Program No	3
Roll No	1262
Title of Program	Bank Account Statement
Description	Design a class bank account to represent customers in a bank. provide facilities such as withdraw, deposit and transfer funds for the account. Assume appropriate data members. design a test class to test the functionality. Minimum balance in account should be 500 rupees

Advanced Java

Source Code:

```java
class BankAccount{
    //Instance variable
    private long accno;
    private String acName;
    private double balance;
    BankAccount(){
        this.accno=0;
        this.acName=" ";
        this.balance=0.0;

    }
    BankAccount(long accno,String acName,double balance){
        this.accno=accno;
        this.acName=acName;
        this.balance=balance;
    }
    //Access and mutators
    public void setAccno(long accno){
        this.accno=accno;
    }
    public void setAccName(String acName){
        this.acName=acName;
    }
    public void setBalance(double balance){
        this.balance=balance;
    }
    public long getAccno(){
        return this.accno;
    }
    public String getAcname(){
```

```java
            return this.acName;

    }
    public double getBalance(){
        return this.balance;
    }
    void deposit(double amt){
        this.balance=this.balance+amt;
    }
    boolean withdraw(double amt){
        if (this.balance-amt>=500){
            this.balance=this.balance-amt;
            return true;
        }
        else{
            return false;
        }
    }
    boolean transfer(BankAccount target,double amt){
        if(this.withdraw(amt)){
            target.deposit(amt);
            return true;

        }
        else{
            return false;
        }

    }
}
class AccountTest{
    public static void main(String[] args){
        //deposit example
        BankAccount b1=new BankAccount();
        System.out.println("before:"+b1.getBalance());
        b1.deposit(1000);
        System.out.println("After:"+b1.getBalance());

        BankAccount b2=new BankAccount(101,"harsh",95000);
        System.out.println("before:"+b2.getBalance());
        b2.deposit(1000);
        System.out.println("After:"+b2.getBalance());
```

```java
//withdrawl example
BankAccount b3=new BankAccount(10,"harsh1",5000);
System.out.println("before:"+b3.getBalance());
if (b3.withdraw(1000)){
   System.out.println("Withdrawl successful");
}
else{
   System.out.println("Insufficient funds");
}
System.out.println("After:"+b3.getBalance());

//transfer example
System.out.println("Acc No:"+b3.getAccno()+
" Name:"+b3.getAcname()+" Balance:"+b3.getBalance());
System.out.println("Acc No:"+b2.getAccno()+
" Name:"+b2.getAcname()+" Balance:"+b2.getBalance());
if (b3.transfer(b2,5000)){
   System.out.println("transfer successfull");

}
else{
   System.out.println("Insufficient funds");
}
System.out.println("Acc No:"+b3.getAccno()+
" Name:"+b3.getAcname()+" Balance:"+b3.getBalance());
System.out.println("Acc No:"+b2.getAccno()+
" Name:"+b2.getAcname()+" Balance:"+b2.getBalance());

System.out.println("Acc No:"+b3.getAccno()+
" Name:"+b3.getAcname()+" Balance:"+b3.getBalance());
System.out.println("Acc No:"+b2.getAccno()+
" Name:"+b2.getAcname()+" Balance:"+b2.getBalance());
if (b3.transfer(b2,100)){
   System.out.println("transfer successfull");

}
else{
   System.out.println("Insufficient funds");
}
System.out.println("Acc No:"+b3.getAccno()+
```

```
    " Name:"+b3.getAcname()+" Balance:"+b3.getBalance());
    System.out.println("Acc No:"+b2.getAccno()+
    " Name:"+b2.getAcname()+" Balance:"+b2.getBalance());

    }
}
```

Output:

```
[Running] cd "f:\dev\java\" && javac AccountTest.java && java AccountTest
before:0.0
After:1000.0
before:95000.0
After:96000.0
before:5000.0
Withdrawl successful
After:4000.0
Acc No:10 Name:harsh1 Balance:4000.0
Acc No:101 Name:harsh Balance:96000.0
Insufficient funds
Acc No:10 Name:harsh1 Balance:4000.0
Acc No:101 Name:harsh Balance:96000.0
Acc No:10 Name:harsh1 Balance:4000.0
Acc No:101 Name:harsh Balance:96000.0
transfer successfull
Acc No:10 Name:harsh1 Balance:3900.0
Acc No:101 Name:harsh Balance:96100.0
```