Assignments on Java/C# - II

Topics Covered: Inheritance
Assignment 1:
Extend the Account class from the Day1-Assignment 5, to create two more classes as "SavingsAccount" and "CurrentAccount".
Additional fields for SavingsAccount class will be minimumBalance and for CurrentAccount, it will be overdraftLimitAmount.

Override the displayAccount method to display account details along with additional fields of Savings and Current Account.

Topics Covered: Abstract classes and methods
Assignment 2:
Modify the "Account" class to make it an abstract. Define an abstract method "withdraw" which accepts a parameter "amount" to withdraw and display the balance amount.

Override the withdraw method in the SavingsAccount and CurrentAccount class to display account balance and overdraftLimit left respectively.

Topics Covered: Interface
Assignment 3:
Create an interface "ATM" which contains following abstract methods:
- withdraw(int accountNumber,double amount)
- changePassword(int accountNumber,String oldPassword,String newPassword)
- checkBalance()

Create two implementation classes and override the methods of the ATM interface as follows:
- SbiAtm
- IciciAtm

Topics Covered: Exception handling
Assignment 4:
Create a custom exception class "InvalidAmountException" class to throw an exception for negative amount.
Create another custom exception class "InsufficientFundException" class to throw an exception for amount exceeding the current balance.

Topics Covered: Collections
Assignment 5:

Follow the below steps to add a DAO Layer:
1. Create an interface AccountDao with below methods:
   - addAnAccount(Account account)
   - withdraw(int accountNumber,double amount)
   - checkBalance()
   - changePassword(int accountNumber,String oldPassword,String newPassword)
   - List<Account> viewAllAccounts()
   - getAccountDetails(int accountNumber)

2. Create an Implementation class "InMemoryAccountDaoImpl" to implement above methods using static ArrayList collection as data store.

Topics Covered: JDBC
Assignment 6:
Create an implementation class "AccountDaoImpl" to implement the AccountDao interface using JDBC/ADO.NET API with Oracle/MsSql database.