

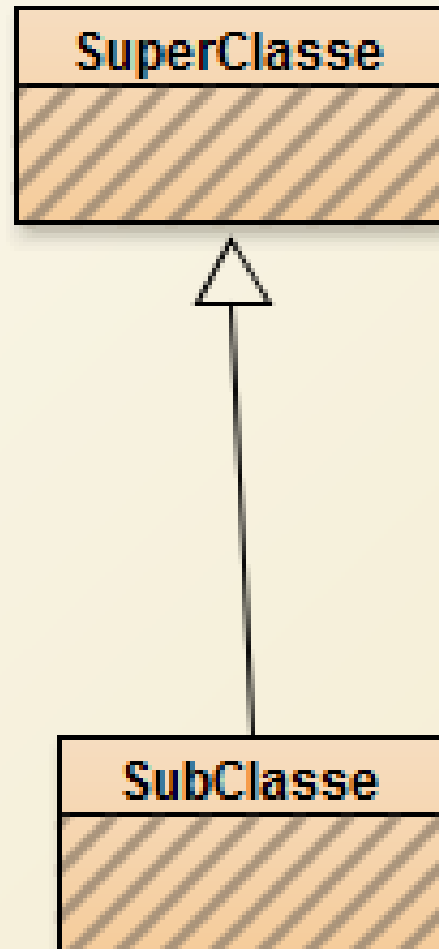
FCT/Unesp – Presidente Prudente
Departamento de Matemática e Computação

**Programação Orientada
a Objetos**
Herança – Parte 2

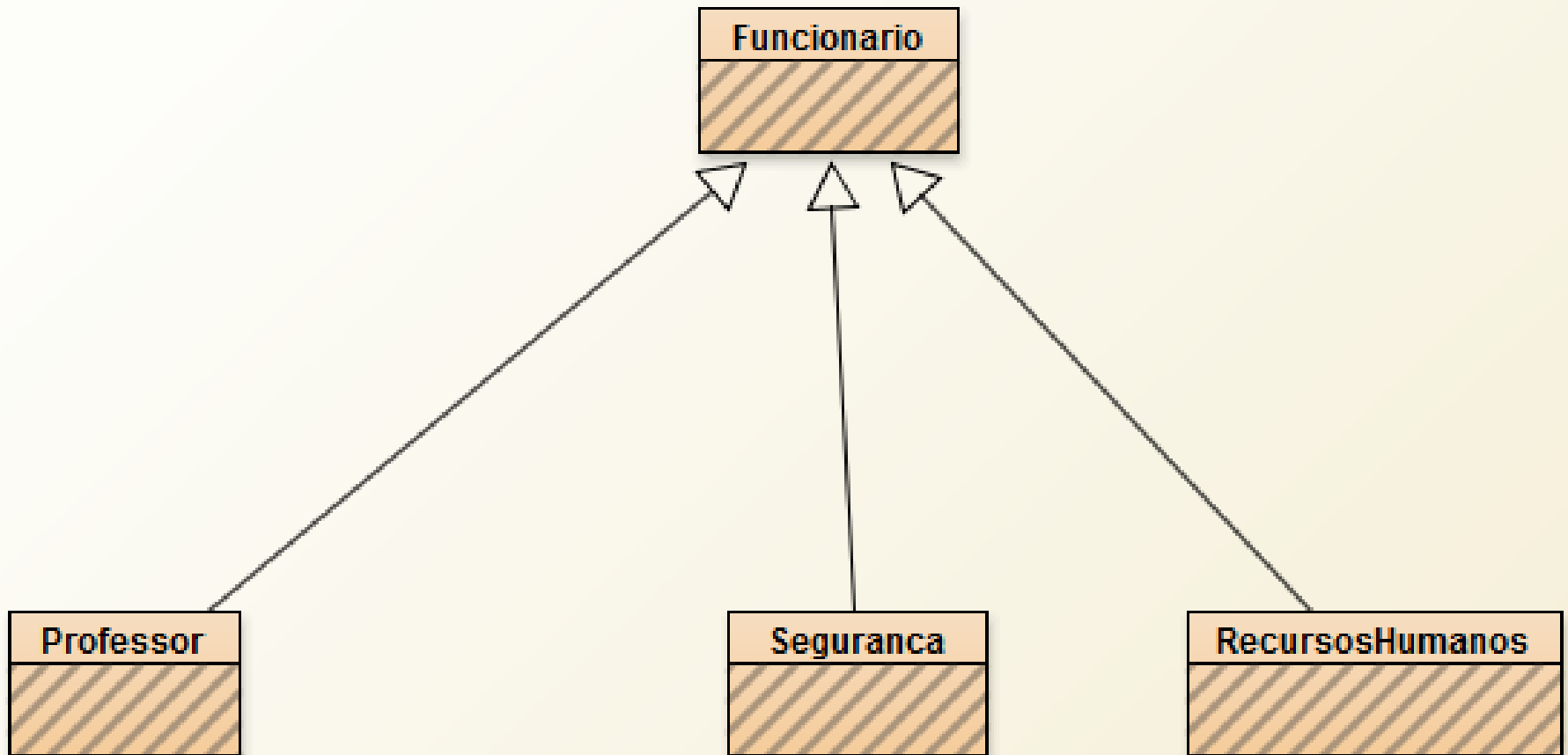
Prof. Danilo Medeiros Eler
danilo.eler@unesp.br

Herança

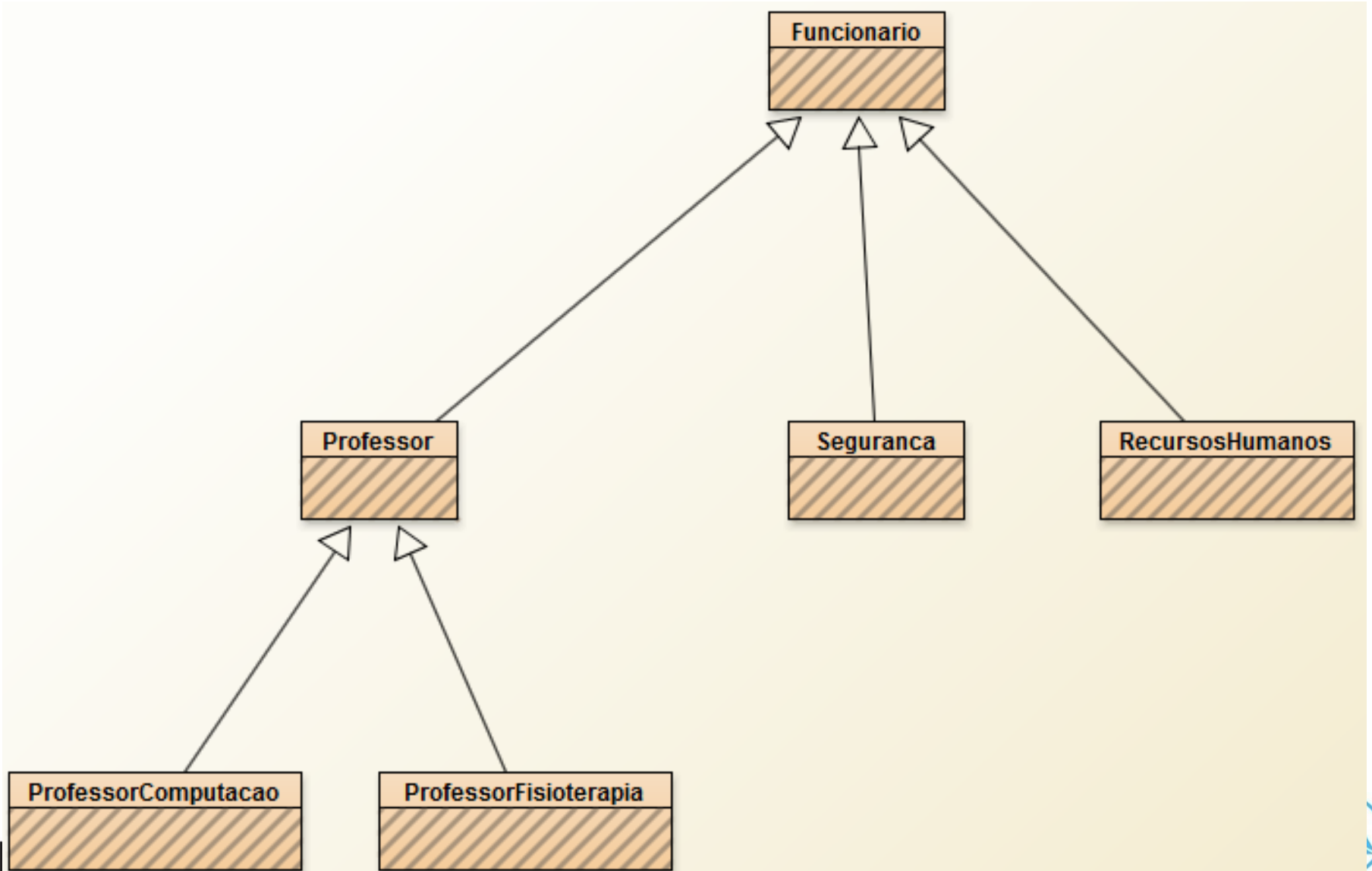
- Representação Gráfica



Herança



Herança



Herança: sintaxe java

- Em java a palavra **extends** é utilizada para indicar que uma classe irá estender outra

```
class SuperClasse{
```

```
.....
```

```
}
```

```
class SubClasse extends SuperClasse{
```

```
....
```

```
}
```

Herança: sintaxe java

```
class Funcionario{
```

```
.....
```

```
}
```

```
class Professor extends Funcionario{
```

```
.....
```

```
}
```

```
class Seguranca extends Funcionario{
```

