Homework 1
OOP & Software Architecture
Due to 18th of September

Banking System

You are assigned to implement a Banking system. Bank should have the following properties
1. Name
2. Clients
3. Account of the clients
4. Total amount of money on the account.

Since Bank wants clients to be loyal, it classifies them in the following categories:
1. Regular Client
2. Clients with Golden Card
3. VIP clients

System should support:
- Add a new client
- Create an account for client
- List Clients (with all the fields)
- List accounts
- List Client's Accounts
- List Operations performed on the account

Each client should have the following mandatory properties:
1. Name
2. BirthDate
3. Gender
4. Amount of money on all accounts
5. Amount of accounts

Bank should support the following type of accounts:
1. Debit Account
2. Credit Account
3. Business Account
4. Saving Account

Accounts should support the following operations:
1. Withdraw
2. Deposit
3. Transfer

The following rules should be supported:
- For each account it should be possible to withdraw and deposit money.
- It should be possible to transfer money from one account to another (whatever type it is)
- Only for a Credit Account it should be possible to have negative balance.
- Saving Account should have a date before which it should not be possible to perform a withdrawal operation.
- Business account should charge a 2% fee for each money transfer for a regular client. 1% fee for a client with golden card and no fee for VIP client.

Please submit your works on moodle in a zip format (works on other formats will not be accepted). Make sure your solution is compiling and does not throw any runtime errors.

PLEASE PROVIDE COMMENTS for each class and method! Your grade will depend on it.

NO LATE SUBMISSIONS ARE ALLOWED!