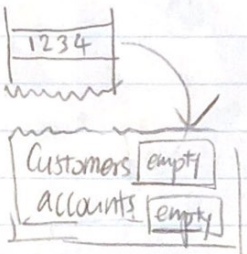
T06 - G02

Line 31

Bank
- customers - accounts
+ addCustomer(Customer aCustomer) + addAccount(BankAccount account) + toString()

```
Bank myBank = new Bank()
```



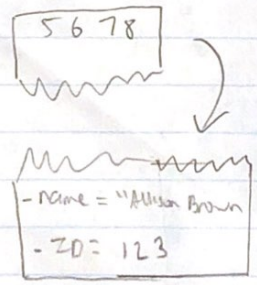
// "1234" is used to represent the address of this memory block

// when myBank is created, its instance variables, Customers and accounts are created as Array lists but it's empty

Line 33

Customer
- name - customerID
+ getName() + getID() + setName(String a) + setID(int b) + toString()

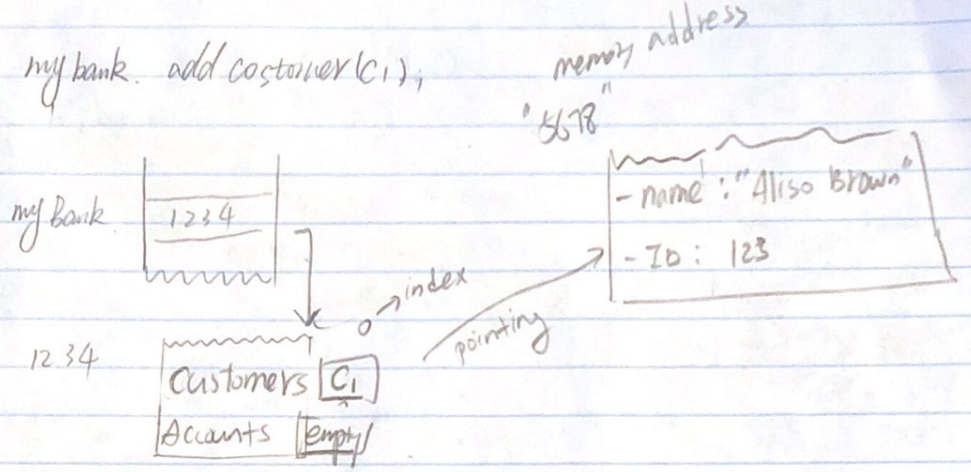
```
Customer c1 = new Customer("Allison Brown", 123)
```



// Customer object variable "c1" is pointing "5678" memory block and the block has data for C_1

Kilroy

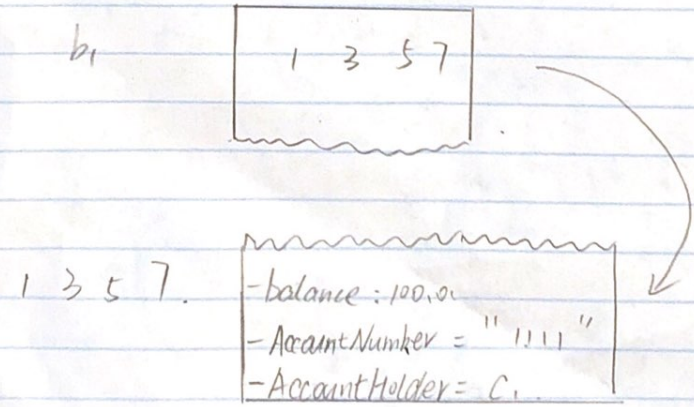
line 34. myBank.addCostomer(C1);



