```
// joi/5/bank/BankAccount.java
//
//
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/**
 * A BankAccount object has private fields to keep track
 * of its current balance, the number of transactions
 * performed and the Bank in which it is an account, and
 * and public methods to access those fields appropriately.
 *
 * @see Bank
 * @version 5
 */

public abstract class BankAccount
{
    private int  balance = 0;          // Account balance (whole dollars)
    private int  transactionCount = 0; // Number of transactions performe
    private Bank issuingBank;          // Bank issuing this account

    /**
     * Construct a BankAccount with the given initial balance and
     * issuing Bank. Construction counts as this BankAccount's
     * first transaction.
     *
     * @param initialBalance the opening balance.
     * @param issuingBank the bank that issued this account.
     */

    public BankAccount( int initialBalance, Bank issuingBank )
    {
        this.issuingBank = issuingBank;
        deposit( initialBalance );
    }

    /**
     * Withdraw the given amount, decreasing this BankAccount's
     * balance and the issuing Bank's balance.
     * Counts as a transaction.
     *
     * @param amount the amount to be withdrawn
     * @return amount withdrawn
     */

    public int withdraw( int amount )
    {
        incrementBalance( -amount );
        countTransaction();
        return amount ;
    }

    /**
     * Deposit the given amount, increasing this BankAccount's
     * balance and the issuing Bank's balance.
     * Counts as a transaction.
```



```
     *
     * @param amount the amount to be deposited
     * @return amount deposited
     */

    public int deposit(int amount)
    {
        incrementBalance( amount);
        countTransaction();
        return amount ;
    }

    /**
     * Request for balance. Counts as a transaction.
     *
     * @return current account balance.
     */

    public int requestBalance()
    {
        countTransaction();
        return getBalance() ;
    }

    /**
     * Get the current balance.
     * Does NOT count as a transaction.
     *
     * @return current account balance
     */

    public int getBalance()
    {
        return balance;
    }

    /**
     * Increment account balance by given amount.
     * Also increment issuing Bank's balance.
     * Does NOT count as a transaction.
     *
     * @param amount the amount of the increment.
     */

    public void incrementBalance( int amount )
    {
        balance += amount;
        this.getIssuingBank().incrementBalance( amount );
    }

    /**
     * Get the number of transactions performed by this
     * account. Does NOT count as a transaction.
     *
     * @return number of transactions performed.
     */
```

```
113
114      public int getTransactionCount()
115      {
116          return transactionCount;
117      }
118
119      /**
120       * Increment by 1 the count of transactions, for this account
121       * and for the issuing Bank.
122       * Does NOT count as a transaction.
123       */
124
125      public void countTransaction()
126      {
127          transactionCount++;
128          this.getIssuingBank().countTransaction();
129      }
130
131      /**
132       * Get the bank that issued this account.
133       * Does NOT count as a transaction.
134       *
135       * @return issuing bank.
136       */
137
138      public Bank getIssuingBank()
139      {
140          return issuingBank;
141      }
142
143      /**
144       * Action to take when a new month starts.
145       */
146
147      public abstract void newMonth();
148  }
```