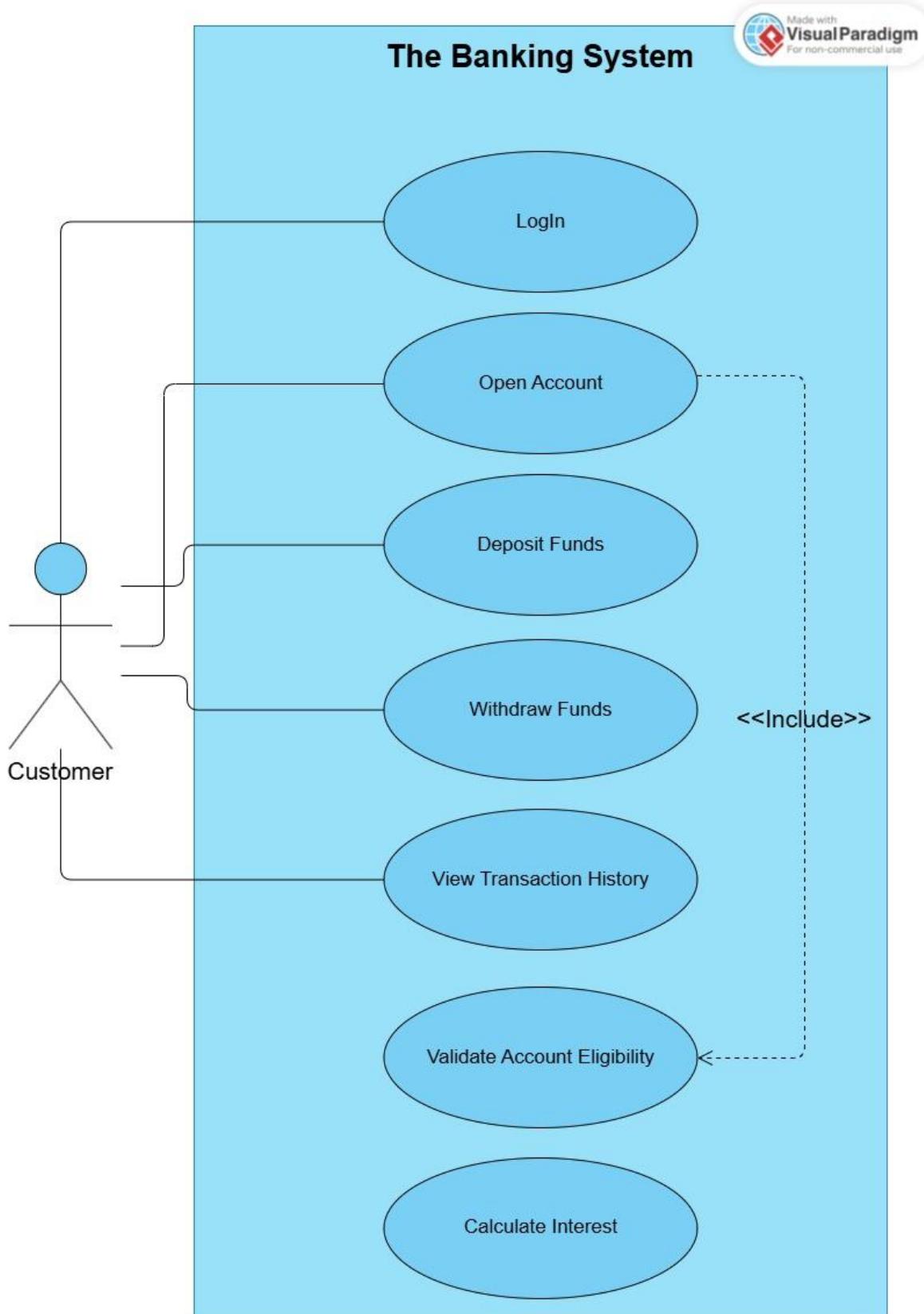
System must be user-friendly cater for those with less technical skills.