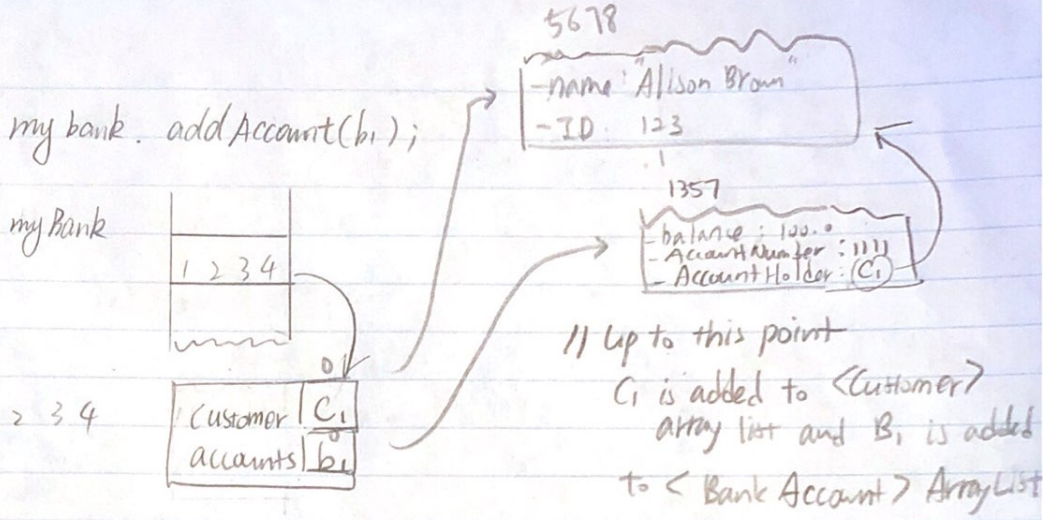
line 36.

BankAccount
- balance - account number. - account Holder.
+ getAccountHolder. + get Balance + get AccountNumber + Set Account Holder + deopcit. + withdraw. + transfer.

BankAccount b1 = new BankAccount(C1, 100.00);

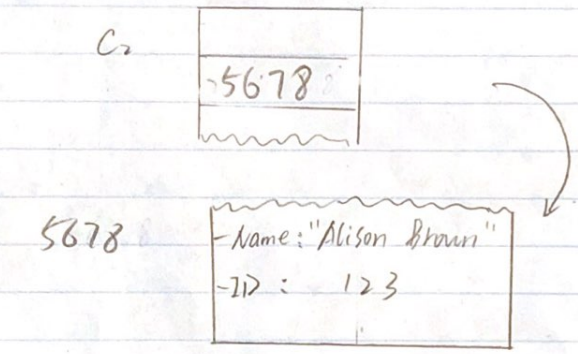


line 37. myBank.addAccount(b1);



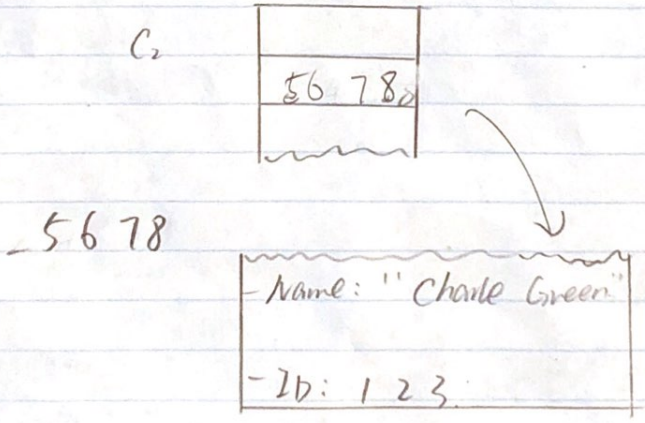
// Up to this point C1 is added to <Customer> array list and B1 is added to <Bank Account> ArrayList

