**1. Requirements Elicitation**

**1.1. Mock Interview Transcript**

**Me (Atang Mutema):** What types of accounts should the system support?  
**Client (Sir Themba Moeng):** Savings, Investment, and Cheque accounts. Each has rules: Savings only allows deposits, Investment requires BWP 500 minimum and allows withdrawals, and Cheque accounts need proof of employment.

**Me:** Can a customer have more than one account?  
**Client:** Yes, customers may hold multiple accounts of different types.

**Me:** How should interest be handled?  
**Client:** Savings accounts pay 0.05% monthly, Investment accounts pay 5% monthly, and Cheque accounts do not earn interest.

**Me:** How should customer registration work?  
**Client:** Registration should be handled by bank staff with details like full name, ID, date of birth, address, and contact information.

**Me:** How should users access the system?  
**Client:** Customers log in with a username and password, while staff and administrators should have stronger authentication.

**Me:** What about transaction history and statements?  
**Client:** Customers should see the last 12 months of transactions, staff should see complete histories, and account statements should be downloadable in PDF.

**Me:** Should the system recognize different user roles?  
**Client:** Yes, customers, staff, and administrators should have different access permissions.

**1.2. Functional Requirements**

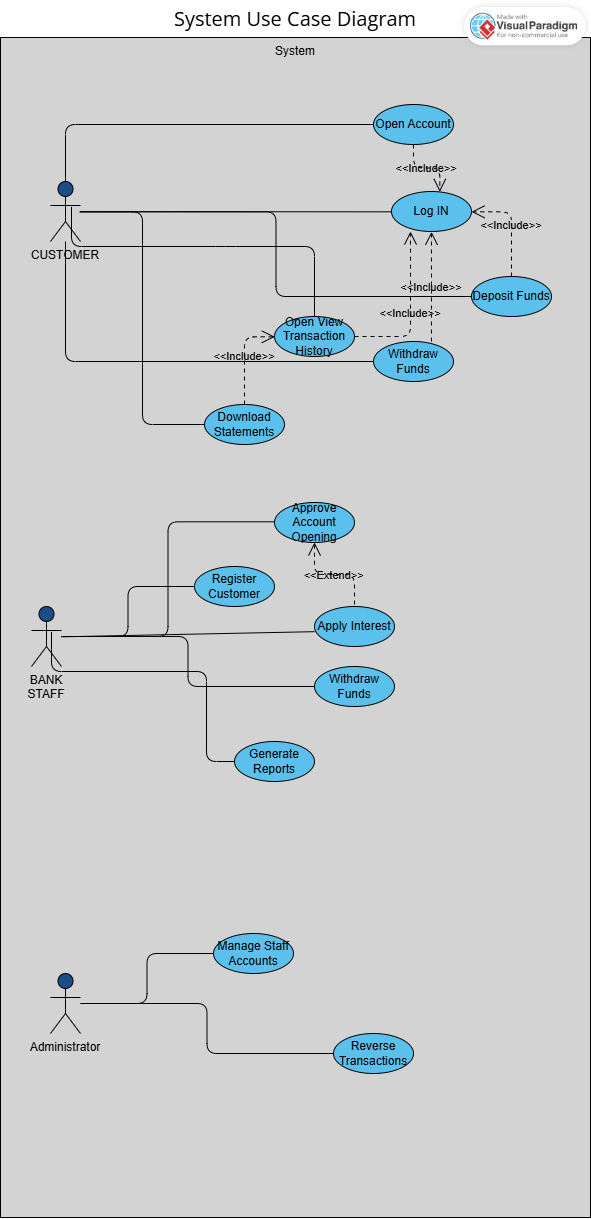
1. The system shall allow staff to register new customers with personal details.
2. The system shall allow customers to open and hold multiple accounts (Savings, Investment, Cheque) under their respective rules.
3. The system shall allow deposits into all accounts and withdrawals where permitted (Investment and Cheque).
4. The system shall calculate and apply monthly interest to Savings and Investment accounts.
5. The system shall allow customers to log in, view at least 12 months of transaction history, and download statements.

**1.3. Non-Functional Requirements**

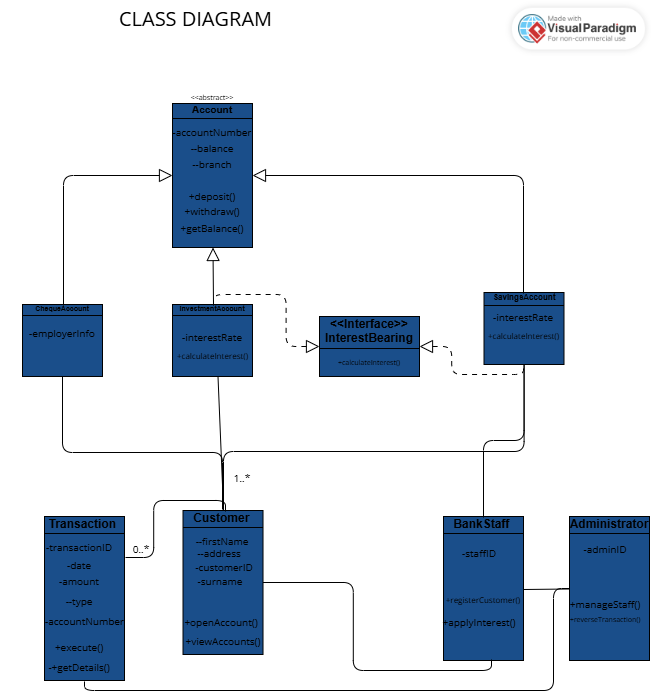
1. **Security:** Customer login requires a password; staff and administrators require stronger authentication.
2. **Performance:** Deposits, withdrawals, and interest calculations must process within seconds.
3. **Reliability:** The system must ensure no data loss and support backup and recovery.
4. **Usability:** The interface must be simple and allow easy navigation to account history and statements.
5. **Data Retention:** Transaction records must be stored for at least 5 years, with older ones archived.

**2. Structural UML Modelling**

**2.1. System Use Case Diagram**

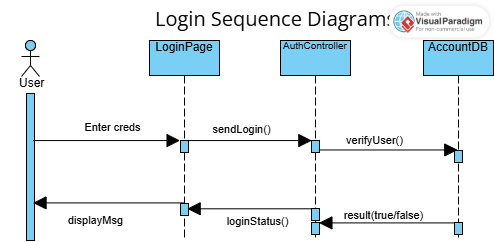


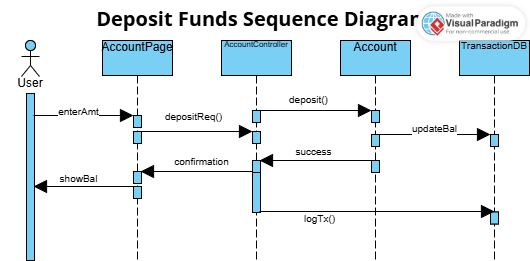
**2.2. Class diagram**



**3. Behavioural UML Modelling)**

**3.1. Sequence Diagrams**





**3.2. State Diagram**