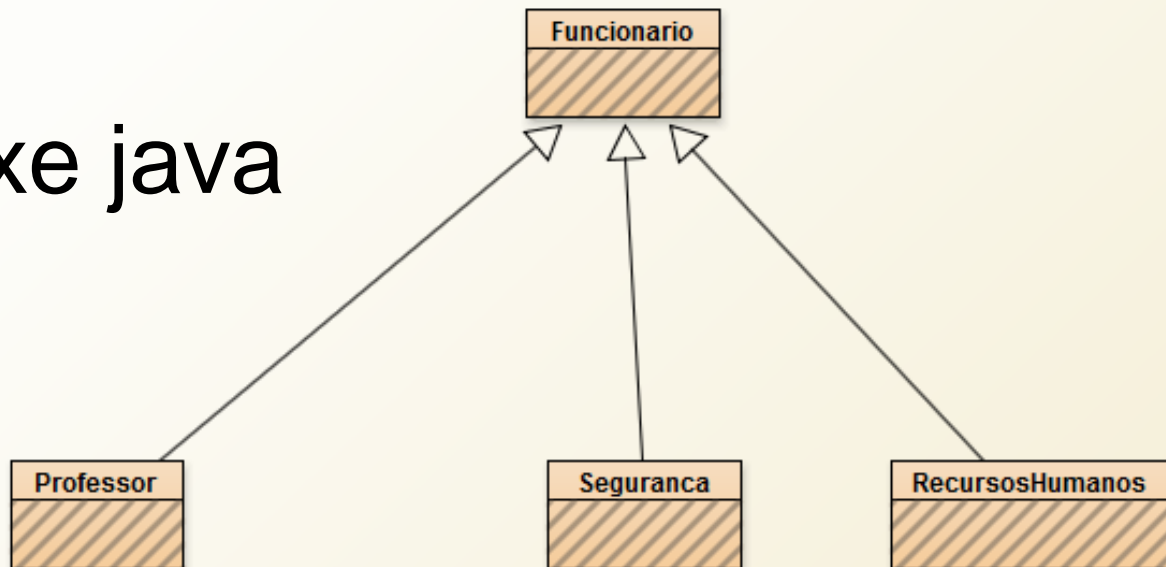
```
.....
```

```
}
```

```
class RecursosHumanos extends Funcionario{
```

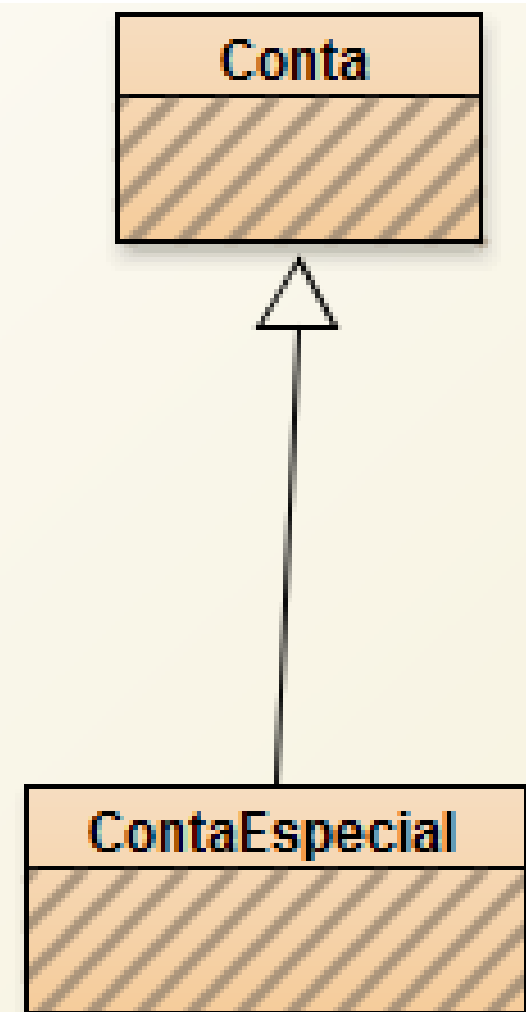
```
.....
```

```
}
```



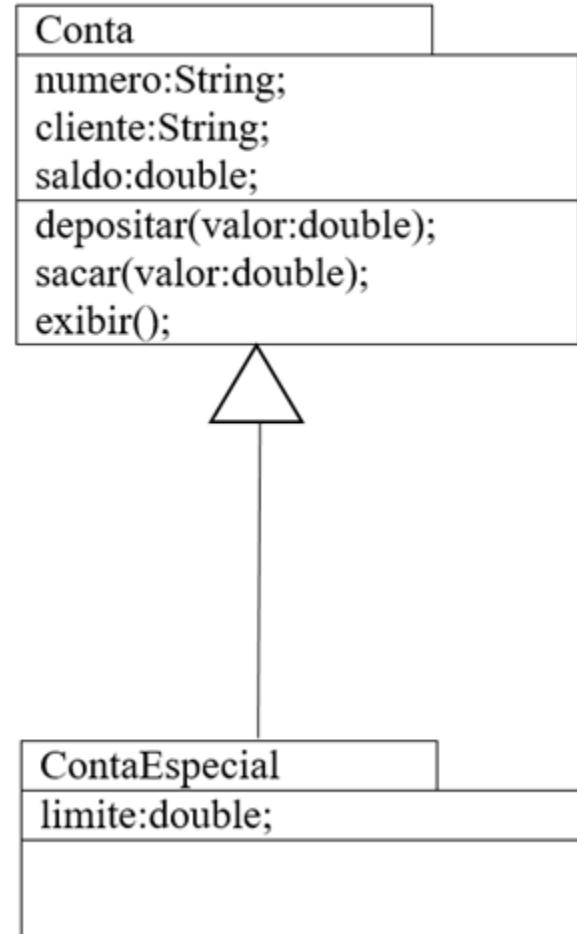
Exemplo

- Conta corrente normal
 - Permite o saque se o saldo não ficar negativo
- Conta corrente especial
 - Possui limite negativo para saque



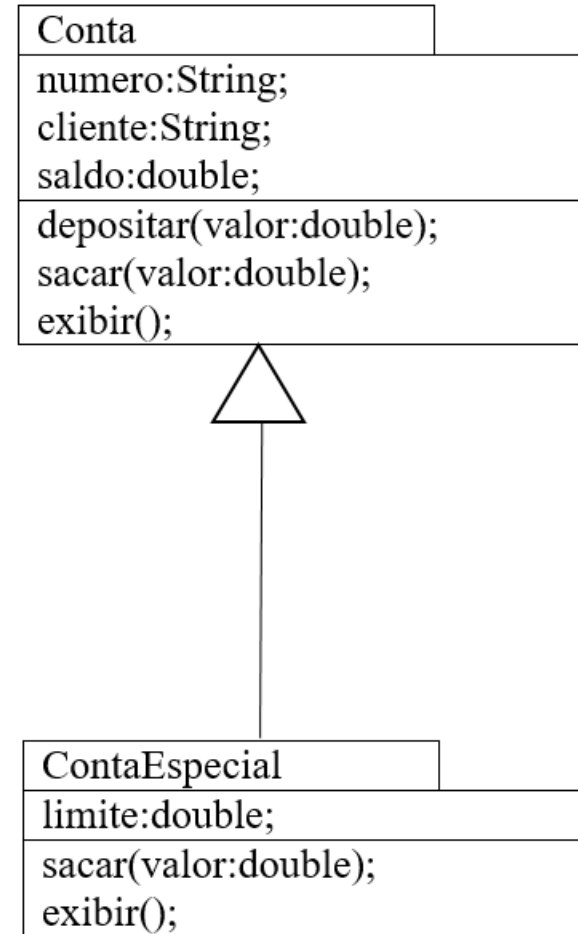
Exemplo

- Conta corrente normal
 - Permite o saque se o saldo não ficar negativo
- Conta corrente especial
 - Possui limite negativo para saque



Exemplo

- Conta corrente normal
 - Permite o saque se o saldo não ficar negativo
- Conta corrente especial
 - Possui limite negativo para saque



Exemplo – Contas

```
public class Conta {
    protected String numero;
    protected String cliente;
    protected double saldo;

    public Conta() {
        numero = "não definido";
        cliente = "não definido";
        saldo = 0;
        System.out.println("PASSEI POR AQUI");
    }

    public Conta(String numero, String cliente) {
        this.numero = numero;
        this.cliente = cliente;
        this.saldo = 0;
    }

    public void sacar(double valor) {
        if (saldo - valor >= 0) {
            saldo = saldo - valor;
        }
    }
}
```

Exemplo – Contas

```
public class ContaEspecial extends Conta {  
  
    private double limite;  
  
    public ContaEspecial() {  
        super();  
        limite = 0;  
    }  
  
    public ContaEspecial(String numero, String cliente) {  
        super(numero, cliente);  
        limite = 100;  
    }  
  
    @Override  
    public void sacar(double valor) {  
        if (saldo + limite - valor >= 0) {  
            saldo = saldo - valor;  
        }  
    }  
}
```

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("Conta Especializada");  
    Conta Especializada ce = new ContaEspecializada("123456", "Cliente 2");  
    ce.exibir();  
    ce.depositar(20);  
    ce.exibir();  
    ce.sacar(10);  
    ce.exibir();  
}
```

```
public class Conta {  
    protected String numero;  
    protected String cliente;  
    protected double saldo;  
  
    public Conta() {  
        numero = "não definido";  
        cliente = "não definido";  
        saldo = 0;  
        System.out.println("PASSEI POR AQUI");  
    }  
  
    public Conta(String numero, String cliente) {  
        this.numero = numero;  
        this.cliente = cliente;  
        this.saldo = 0;  
    }  
}
```


Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
}
```

```
public class Conta {  
    protected String numero;  
    protected String cliente;  
    protected double saldo;  
    public void exibir() {  
        System.out.println("\n=====");  
        System.out.println("Conta: "+numero);  
        System.out.println("Cliente: "+cliente);  
        System.out.println("Saldo: R$ "+saldo);  
        System.out.println("=====");  
    }  
}
```

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
}
```

```
public class Conta {  
    protected String numero;  
    protected String cliente;  
    protected double saldo;  
  
    public void depositar(double valor) {  
        saldo = saldo + valor;  
    }  
}
```

"Cliente 2");

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
}
```

```
public class Conta {  
    protected String numero;  
    protected String cliente;  
    protected double saldo;  
    public void exibir() {  
        System.out.println("\n=====");  
        System.out.println("Conta: "+numero);  
        System.out.println("Cliente: "+cliente);  
        System.out.println("Saldo: R$ "+saldo);  
        System.out.println("=====");  
    }  
}
```

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("Conta Especial ce = n");  
    ContaEspecial ce = n;  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}  
  
public class Conta {  
    protected String numero;  
    protected String cliente;  
    protected double saldo;  
    public void sacar(double valor) {  
        if (saldo - valor >= 0) {  
            saldo = saldo - valor;  
        }  
    }  
}
```

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

Exemplo – Contas

```
public class ContaEspecial extends Conta {  
  
    private double limite;  
  
    public ContaEspecial() {  
        super();  
        limite = 0;  
    }  
  
    public ContaEspecial(String numero, String cliente) {  
        super(numero, cliente);  
        limite = 100;  
    }  
}
```

