**2nd Problem Statement for Practice**

**Bank Account**

The bank account contains different types of accounts. We have considered “Savings” and “Salary” account type. The Savings account is the normal account. But the salary account is the type of account which has the minimum threshold for the balance. If the account balance increases by 15,000 and more, then that extra amount is swept into a Fixed Deposit. And the swept amount is visible as the MOD balance which is different from the original account balance.

e.g. Assume minimum threshold = 35,000

|  |  |  |  |
| --- | --- | --- | --- |
| **AccountType** | **Available balance** | **MOD balance** | **NewBalance** |
| Salary | 50,000 | 15,000 | 35,000 |
| Savings | 60,000 | - | 60,000 |
| Salary | 45,000 | - | 45,000 |
| Salary | 60,000 | 25,000 | 35,000 |
| Savings | 1,00,000 | - | 1,00,000 |

The following data describes the system functionality.

**Account Class** contains acc\_no, acc\_type, balance, mod\_balance as the data members and getacc\_no(), getacc\_type(), getbal(), setbal(), getmod\_bal(), setmod\_bal() as the member functions.

**Bal\_Check Class** contains ArrayList of type Account, mod\_balance as the data members and chck\_Bal(), createFD() and showDetails() as the member functions.The chck\_Bal() methods checks for the account type, i.e. whether “Salary Account” or “Savings” accordingly. If the account type is identified as the Salary then it checks for the minimum threshold limit. If balance increases the threshold limit by more or equal to 15,000, it sets the status to true and notify the FixedDeposit thread. The createFD() method uses the status flag to perform the operation. If the status flag is set to true by the chck\_Bal() method, then created() method will set the mod balance and new available balance for that account number. Else it will not perform anything.

**BalanceStatus** **class implements Runnable** interface. The class create its thread and calls the chck\_Bal() method of Bal\_Check class and iterates over all the items of the ArrayList and pass the index to the chck\_bal().

**FixedDeposit** **class implements Runnable** interface. The class create its thread and calls the createFD() method of Bal\_Check class and iterates over all the items of the ArrayList and pass the index to the createFD().

**Main class** contains main() method. In main() method some Account class objects are created using some initialized values and are added into the ArrayList which is created in the main() method. The ArrayList is send as the parameter to the Bal\_Check class to initialize the ArrayList of that class. The objects of class are created to start the threads to perform the particular operation. Then the updated details of the bank account are displayed.

**Note: Initially the MOD balance will be zero (0) for all account types.**

**Program execution flow:**

1. Show the initial details of bank account.
2. Show the updated details of all the bank accounts.