MEKELLE UNIVERSITY

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SCHOOL OF COMPUTING

DEPARTEMENT: SOFTWARE ENGINEERING

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GROUP ASSIGNMENT TITLE: BANKING SYSTEM MODEL

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BANKING SYSTEM MODEL

Introduction to the Banking System Model

the **Banking System Model** is often designed using **UML diagrams** to visually represent its structure, processes, and interactions. This approach helps in analyzing, designing, and implementing a robust banking application.

Key UML diagrams used include:

1. **Use Case Diagram**: Highlights the interactions between actors (e.g., customers, bank staff) and the system, showing use cases like deposit, withdrawal, fund transfer, and loan application.
2. **Class Diagram**: Represents the system's data structure, showing entities such as **Account**, **Customer**, **Transaction**, and their relationships.
3. **State Diagram**: Highlights the states an object can occupy, such as an account transitioning from active to suspended.
4. **Sequence Diagram**: Describes the interaction between system components, such as a customer initiating a transaction and the bank verifying and processing it.

Example:

- **Use Case**: A customer logs in to check their balance.
    - **Actors**: Customer, System
    - **Use Case Flow**:
        1. Customer enters credentials.
        2. System validates input.
        3. System retrieves and displays balance.

UML diagrams are created using tools like **Lucidchart**, **Microsoft Visio**, **Enterprise Architect**, or open-source options like **StarUML** and **Draw.io**, enabling clear communication among stakeholders and aiding in effective system development.