```
System.out.println("CONTA ESPECIAL");
```

```
ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");
```

```
ce.exibir();
```

```
ce.depositar(50);
```

```
ce.exibir();
```

```
ce.sacar(60);
```

```
ce.exibir();
```

Exemplo – Contas

```
public class ContaEspecial extends Conta {  
  
    private double limite;  
  
    public ContaEspecial() {  
        super();  
        limite = 0;  
    }  
  
    public ContaEspecial(String numero, String cliente) {  
        super(numero, cliente);  
        limite = 100;  
    }  
}
```

```
System.out.println("CONTA ESPECIAL");  
ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
ce.exibir();  
ce.depositar(50);  
ce.exibir();  
ce.sacar(60);  
ce.exibir();
```


Exemplo – Contas

```
public class ContaEspecial extends Conta {  
  
    private double limite;  
  
    public ContaEspecial() {  
        super();  
        limite = 0;  
    }  
  
    public ContaEspecial(String numero, String cliente) {  
        super(numero, cliente);  
        limite = 100;  
    }  
}
```

```
System.out.println("CONTA ESPECIAL");  
ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
ce.exibir();  
ce.depositar(50);  
ce.exibir();  
ce.sacar(60);  
ce.exibir();
```

Exercício 02

```
public class ContaEspecial ext
```

```
private double limite;
```

```
public ContaEspecial(){  
    super();  
    limite = 0;  
}
```

```
public ContaEspecial(String numero, String cliente) {  
    super(numero, cliente);  
    limite = 100;  
}
```

```
public class Conta {  
    protected String numero;  
    protected String cliente;  
    protected double saldo;  
    public Conta(String numero, String cliente) {  
        this.numero = numero;  
        this.cliente = cliente;  
        this.saldo = 0;  
    }  
}
```

```
System.out.println("CONTA ESPECIAL");
```

```
ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");
```

```
ce.exibir();
```

```
ce.depositar(50);
```

```
ce.exibir();
```

```
ce.sacar(60);
```

```
ce.exibir();
```

Exemplo – Contas

```
public class ContaEspecial extends Conta {  
  
    private double limite;  
  
    public ContaEspecial() {  
        super();  
        limite = 0;  
    }  
  
    public ContaEspecial(String numero, String cliente) {  
        super(numero, cliente);  
        limite = 100;  
    }  
}
```

```
System.out.println("CONTA ESPECIAL");  
ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
ce.exibir();  
ce.depositar(50);  
ce.exibir();  
ce.sacar(60);  
ce.exibir();  
}
```

Exemplo – Contas

```
public class ContaEspecial extends Conta {  
  
    private double limite;  
  
    public ContaEspecial() {  
        super();  
        limite = 0;  
    }  
  
    public ContaEspecial(String numero, String cliente) {  
        super(numero, cliente);  
        limite = 100;  
    }  
}
```

```
System.out.println("CONTA ESPECIAL");  
ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
ce.exibir();  
ce.depositar(50);  
ce.exibir();  
ce.sacar(60);  
ce.exibir();
```

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

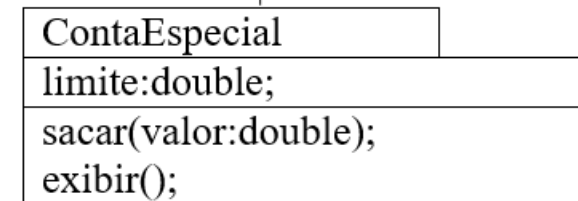
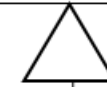
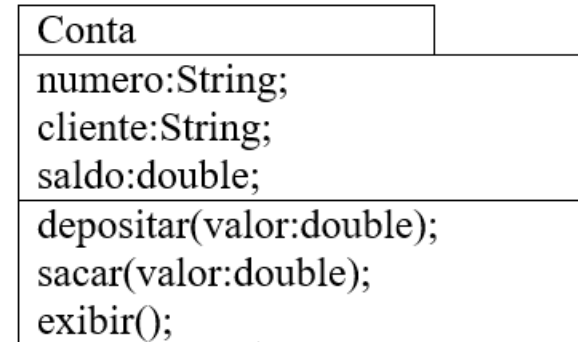
Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

Exemplo – Contas

```
public static void main(String[] arg
    Conta c = new Conta("123456", "C
    c.exibir();
    c.depositar(20);
    c.exibir();
    c.sacar(10);
    c.exibir();

    System.out.println("CONTA ESPECI
    ContaEspecial ce = new ContaEspe
    ce.exibir();
    ce.depositar(50);
    ce.exibir();
    ce.sacar(60);
    ce.exibir();
```



");

Exemplo – Contas

```
public class ContaEspecial extends Conta {
    private double limite;

    @Override
    public void exibir() {
        System.out.println("\n=====");
        System.out.println("Conta: "+numero);
        System.out.println("Cliente: "+cliente);
        System.out.println("Limite: R$ "+limite);
        System.out.println("Saldo: R$ "+saldo);
        System.out.println("=====");
    }
}

System.out.println("CONTA ESPECIAL");
ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");
ce.exibir();
ce.depositar(50);
ce.exibir();
ce.sacar(60);
ce.exibir();
```

Exemplo – Contas

Classe Conta

```
public void exibir() {  
    System.out.println("\n=====");  
    System.out.println("Conta: "+numero);  
    System.out.println("Cliente: "+cliente);  
    System.out.println("Saldo: R$ "+saldo);  
    System.out.println("=====");  
}
```

Classe Conta Especial

```
public void exibir() {  
    System.out.println("\n=====");  
    System.out.println("Conta: "+numero);  
    System.out.println("Cliente: "+cliente);  
    System.out.println("Limite: R$ "+limite);  
    System.out.println("Saldo: R$ "+saldo);  
    System.out.println("=====");  
}
```

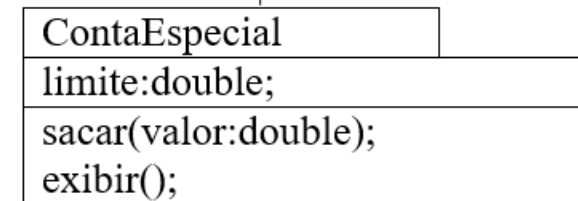
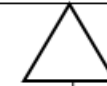
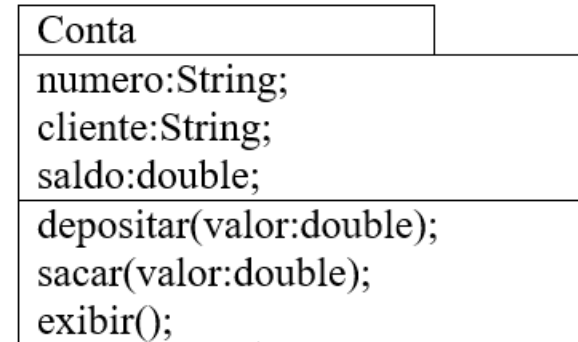
Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

Exemplo – Contas

```
public static void main(String[] arg
    Conta c = new Conta("123456", "C
    c.exibir();
    c.depositar(20);
    c.exibir();
    c.sacar(10);
    c.exibir();

    System.out.println("CONTA ESPECI
    ContaEspecial ce = new ContaEspe
    ce.exibir();
    ce.depositar(50);
    ce.exibir();
    ce.sacar(60);
    ce.exibir();
```



");

Exemplo – Contas

```
public static void  
    Conta c = new  
    c.exibir();  
    c.depositar(20  
    c.exibir();  
    c.sacar(10);  
    c.exibir();
```

```
public class Conta {  
    protected String numero;  
    protected String cliente;  
    protected double saldo;  
    public void depositar(double valor) {  
        saldo = saldo + valor;  
    }
```

```
System.out.println("CONTA ESPECIAL");  
ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
ce.exibir();  
ce.depositar(50);  
ce.exibir();  
ce.sacar(60);  
ce.exibir();
```

Exemplo – Contas

```
public class ContaEspecial extends Conta {
    private double limite;

    @Override
    public void exibir() {
        System.out.println("\n=====");
        System.out.println("Conta: "+numero);
        System.out.println("Cliente: "+cliente);
        System.out.println("Limite: R$ "+limite);
        System.out.println("Saldo: R$ "+saldo);
        System.out.println("=====");
    }
}

System.out.println("CONTA ESPECIAL");
ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");
ce.exibir();
ce.depositar(50);
ce.exibir();
ce.sacar(60);
ce.exibir();
}
```

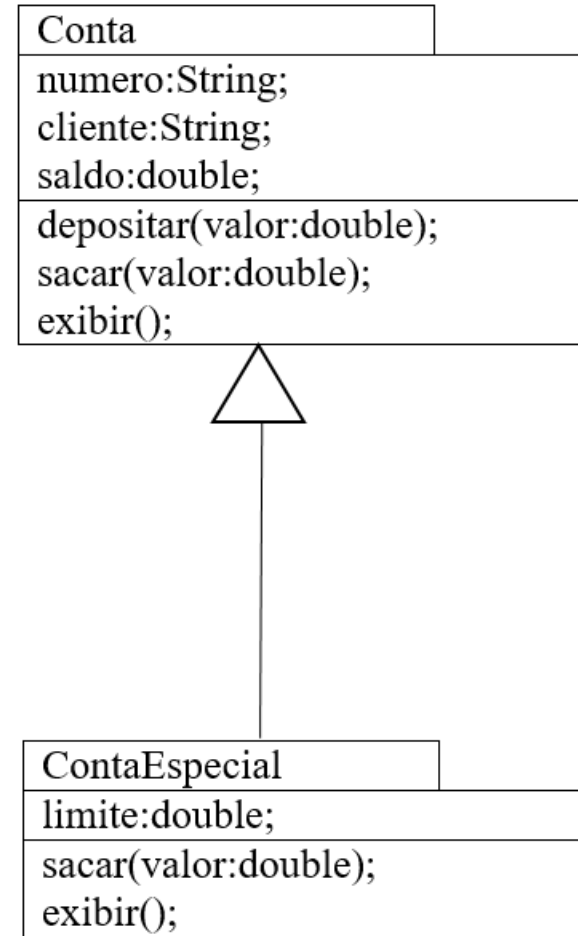
Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

Exemplo – Contas

```
public static void main(String[] arg
    Conta c = new Conta("123456", "C
    c.exibir();
    c.depositar(20);
    c.exibir();
    c.sacar(10);
    c.exibir();