- **Automation and Reliability**

Monthly Interest calculations and crediting must be fully automated, and system must ensure accurate interest calculation and transaction history records.

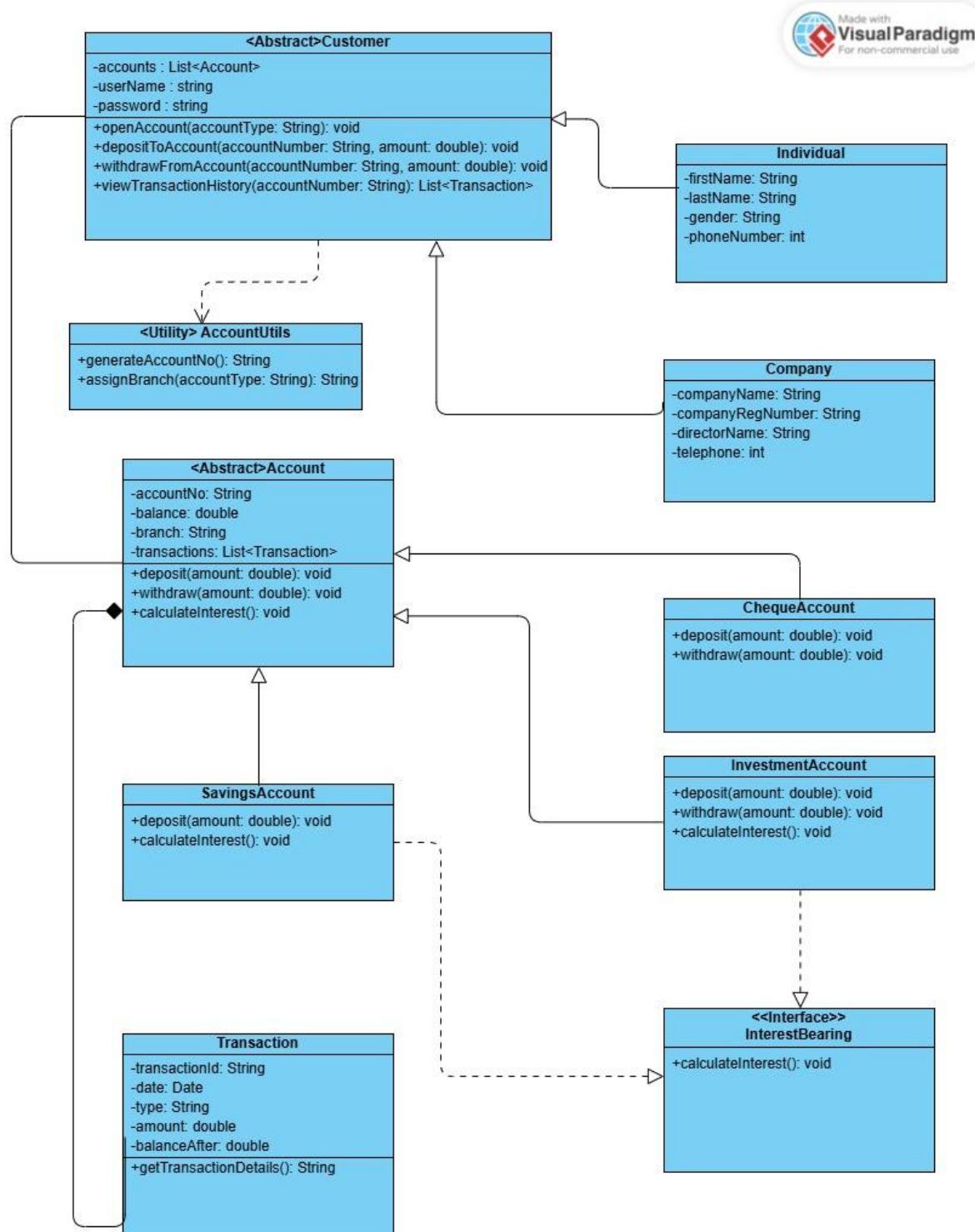
## 2. Structural UML Modelling

### 2.1 System Use Case Diagram



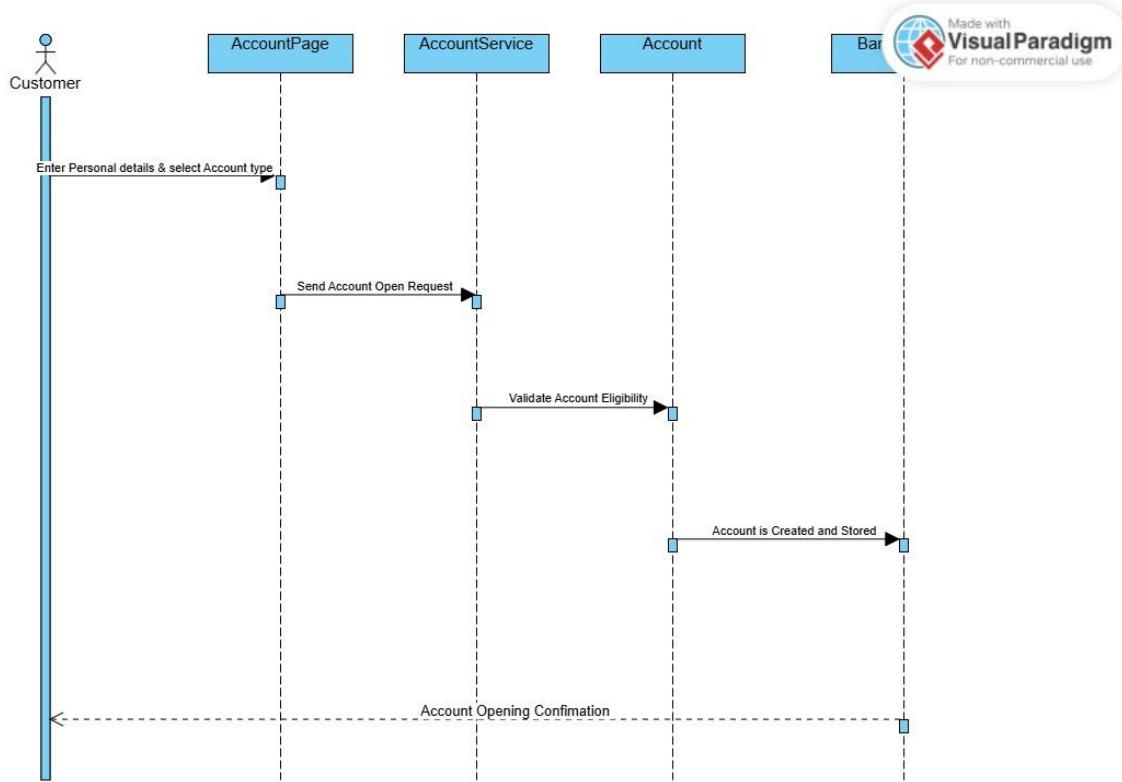
## 2.2 Class Diagram

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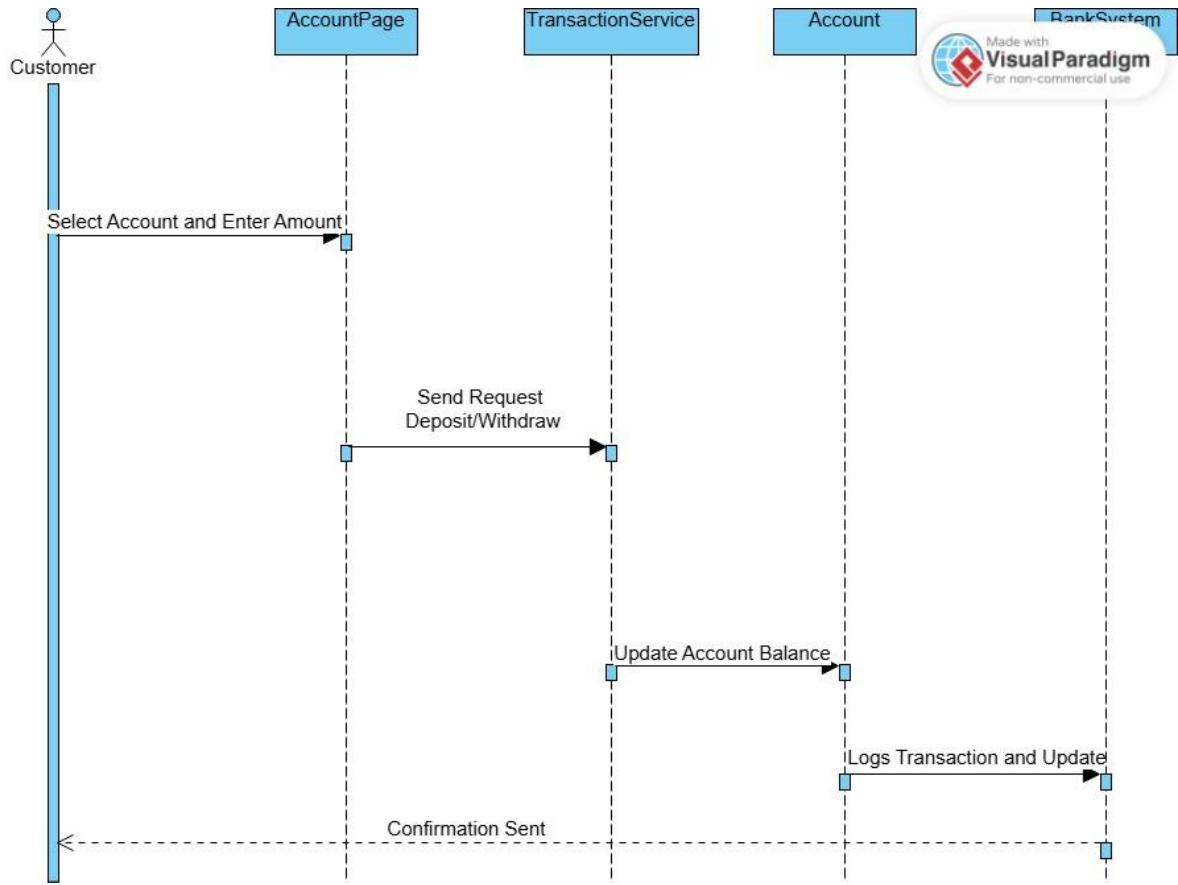


### 3. Behavioural Modelling

#### 3.1 Sequence Diagram



*Opening An Account Sequence*



### *Depositing/withdrawing Funds Sequence*

# Mock Interview Record

**Interviewee:** Kentsenao Baseki

**Interviewer:** Ishmael M Molelwane

**Date:** 18/09/2025

**Venue:** Online Teams Meeting

**Interview Format:** Formal Question & Answer

**Q1. Who is expected to operate the system? Does it require a bank teller?**

**Answer:** *The system is designed for customers only, all operations are customer driven.*

**Q2. What should system do first?**

**Answer:** *The system should allow customers to open an account online by capturing their personal details. No registration.*

**Q3. What are rules for opening an account?**

**Answer:** *Investment need BWP 500 minimum and Cheque requires job/employment info and Savings Account no special requirements but withdrawal is not allowed.*

**Q4. What should happen if customer tries to open Investment Account with less than BWP 500 deposit?**

**Answer:** *The system should reject and notify customer the minimum deposit requirement has not been met.*

**Q5. Does monthly interest require human approval or is it automated ?**

**Answer:** *Fully automated. The system calculates and credit interest.*

**Q6. Are interest rate the same for individual and companies?**

**Answer:** *Yes, interest rates are fixed regardless of whether account holder is individual or a company.*