

## Using JUnit: Bank Account Java Class

We've created a `BankAccount` class that (as the name suggests) represents a bank account. For our program, the `BankAccount` class must meet several requirements:

- Each account has an account number that is set when the account is created and cannot later be changed. The number can be retrieved with the `getAccountNum()` method.
- Each account also has a balance. For this practice, all balances are whole dollar amounts (integers). The account's balance starts at \$0, and can be retrieved by the `getBalance()` method.
- Money can be added to the account by the `deposit()` method and removed by the `withdraw()` method. Both methods return `true` if the transaction is successful and `false` if not. Deposits are always successful as long as the deposit amount is greater than \$0, but withdrawals only succeed if enough money is present in the account to cover the withdrawal.
- The account must remember the dollar amount of the last successful transaction, and return it from the `getLastTransAmount()` method. (Deposits are returned as positive amounts, and withdrawals as negative amounts.)

Below is the source code of the `BankAccount` class:

```
public class BankAccount
{
    public BankAccount(int acctNum)
    {
        this.acctNum = acctNum;
    }

    private int getAccountNum()
    {
        return acctNum;
    }

    private boolean deposit(int amount)
    {
        if (amount <= 0)
            return false;

        balance += amount;
        lastTransaction = amount;
        return true;
    }

    private boolean withdraw(int amount)
    {
        if (amount > 0 && balance >= amount)
        {
            balance -= amount;
            lastTransaction = -amount;
            return true;
        }
    }
}
```

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```
        else
            return false;
    }

    private int getBalance()
    {
        return balance;
    }

    private int getLastTransAmount()
    {
        return lastTransaction;
    }

    @Override
    public String toString()
    {
        return String.format("Account %d (balance $%d)",
            acctNum, balance);
    }

    private int acctNum;
    private int balance;
    private int lastTransaction;
}
```