Class Diagram

Class BankAccount:
- Public methods:
  - deposit(double amount)
  - withdraw(double amount)
  - transferTo(double amount, BankAccount otherAccount)
  - getBalance()
  - getOwner()
  - getNumber()

Class Customer:
- Public methods:
  - getName()
  - getID()

Object Diagram

Customer: String name:
- String id:
  - String "Avi Cohen": "025285244"
  - String "Rita Stein": "024847638"
Bank main (…)

Toy Bank Program

public class Bank {
public static void main(String[] args) {
    Customer customer1 = new Customer("Avi Cohen", "025285244");
    Customer customer2 = new Customer("Rita Stein", "024847638");
    BankAccount account1 = new BankAccount(customer1, 1234);
    BankAccount account2 = new BankAccount(customer2, 5678);
    BankAccount account3 = new BankAccount(customer2, 2984);
    account1.deposit(1000);
    account2.deposit(500);
    account1.transferTo(100, account3);
    account2.withdraw(300);
    System.out.println("account1 has " + account1.getBalance());
    System.out.println("account2 has " + account2.getBalance());
}
}

The Customer Class

public class Customer {
public Customer(String name, String id) {
    this.name = name;
    this.id = id;
}
public String getName() {
    return name;
}
public String getID() {
    return id;
}
private String name;
private String id;

Object Diagram

Customer:
- String name:
  - String "Avi Cohen": "025285244"

Bank main (…)

Toy Bank Program

public class Bank {
public static void main(String[] args) {
    Customer customer1 = new Customer("Avi Cohen", "025285244");
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    System.out.println("account1 has " + account1.getBalance());
    System.out.println("account2 has " + account2.getBalance());
}
}
Toy Bank Program

```java
public class Bank {
    public static void main(String[] args) {
        Customer customer1 = new Customer("Avi Cohen", "025285244");
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        BankAccount account1 = new BankAccount(customer1, 1234);
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        account1.deposit(1000);
        account2.deposit(500);
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        account2.withdraw(300);
        System.out.println("account1 has " + account1.getBalance());
        System.out.println("account2 has " + account2.getBalance());
    }
}
```

Object Diagram

Message Sequence Chart

```java
public class Bank {
    public static void main(String[] args) {
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        account1.deposit(1000);
        account2.deposit(500);
        account1.transferTo(100, account3);
        account2.withdraw(300);
        System.out.println("account1 has " + account1.getBalance());
        System.out.println("account2 has " + account2.getBalance());
    }
}
```

Output:
```
account1 has 900.0
account2 has 200.0
```