

Suponha que, para realizar um empréstimo, é descontada uma taxa no valor de 10.0

Isso resulta em erro:

```
public void loan(double amount) {
    if (amount <= loanLimit) {
        balance += amount - 10.0;
    }
}
```

<https://github.com/acenelio/inheritance1-java>

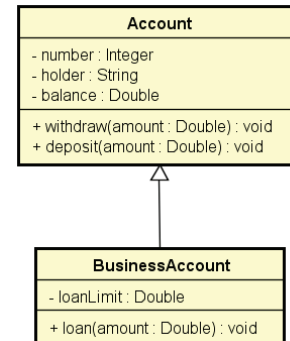
Upcasting e downcasting

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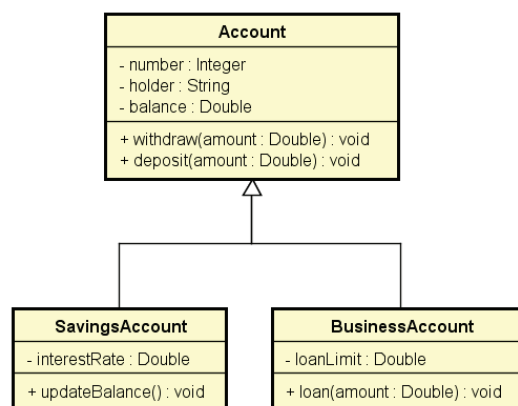
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Checklist

- Upcasting
 - Casting da subclasse para superclasse
 - Uso comum: polimorfismo
- Downcasting
 - Casting da superclasse para subclasse
 - Palavra instanceof
 - Uso comum: métodos que recebem parâmetros genéricos (ex: Equals)



Example



<https://github.com/acenelio/inheritance2-java>

```
Account acc = new Account(1001, "Alex", 0.0);
BusinessAccount bacc = new BusinessAccount(1002, "Maria", 0.0, 500.0);

// UPCASTING

Account acc1 = bacc;
Account acc2 = new BusinessAccount(1003, "Bob", 0.0, 200.0);
Account acc3 = new SavingsAccount(1004, "Anna", 0.0, 0.01);

// DOWNCASTING

BusinessAccount acc4 = (BusinessAccount)acc2;
acc4.loan(100.0);

// BusinessAccount acc5 = (BusinessAccount)acc3;
if (acc3 instanceof BusinessAccount) {
    BusinessAccount acc5 = (BusinessAccount)acc3;
    acc5.loan(200.0);
    System.out.println("Loan!");
}

if (acc3 instanceof SavingsAccount) {
    SavingsAccount acc5 = (SavingsAccount)acc3;
    acc5.updateBalance();
    System.out.println("Update!");
}
```

Sobreposição, palavra super,
anotação @Override

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