    System.out.println("CONTA ESPECI
    ContaEspecial ce = new ContaEspe
    ce.exibir();
    ce.depositar(50);
    ce.exibir();
    ce.sacar(60);
    ce.exibir();
}
```



");

Exemplo – Contas

```
public class ContaEspecial extends Conta {  
  
    private double limite;  
  
    public ContaEspecial() { ...4 lines }  
  
    public ContaEspecial(String numero, String cliente) { ...4 lines }  
  
    @Override  
    public void sacar(double valor) {  
        if (saldo + limite - valor >= 0) {  
            saldo = saldo - valor;  
        }  
    }  
}
```

```
ce.exibir();  
ce.depositar(50);  
ce.exibir();  
ce.sacar(60);  
ce.exibir();
```

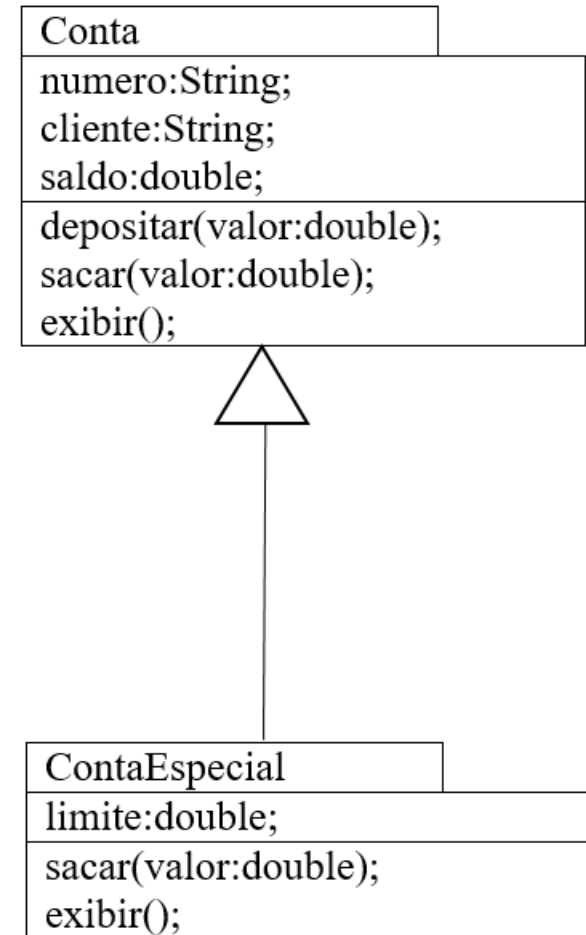
Exemplo – Contas

Classe Conta

```
public void sacar(double valor) {  
    if (saldo - valor >= 0) {  
        saldo = saldo - valor;  
    }  
}
```

Classe Conta Especial

```
public void sacar(double valor) {  
    if (saldo + limite - valor >= 0) {  
        saldo = saldo - valor;  
    }  
}
```



Exemplo – Contas

```
public class ContaEspecial extends Conta {
    private double limite;

    @Override
    public void exibir() {
        System.out.println("\n=====");
        System.out.println("Conta: "+numero);
        System.out.println("Cliente: "+cliente);
        System.out.println("Limite: R$ "+limite);
        System.out.println("Saldo: R$ "+saldo);
        System.out.println("=====");
    }
}

System.out.println("CONTA ESPECIAL");
ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");
ce.exibir();
ce.depositar(50);
ce.exibir();
ce.sacar(60);
ce.exibir();
}
```

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

c → null

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

c → null

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

c → null

Conta
“”
“”
0

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

c → null

Conta "123456" "Cliente 1" 0

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

c

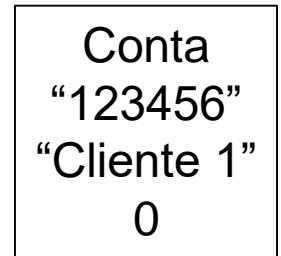
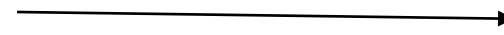
```
graph LR; c --> Conta["Conta  
"123456"  
"Cliente 1"  
0"]
```

Conta
"123456"
"Cliente 1"
0

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

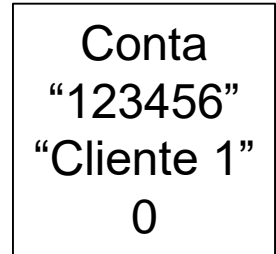
c



Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

c



Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

c



Conta
"123456"
"Cliente 1"
20

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

c

```
graph LR; c --> Conta["Conta  
"123456"  
"Cliente 1"  
20"]
```

Conta
"123456"
"Cliente 1"
20

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

c

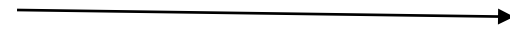
```
graph LR; c --> Conta["Conta  
"123456"  
"Cliente 1"  
20"]
```

Conta
"123456"
"Cliente 1"
20

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

c



Conta
"123456"
"Cliente 1"
10

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

c

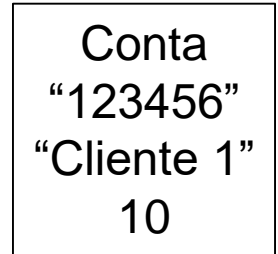
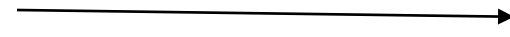


Conta
"123456"
"Cliente 1"
10

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

c



ce → null

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

c

Conta
"123456"
"Cliente 1"
10

ce → null

ContaEspecial

""

""

0

0

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

c

Conta
"123456"
"Cliente 1"
10

ce → null

ContaEspecial
"21342"
"Cliente 2"
0
100

Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();
```

c

```
Conta  
"123456"  
"Cliente 1"  
10
```

```
System.out.println("CONTA ESPECIAL");
```

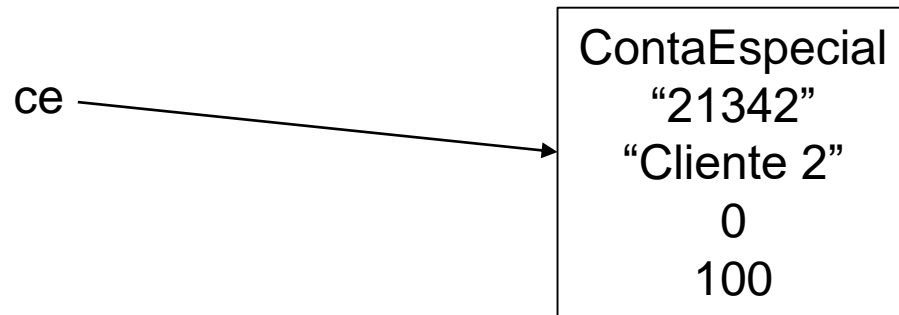
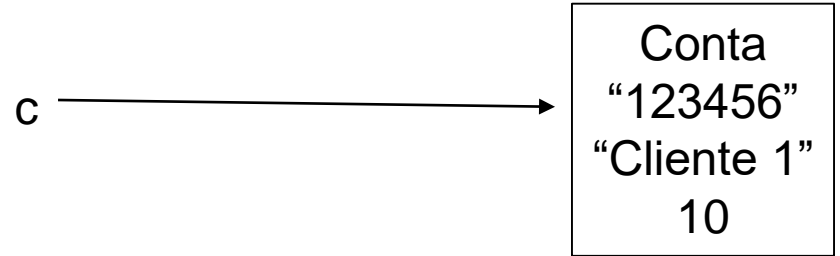
```
ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
ce.exibir();  
ce.depositar(50);  
ce.exibir();  
ce.sacar(60);  
ce.exibir();
```

ce

```
ContaEspecial  
"21342"  
"Cliente 2"  
0  
100
```

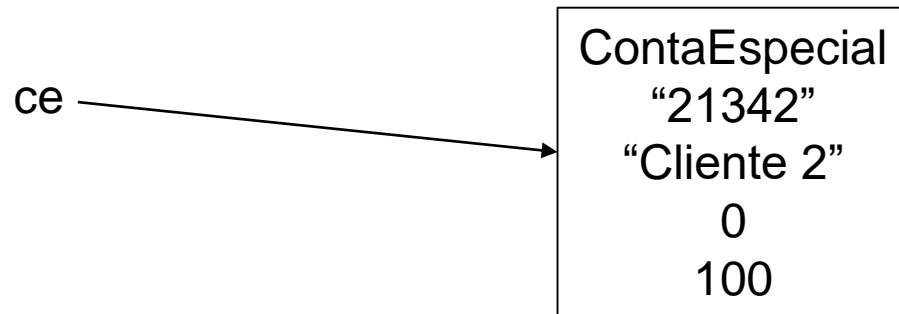
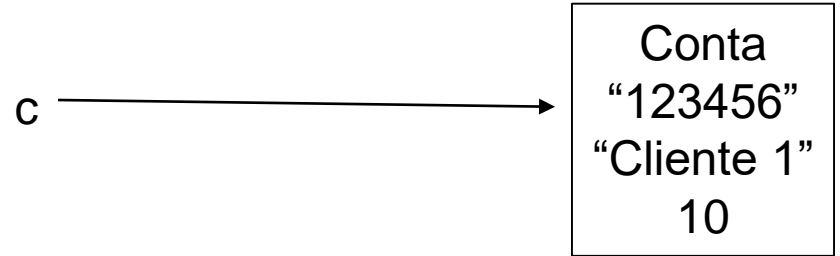
Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```



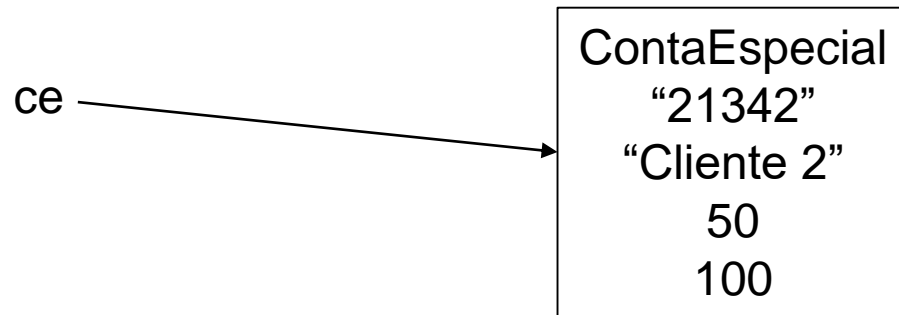
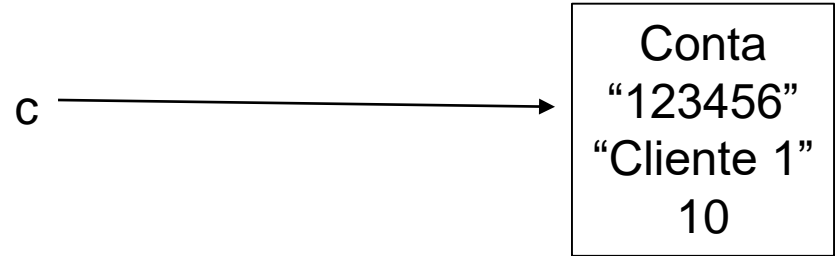
Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```



