# Class BankAccount

java.lang.Object
        BankAccount

**Direct Known Subclasses:**

LineOfCredit

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```
public class BankAccount
extends java.lang.Object
```

Basic bank account class for CS1083. Balances are not permitted to go below $0.00

## Field Summary

### Fields

| Modifier and Type | Field | Description |
|---|---|---|
| private int | accountNumber | Account number. |
| private int | balance | Account balance stored as pennies. |

## Constructor Summary

## Constructors

| Constructor | Description |
| --- | --- |
| **BankAccount**(int accountNumberIn) | Constructs a BankAccount object given the account number. |
| **BankAccount**(int accountNumberIn, int balanceIn) | Constructs a BankAccount object given the account number and an initial balance. |

## *Method Summary*

| All Methods | Instance Methods | Concrete Methods |
| --- | --- | --- |

| Modifier and Type | Method | Description |
| --- | --- | --- |
| void | **deposit** (int depositAmount) | Deposits money into this account. |
| int | **getAccountNumber**() | Accessor method for accountNumber. |
| int | **getBalance**() | Accessor method for balance. |
| void | **setBalance** (int balanceIn) | Mutator method for balance. |
| java.lang.String | **toString**() | Supplies the account number and balance as a String. |
| void | **withdraw** (int withdrawalAmount) | Withdraws money from this account. |

### Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, wait, wait, wait

## *Field Detail*

### accountNumber

```
private int accountNumber
```

Account number.

### balance

```
private int balance
```

Account balance stored as pennies.

## *Constructor Detail*

### BankAccount

```
public BankAccount(int accountNumberIn,
                   int balanceIn)
```

Constructs a BankAccount object given the account number and an initial balance.

**Parameters:**

`accountNumberIn` - The given account number.

`balanceIn` - The initial balance in pennies.

### BankAccount

```
public BankAccount(int accountNumberIn)
```

Constructs a BankAccount object given the account number. The initial balance is set to 0 pennies, which represents $0.00

**Parameters:**

`accountNumberIn` - The given account number.

## *Method Detail*

### getAccountNumber

```
public int getAccountNumber()
```

Accessor method for accountNumber.

**Returns:**
The account number.

### getBalance

```
public int getBalance()
```

Accessor method for balance.

**Returns:**
The balance in pennies.

### setBalance

```
public void setBalance(int balanceIn)
```

Mutator method for balance.

**Parameters:**
balanceIn - The new balance in pennies.

### deposit

```
public void deposit(int depositAmount)
          throws OverpaymentException
```

Deposits money into this account.

**Parameters:**

depositAmount - The amount to be deposited in pennies.

**Throws:**

OverpaymentException - Included here only to be consistent with the overridden 'deposit' method in the child LineOfCredit class.

## withdraw

```
public void withdraw(int withdrawalAmount)
              throws InsufficientFundsException
```

Withdraws money from this account.

**Parameters:**

withdrawalAmount - The amount to be withdrawn in pennies. The withdrawal happens only if the balance will remain at least $0.00

**Throws:**

InsufficientFundsException - When the withdrawal attempts to reduce the balance below $0.00

## toString

```
public java.lang.String toString()
```

Supplies the account number and balance as a String.

**Overrides:**

toString in class java.lang.Object

**Returns:**

A String representation of the account number and balance for this BankAccount instance. The balance is formatted in currency format.