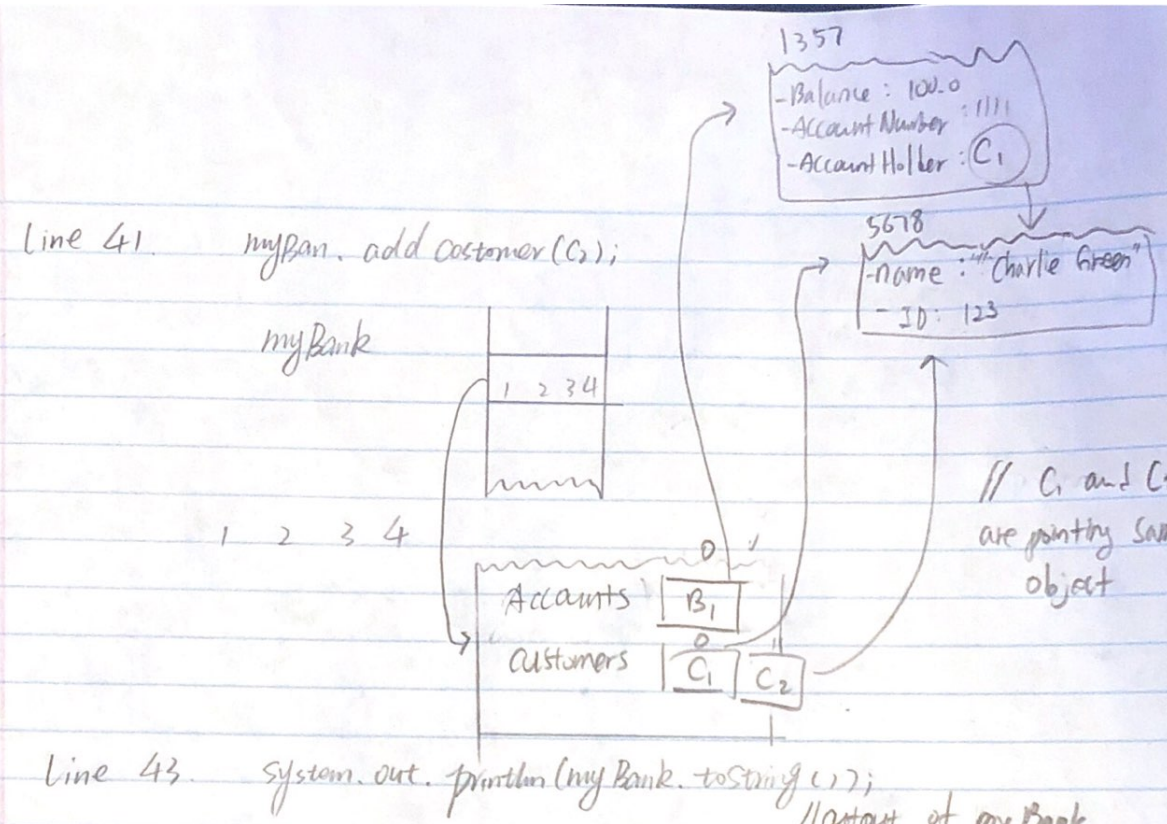
line 39. Customer C2 = b1.getAccountHolder();



// pointing
// same memory block
// as C1

Line 40. C2.setName("Charle Green");





Line 43 System.out.println(myBank.toString());

//output of myBank

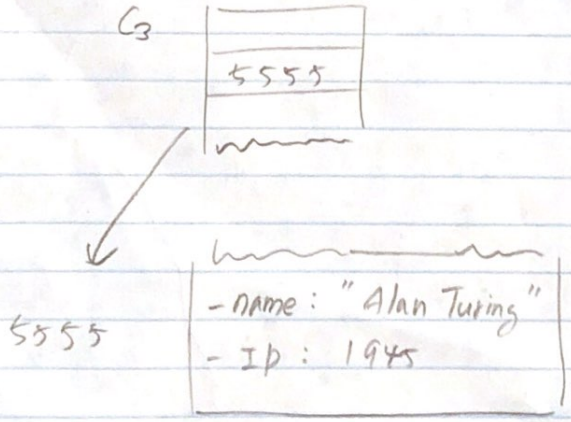
(Charles Green 123) 1111 : 100.0 // B1 in accounts[0]