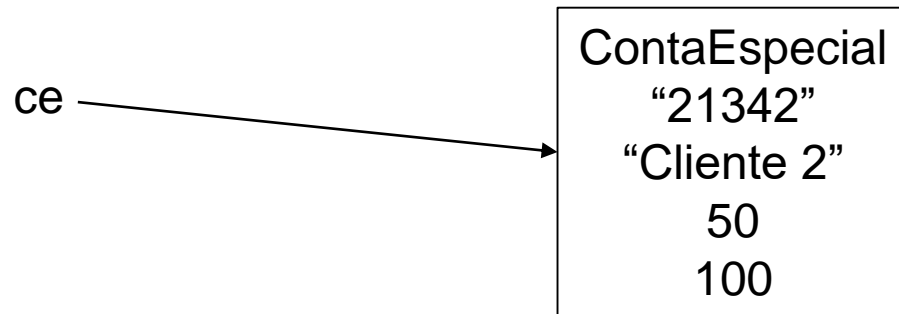
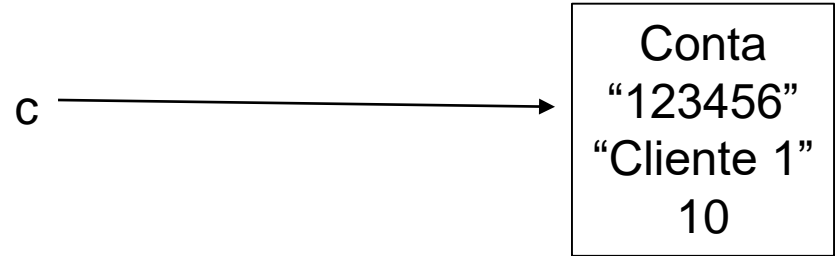
Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```



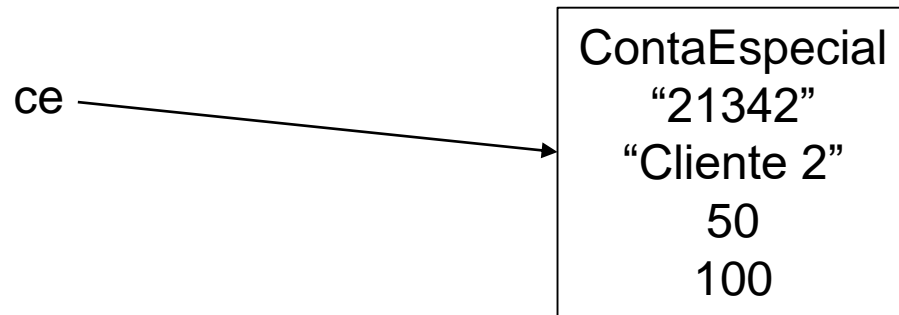
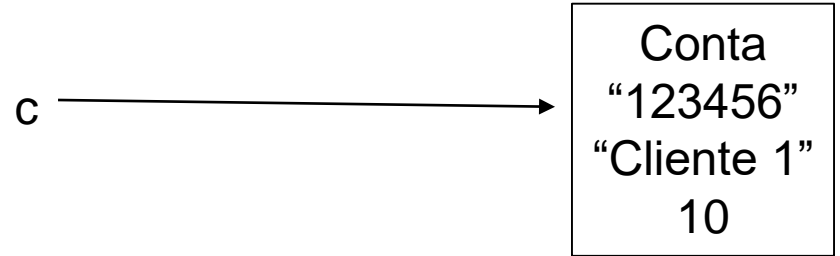
Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```



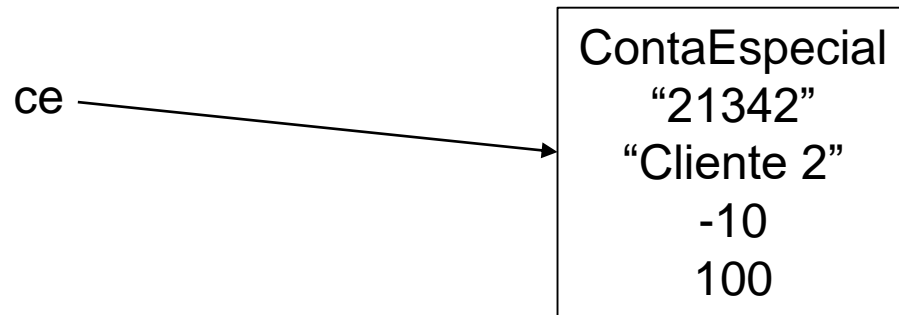
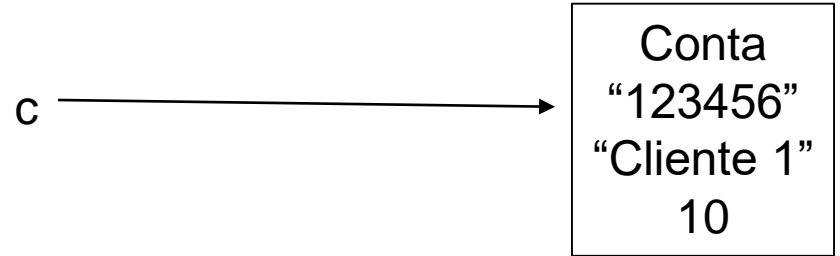
Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```



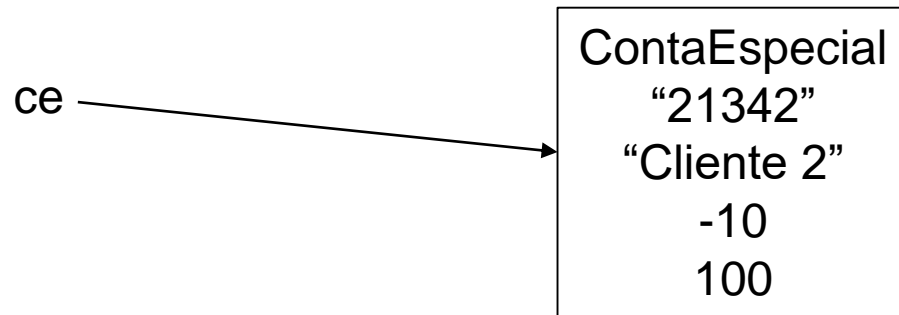
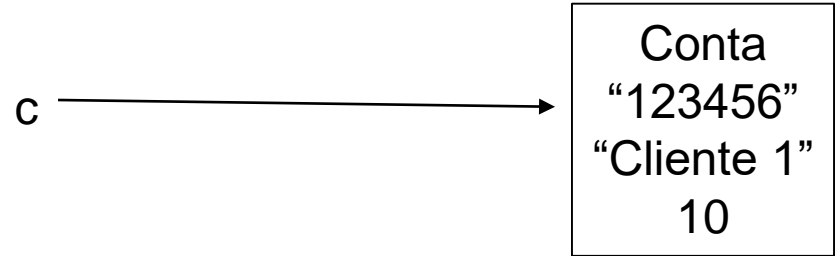
Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```



Exemplo – Contas

```
public static void main(String[] args) {  
    Conta c = new Conta("123456", "Cliente 1");  
    c.exibir();  
    c.depositar(20);  
    c.exibir();  
    c.sacar(10);  
    c.exibir();  
  
    System.out.println("CONTA ESPECIAL");  
    ContaEspecial ce = new ContaEspecial("21342", "Cliente 2");  
    ce.exibir();  
    ce.depositar(50);  
    ce.exibir();  
    ce.sacar(60);  
    ce.exibir();  
}
```

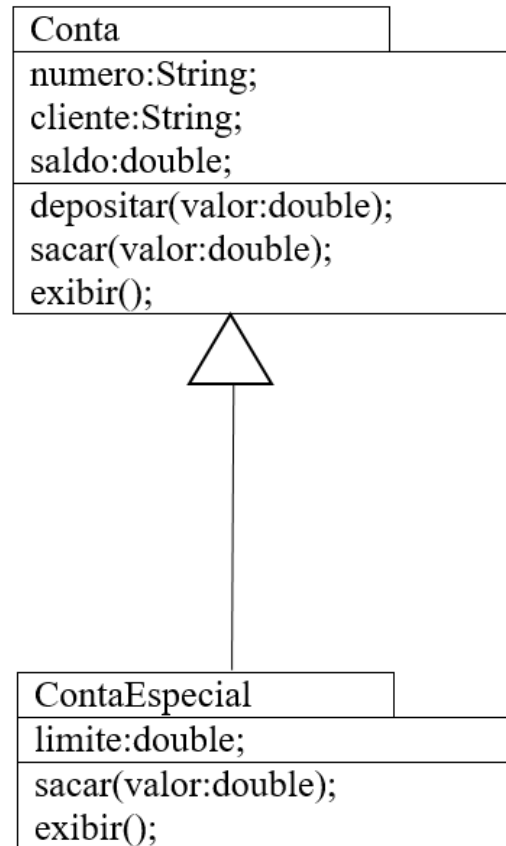


Exemplo – Contas

```
Conta c1 = new ContaEspecial("21342", "Cliente 2");  
c1.exibir();  
c1.depositar(50);  
c1.exibir();  
c1.sacar(60);  
c1.exibir();
```

Exemplo – Contas

```
Conta c1 = new ContaEspecial("21342", "Cliente 2");  
c1.exibir();  
c1.depositar(50);  
c1.exibir();  
c1.sacar(60);  
c1.exibir();
```



