

## **ASSIGNMENT A1**

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### **1. Objective**

The objective of this assignment is to allow students to become familiar with design patterns, layered architecture, SOLID principles and clean code principles.

### **2. Application Description**

Use JAVA API to design and implement an application for the front desk employees of a bank. The application should have two types of users (a regular user represented by the front desk employee and an administrator user) which have to provide a username and a password in order to use the application.

The regular user can perform the following operations:

- Add/update/view client information (name, identity card number, personal numerical code, address, etc.).
- Create/update/delete/view client account (account information: identification number, type, amount of money, date of creation).
- Transfer money between accounts.
- Process utilities bills.

The administrator user can perform the following operations:

- CRUD on employees' information.
- Generate reports for a particular period containing the activities performed by an employee.

### **3. Application Constraints**

- The data will be stored in a database. Use the Layers architectural pattern to organize your application
- All the inputs of the application will be validated against invalid data before submitting the

data and saving it in the database.

#### **4. Requirements**

- Implement and test the application
- Everything through [www.github.com](https://www.github.com)

#### **5. Deliverables**

- Implementation source files
- service
- repository
- database schema
- system diagram

#### **6. References**

[https://github.com/AlexandruGH/AC\\_Inginerie\\_Software\\_2025-20](https://github.com/AlexandruGH/AC_Inginerie_Software_2025-20)