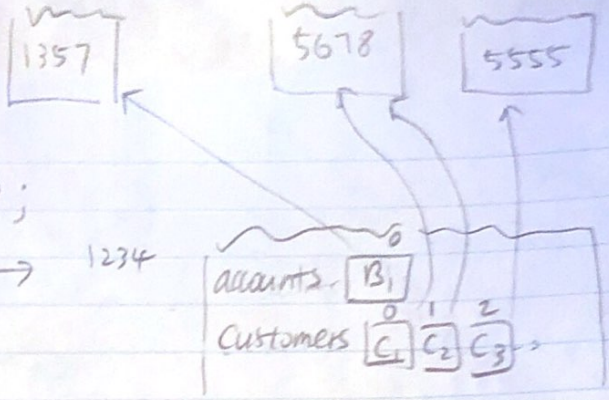
Charles Green 123 // C1 in customers[0]

Charles Green 123 // C2 in customers[1]

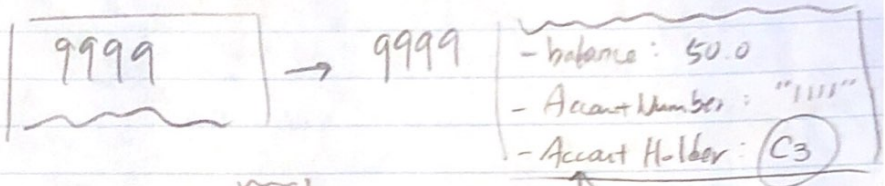
// due to privacy leak in // getAccountHolder(), informations are duplicated

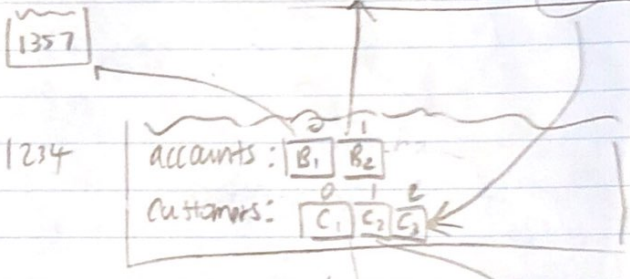
line 45 Customer C3 = new Customer ("Alan Turing", 1945);





line47 BankAccount b2 = new BankAccount(C3, 50.0);

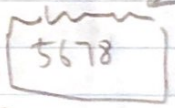




line49 System.out.println(myBank.toString()); // output of myBank

(Charles Green 123) 1111: 100.0 // accounts[0], B1

(Alan Turing 1945) 1111: 50.0 // accounts[1], B2

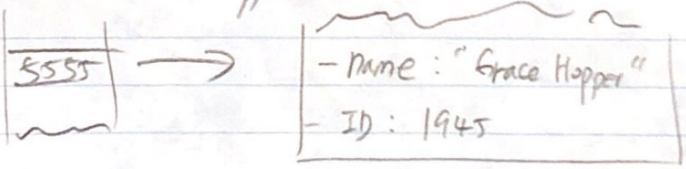


Charles Green 123 // Customers[0], C1

Charles Green 123 // Customers[1], C2

Alan Turing 1945 // Customers[2], C3

line 51 C3.setName("Grace Hopper");



line 52 System.out.println(myBank.toString()); // output of myBank

(Charles Green 123) 1111 : 100.0
(Grace Hopper 1945) 1111 : 50.0

// B_1 accounts[0]
// B_2 accounts[1]

Charles Green 123
Charles Green 123
Grace Hopper 1945

// C_1 Customers[0]
// C_2 " [1]
// C_3 , just updated [2] with line 51,

B_2, C_3 are both updated by line 51 due to privacy leak