Exemplo – Contas

```
Conta c1 = new ContaEspecial("21342", "Cliente 2");  
c1.exibir();  
c1.depositar(50);  
c1.exibir();  
c1.sacar(60);  
c1.exibir();
```

c1 → null

Exemplo – Contas

```
Conta c1 = new ContaEspecial("21342", "Cliente 2");  
c1.exibir();  
c1.depositar(50);  
c1.exibir();  
c1.sacar(60);  
c1.exibir();
```

c1 → null

ContaEspecial
“”
“”
0
0

Exemplo – Contas

```
Conta c1 = new ContaEspecial("21342", "Cliente 2");  
c1.exibir();  
c1.depositar(50);  
c1.exibir();  
c1.sacar(60);  
c1.exibir();
```

c1 → null

```
ContaEspecial  
  "21342"  
  "Cliente 2"  
    0  
   100
```

Exemplo – Contas

```
Conta c1 = new ContaEspecial("21342", "Cliente 2");
```

```
c1.exibir();
```

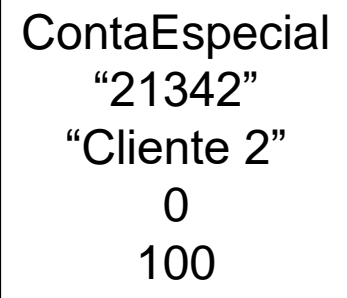
```
c1.depositar(50);
```

```
c1.exibir();
```

```
c1.sacar(60);
```

```
c1.exibir();
```

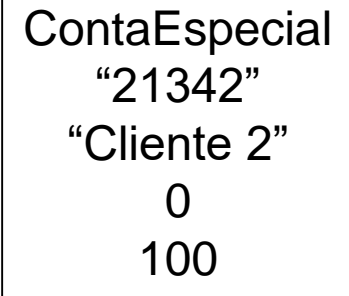
c1



Exemplo – Contas

```
Conta c1 = new ContaEspecial("21342", "Cliente 2");  
c1.exibir();  
c1.depositar(50);  
c1.exibir();  
c1.sacar(60);  
c1.exibir();
```

c1



Exemplo – Contas

```
Conta c1 = new ContaEspecial("21342", "Cliente 2");  
c1.exibir();  
c1.depositar(50);  
c1.exibir();  
c1.sacar(60);  
c1.exibir();
```

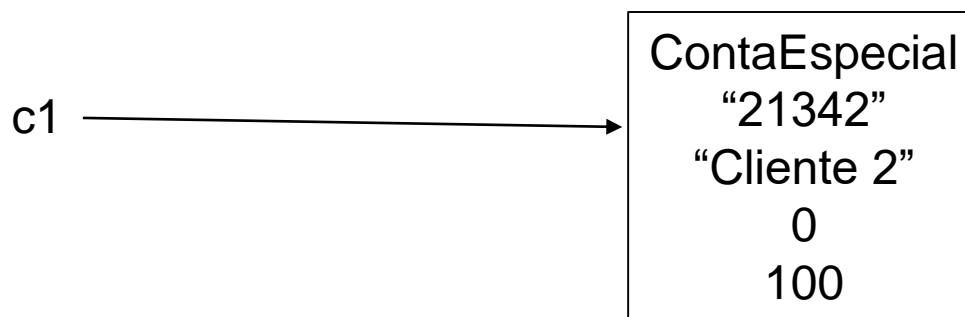
c1

```
ContaEspecial  
"21342"  
"Cliente 2"  
0  
100
```

```
public class ContaEspecial extends Conta {  
    private double limite;  
  
    @Override  
    public void exibir() {  
        System.out.println("\n=====");  
        System.out.println("Conta: "+numero);  
        System.out.println("Cliente: "+cliente);  
        System.out.println("Limite: R$ "+limite);  
        System.out.println("Saldo: R$ "+saldo);  
        System.out.println("=====");  
    }  
}
```

Exemplo – Contas

```
Conta c1 = new ContaEspecial("21342", "Cliente 2");  
c1.exibir();  
c1.depositar(50);  
c1.exibir();  
c1.sacar(60);  
c1.exibir();
```



Exemplo – Contas

```
Conta c1 = new ContaEspecial("21342", "Cliente 2");  
c1.exibir();  
c1.depositar(50);  
c1.exibir();  
c1.sacar(60);  
c1.exibir();
```

c1



```
ContaEspecial  
"21342"  
"Cliente 2"  
50  
100
```

```
public class Conta {  
    protected String numero;  
    protected String cliente;  
    protected double saldo;  
  
    public void depositar(double valor) {  
        saldo = saldo + valor;  
    }  
}
```

Exemplo – Contas

```
Conta c1 = new ContaEspecial("21342","Cliente 2");  
c1.exibir();  
c1.depositar(50);  
c1.exibir();  
c1.sacar(60);  
c1.exibir();
```

c1

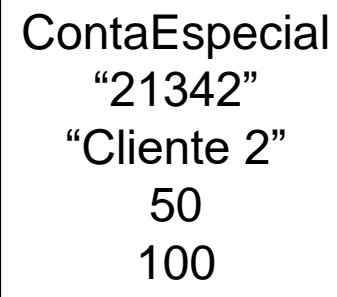
ContaEspecial
"21342"
"Cliente 2"
50
100

```
public class ContaEspecial extends Conta {  
    private double limite;  
  
    @Override  
    public void exibir() {  
        System.out.println("\n=====");  
        System.out.println("Conta: "+numero);  
        System.out.println("Cliente: "+cliente);  
        System.out.println("Limite: R$ "+limite);  
        System.out.println("Saldo: R$ "+saldo);  
        System.out.println("=====");  
    }  
}
```

Exemplo – Contas

```
Conta c1 = new ContaEspecial("21342", "Cliente 2");  
c1.exibir();  
c1.depositar(50);  
c1.exibir();  
c1.sacar(60);  
c1.exibir();
```

c1



Exemplo – Contas

```
Conta c1 = new ContaEspecial("21342", "Cliente 2");  
c1.exibir();  
c1.depositar(50);  
c1.exibir();  
c1.sacar(60);  
c1.exibir();
```

c1

```
ContaEspecial  
"21342"  
"Cliente 2"  
-10  
100
```

```
public class ContaEspecial extends Conta {  
    private double limite;  
    @Override  
    public void sacar(double valor) {  
        if (saldo + limite - valor >= 0) {  
            saldo = saldo - valor;  
        }  
    }  
}
```

Exemplo – Contas

```
Conta c1 = new ContaEspecial("21342", "Cliente 2");  
c1.exibir();  
c1.depositar(50);  
c1.exibir();  
c1.sacar(60);  
c1.exibir();
```

c1

ContaEspecial
"21342"
"Cliente 2"
-10
100

```
public class ContaEspecial extends Conta {  
    private double limite;  
  
    @Override  
    public void exibir() {  
        System.out.println("\n=====");  
        System.out.println("Conta: "+numero);  
        System.out.println("Cliente: "+cliente);  
        System.out.println("Limite: R$ "+limite);  
        System.out.println("Saldo: R$ "+saldo);  
        System.out.println("=====");  
    }  
}
```


Exemplo – Contas

```
Conta contas[] = new Conta[10];  
contas[0] = new Conta("123", "Cliente 1");  
contas[1] = new ContaEspecial("456", "Cliente 2");  
contas[2] = new Conta("678", "Cliente 3");
```

Exemplo – Contas

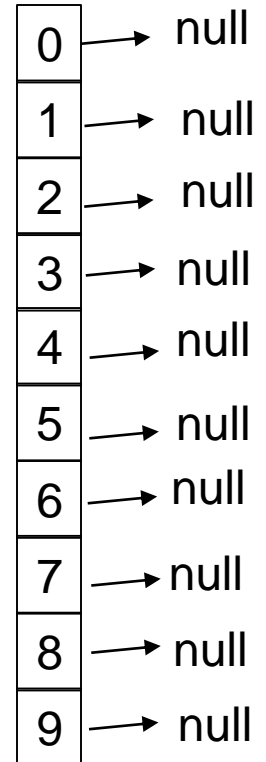
```
Conta contas[] = new Conta[10];  
contas[0] = new Conta("123", "Cliente 1");  
contas[1] = new ContaEspecial("456", "Cliente 2");  
contas[2] = new Conta("678", "Cliente 3");
```

contas → null

Exemplo – Contas

```
Conta contas[] = new Conta[10];  
contas[0] = new Conta("123", "Cliente 1");  
contas[1] = new ContaEspecial("456", "Cliente 2");  
contas[2] = new Conta("678", "Cliente 3");
```

contas → null



Exemplo – Contas

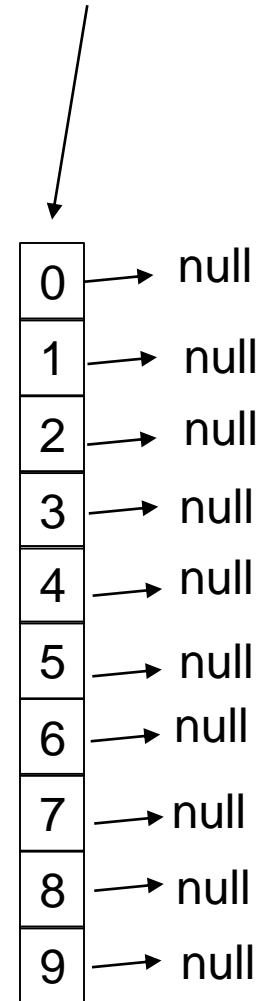
```
Conta contas[] = new Conta[10];
```

```
contas[0] = new Conta("123", "Cliente 1");
```

```
contas[1] = new ContaEspecial("456", "Cliente 2");
```

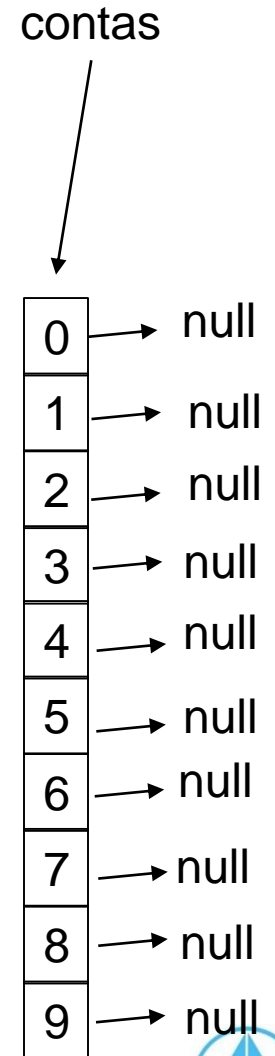
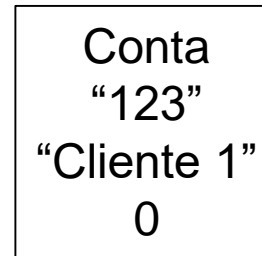
```
contas[2] = new Conta("678", "Cliente 3");
```

contas



Exemplo – Contas

```
Conta contas[] = new Conta[10];  
contas[0] = new Conta("123", "Cliente 1");  
contas[1] = new ContaEspecial("456", "Cliente 2");  
contas[2] = new Conta("678", "Cliente 3");
```



