

Lab Task 9b – Inheritance

Create a C# program that models a bank account. The program should have a **BankAccount** class that represents a bank account, and it should have the following attributes:

AccountNumber: a unique string that identifies the account

OwnerName: the name of the account owner

Balance: the current balance of the account

The BankAccount class should have the following methods:

- Deposit(decimal amount): adds the specified amount to the balance of the account
- Withdraw(decimal amount): subtracts the specified amount from the balance of the account
- Transfer(BankAccount destinationAccount, decimal amount): transfers the specified amount from this account to the specified destinationAccount

The program should also have a Bank class that represents a bank, and it should have the following attributes:

Name: the name of the bank

Accounts: a list of BankAccount objects representing the accounts held by the bank

The Bank class should have the following methods:

- AddAccount(BankAccount account): adds the specified BankAccount object to the Accounts list
- GetAccount(string accountNumber): returns the BankAccount object with the specified account number, or null if no such account exists
- GetTotalBalance(): returns the total balance of all accounts held by the bank

Implement the classes and methods described above and create a sample program that demonstrates their usage. The program should create a Bank object, add several BankAccount objects to it, and perform some transactions on them.

=====SUBMISSION=====

Date: Friday, April 14, 2023

Time: 12:00 p.m

Please note serious attention is now being drawn to the originality of every task submitted. As it is generally believe that no two persons can reason exactly the way, picking the same variable names, implementing logic exactly the same way etc. Therefore, each student is expected to submit only his/her own authentic work.

This is not a collaborative task!!!