Fortis Bank System

Fortis Bank hired you to implement a bank applications system to manage customers and their accounts *as well as customers' transactions*.
A customer has a customer number, name, email., ……., (this list is not exhaustive)

A customer must have at least a checking account.
A customer can open a saving account and a credit account and, a currency account.
A customer can close an account at any time (except the checking account)

An account is identified by an account number, account type, opened date, available balance.
An account has a list of transactions.

A customer has two types of accounts: checking account and saving account. He can have also a credit account.

A checking account has a free limit number of transactions (only 3 free transactions per month) and extra-fees.
A saving account has: annual interest rate, annual gain

A transaction is defined by a transaction number, description, transaction date, amount and transaction type (deposit, withdraw).

The bank manager can create a customer, open an account to the customer. He also can close the accounts of a customer and then delete a customer.

You must define the characteristics and behaviors of each object in the Banking System.

Part I: Analysis

1. Define the domain of the system according to the business rules.
2. Design the UML diagrams (class diagram and use case)
3. Design the UML sequence and activity diagrams.

Part II: Back End Implementation

4. Implement the business layer.
5. Generate the Bank System API

Requirements: Use the pillars (the fundamental concepts) of the Object-Oriented Concepts to implement this information system.

- ✓ **Data abstraction**
- ✓ **Encapsulation**
- ✓ **Inheritance**
- ✓ **Polymorphism (static polymorphism and dynamic polymorphism)**
- ✓ **Interface**

Due date: March 22, 2023