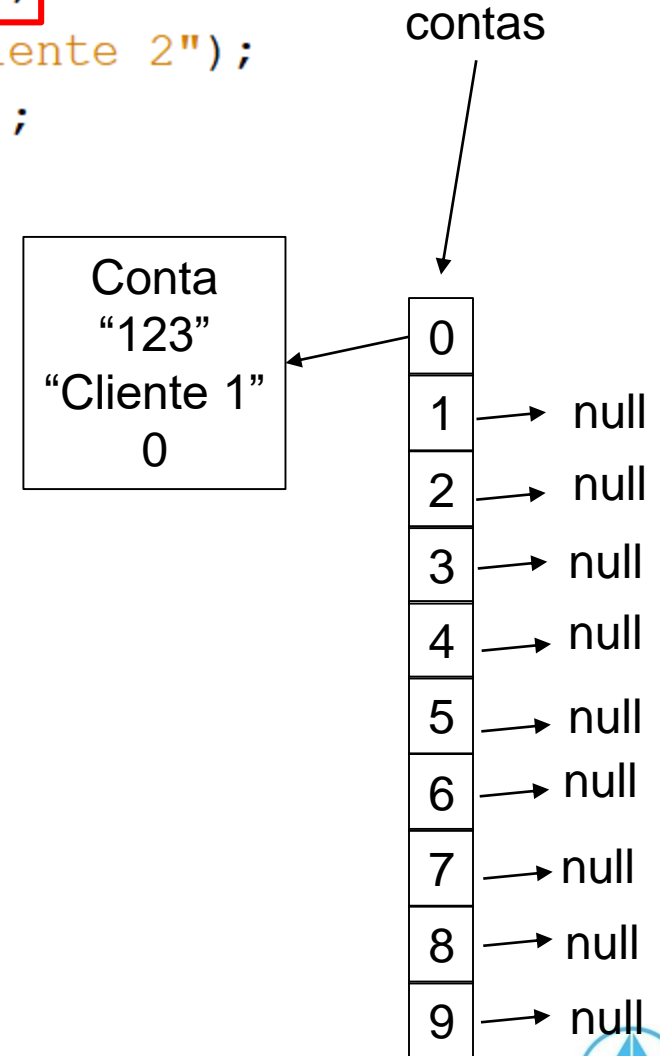
Exemplo – Contas

```
Conta contas[] = new Conta[10];
```

```
contas[0] = new Conta("123", "Cliente 1");
```

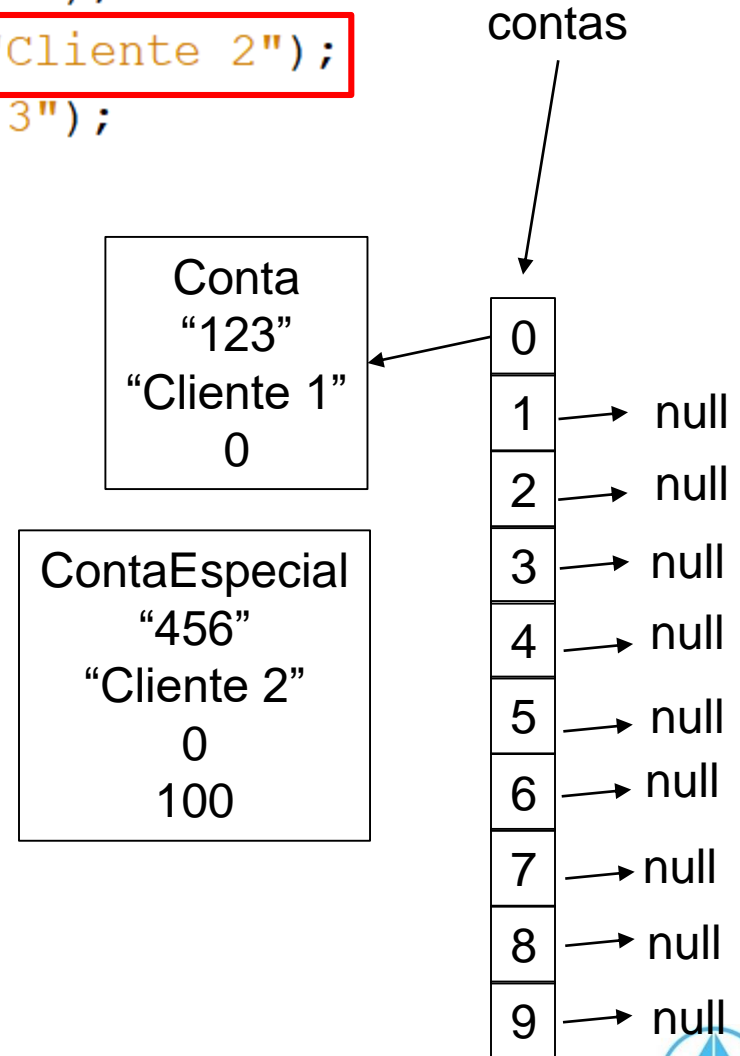
```
contas[1] = new ContaEspecial("456", "Cliente 2");
```

```
contas[2] = new Conta("678", "Cliente 3");
```



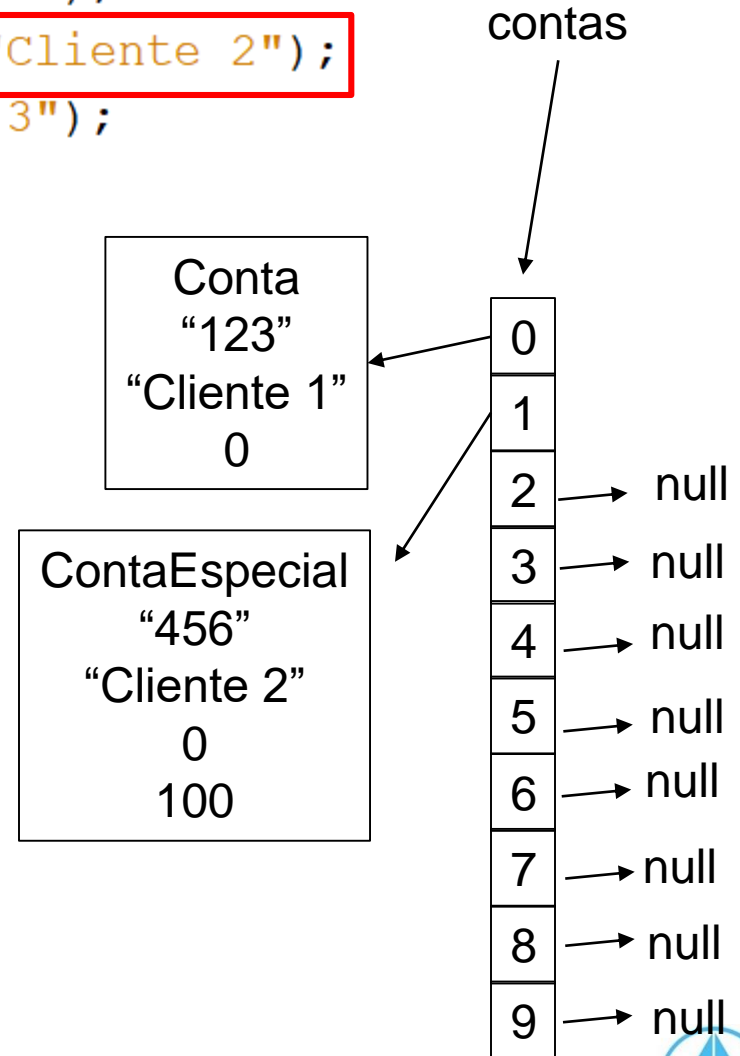
Exemplo – Contas

```
Conta contas[] = new Conta[10];  
contas[0] = new Conta("123", "Cliente 1");  
contas[1] = new ContaEspecial("456", "Cliente 2");  
contas[2] = new Conta("678", "Cliente 3");
```



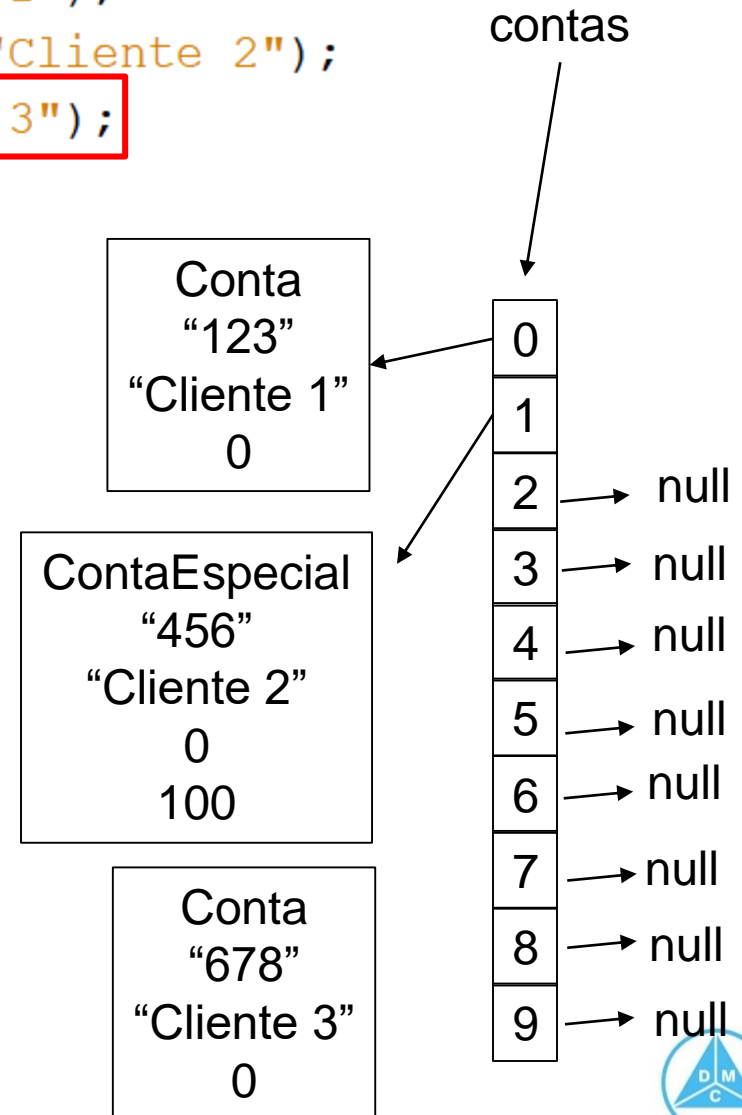
Exemplo – Contas

```
Conta contas[] = new Conta[10];  
contas[0] = new Conta("123", "Cliente 1");  
contas[1] = new ContaEspecial("456", "Cliente 2");  
contas[2] = new Conta("678", "Cliente 3");
```



