Activity 26th May :

Part 1 :

Consider the following UML diagram :

Diagram

Description automatically generated

Text, letter

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

Part 2 :

Given the following BankAccount Class:

package Main;

import Exception.\*;

class BankAccount {

private String name; // your name

private double balance; // current amount of money you save in the bank account

private final static double depositLimit = 500;

private final static double withdrawLimit = 500;

/\*\* constructor \*/

public BankAccount(String name, double balance) {

this.name = name;

this.balance = balance;

}

/\*\* constructor \*/

public BankAccount(String name) {

this(name,0);

}

/\*\* return balance \*/

public double getbalance() {

return balance;

}

/\*\* return name \*/

public String getName() {

return name;

}

public String toString() {

return "Name: " + name + "\n" + "balance: " + balance ;

}

/\*\* deposit money into the account \*/

public void deposit(double depositAmount) throws BankAccountException {

// TODO

}

/\*\* withdraw money from the account \*/

public void withdraw(double withdrawAmount) throws BankAccountException {

// TODO

}

}

1. **Create the following Exception classes:**

* BankAccountException
* InvalidAmountException extends BankAccountException
* NotEnoughBalanceException extends BankAccountException
* WithdrawLimitException extends BankAccountException
* DepositLimitException extends BankAccountException

1. **Implement the deposit(double depositAmount) method which:**

* Throws InvalidAmountException if amount is non positive
* Throws DepositLimitException if the amount is greater than the deposit limit
* Otherwise, deposit the amount

1. **Implement the withdraw(double withdrawAmount)method which:**

* Throws InvalidAmountException if amount is non positive
* Throws WithdrawLimitException if the amount is greater than the withdraw limit
* Throws NotEnoughBalanceException if the amount is greater than the current balance
* Otherwise, withdraw the amount