You have to create the BankAccount class so that when you run the driver class, your output matches exactly with the given output.

BankAccount class basically creates bank accounts for clients. This bank can create 2 types of account – savings and current. If a client wants to open a current account the opening deposit must be at least BDT 20,000.00. There’s no restriction for savings account types.

A client can deposit and withdraw money. Of course, the account number and account name must match before a deposit or a withdrawal. Before a withdrawal, the account balance must be greater than the withdrawal amount. Moreover, there is a restriction for current account holders and that is, the minimum balance must be at least BDT 10,000 after deducting the withdrawal amount otherwise the system will not allow to withdraw. [example, if the balance is 20,000 and a current account holder wants to withdraw 12,000 the system will not allow it because 20,000 – 12,000 = 8,000 which < 10,000].

Each successful transaction (deposit/withdrawal) is recorded inside an array. But you know that arrays are of fixed length and will run out of space at some point. Therefore, you need to resize the array when needed.

Hint [ before you store a successful transaction, check whether the array is full or not. If full resize. Create a method for resize]

Methods of BankAccount class:

1. createAccount() – takes 4 pieces of information as parameters – account name, account number, account type and account opening balance. Creates the account if the requirements are met
2. deposit() – takes account name, account number and deposit amount as parameters. Possible if the corresponding name and number matches.
3. withdraw() - takes account name, account number and withdrawal amount as parameters. Possible if the corresponding name and number matches also the conditions mentioned above.
4. printStatement() – prints the transaction history of the client and the balance

|  |
| --- |
| class Driver { |
| public static void main(String[] args) { |
| System.out.println("Welcome to ABC Bank \n"); |
|  |
| BankAccount ba[] = new BankAccount[4]; |
| String clients [] = {"Frodo","current","20000","Sauron","savings","5000",  "Aragon","savings","30000","Gandalf","current","2000"}; |
|  |
| int j = 0,k=0; |
| while(j<4){ |
| ba[j] = new BankAccount(); |
| ba[j].createAccount(clients[k],String.valueOf(j),  clients[k+1],Integer.parseInt(clients[k+2])); |
| j++; |
| k = k + 3; |
| } |
| System.out.println(">>>>>>>>>>>>>>>>>>>>>>>>>>>>>>"); |
| ba[0].withdraw("1","Frodo",2222); |
|  |
| System.out.println(">>>>>>>>>>>>>>>>>>>>>>>>>>>>>>"); |
| ba[0].withdraw("0","Frodo",2000000); |
|  |
| System.out.println(">>>>>>>>>>>>>>>>>>>>>>>>>>>>>>"); |
| ba[0].withdraw("0","Frodo",12000); |
|  |
| System.out.println(">>>>>>>>>>>>>>>>>>>>>>>>>>>>>>"); |
| ba[0].withdraw("0","Frodo",9000); |
|  |
| System.out.println(">>>>>>>>>>>>>>>>>>>>>>>>>>>>>>"); |
| ba[0].withdraw("0","Frodo",1000); |
|  |
| System.out.println(">>>>>>>>>>>>>>>>>>>>>>>>>>>>>>"); |
| ba[0].deposit("0","Frodo",2000); |
|  |
| System.out.println(">>>>>>>>>>>>>>>>>>>>>>>>>>>>>>"); |
| ba[0].printStatement(); |
|  |
| } |
| } |

**Expected Output**

|  |
| --- |
| Welcome to ABC Bank |
|  |
| Mr.Frodo Current Account creation successful |
| Your current banance is 20000.0 |
|  |
| Mr.Sauron Savings Account creation successful |
| Your Savings banance is 5000.0 |
|  |
| Mr.Aragon Savings Account creation successful |
| Your Savings banance is 30000.0 |
|  |
| Sorry Mr.Gandalf could not create a current account |
| Minimum amount must be BDT20000 |
|  |
| >>>>>>>>>> |
| Unsuccessful. Your name-account number mismatch |
| >>>>>>>>>> |
| Unsuccessful. Withdrawl amount exceeds your balance |
| >>>>>>>>>> |
| Unsuccessful. The minimum balance after withdrawl must be greater than 10000 |
| >>>>>>>>>> |
| Withdrawl Successful. Your current balance is 11000.0 |
| >>>>>>>>>> |
| Withdrawl Successful. Your current balance is 10000.0 |
| >>>>>>>>>> |
| Deposit Successful. Your current balance is 12000.0 |
| >>>>>>>>>> |
| Printing Statement of Mr. Frodo |
| withdrawl 9000.0 |
| withdrawl 1000.0 |
| deposit 2000 |
| Total Balance: 12000.0 |