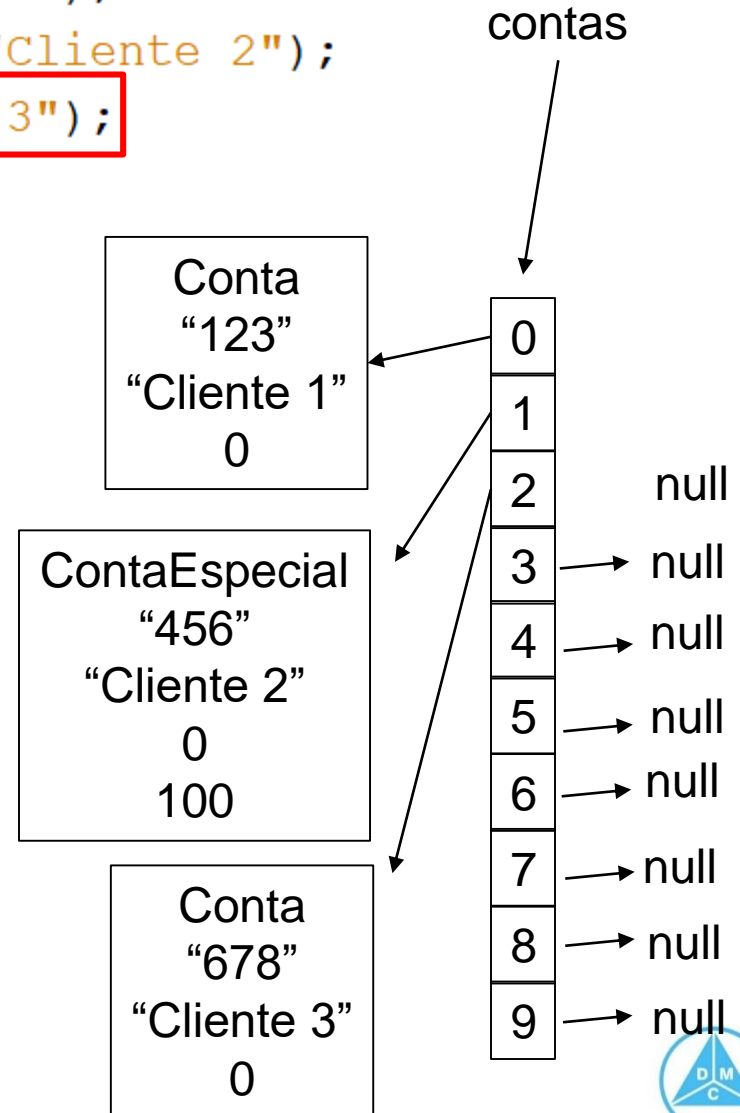
Exemplo – Contas

```
Conta contas[] = new Conta[10];  
contas[0] = new Conta("123", "Cliente 1");  
contas[1] = new ContaEspecial("456", "Cliente 2");  
contas[2] = new Conta("678", "Cliente 3");
```



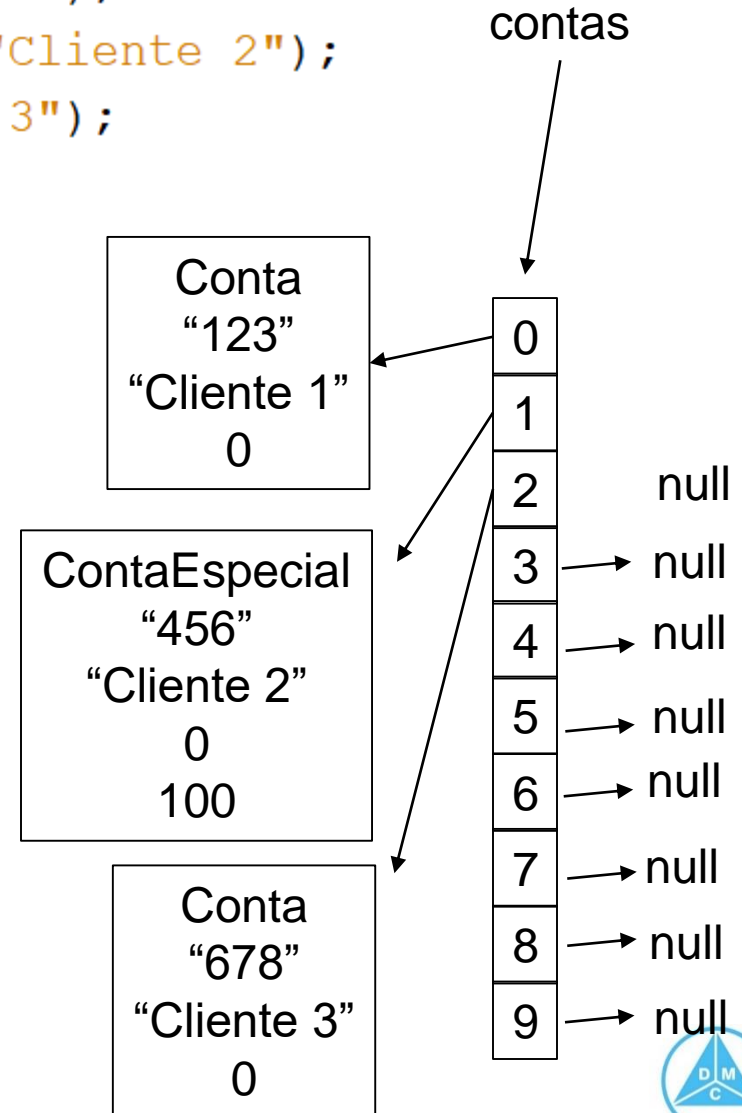
Exemplo – Contas

```
Conta contas[] = new Conta[10];  
contas[0] = new Conta("123", "Cliente 1");  
contas[1] = new ContaEspecial("456", "Cliente 2");  
contas[2] = new Conta("678", "Cliente 3");
```



Exemplo – Contas

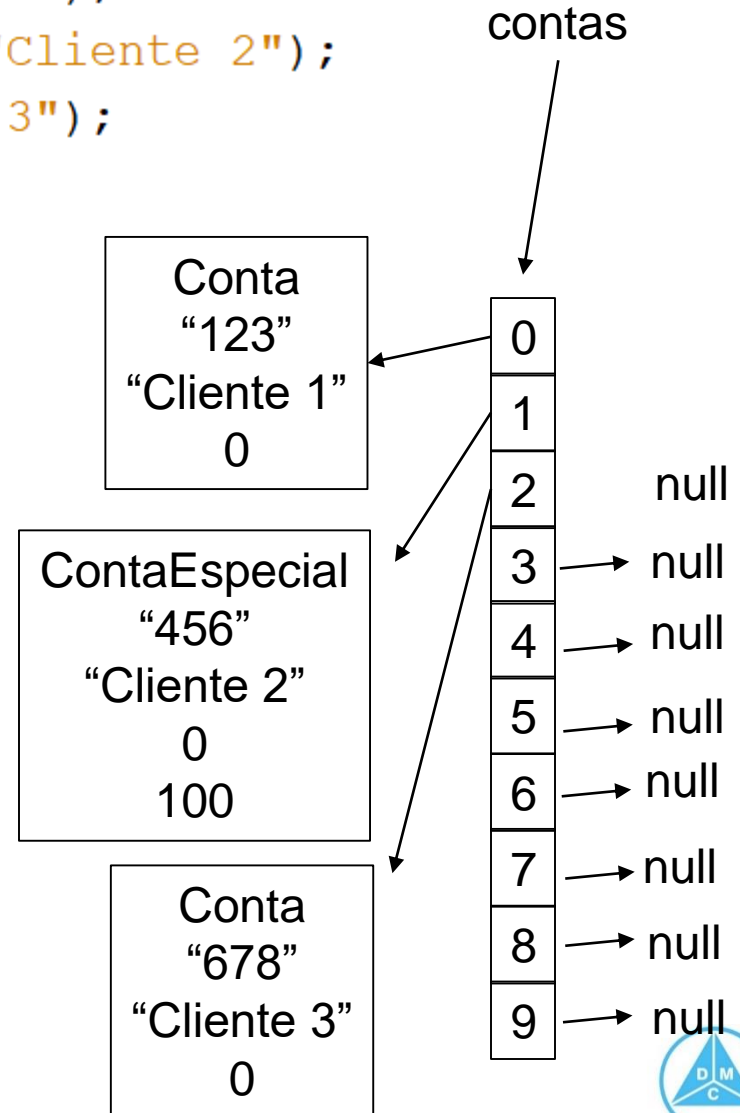
```
Conta contas[] = new Conta[10];  
contas[0] = new Conta("123", "Cliente 1");  
contas[1] = new ContaEspecial("456", "Cliente 2");  
contas[2] = new Conta("678", "Cliente 3");
```



Exemplo – Contas

```
Conta contas[] = new Conta[10];  
contas[0] = new Conta("123", "Cliente 1");  
contas[1] = new ContaEspecial("456", "Cliente 2");  
contas[2] = new Conta("678", "Cliente 3");  
  
for(int i=0; i<3; i++){  
    contas[i].depositar(i*10);  
}
```

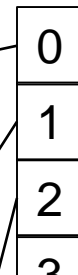
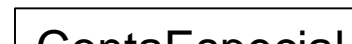
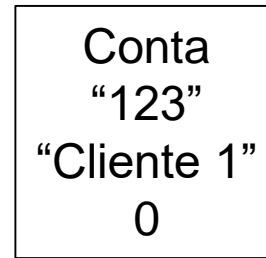
i=0



Exemplo – Contas

```
Conta contas[] = new Conta[10];  
contas[0] = new Conta("123", "Cliente 1");  
contas[1] = new ContaEspecial("456", "Cliente 2");  
contas[2] = new Conta("678", "Cliente 3");  
  
for(int i=0; i<3; i++){  
    contas[i].depositar(i*10);  
}
```

contas



null
null
null
null
null
null
null

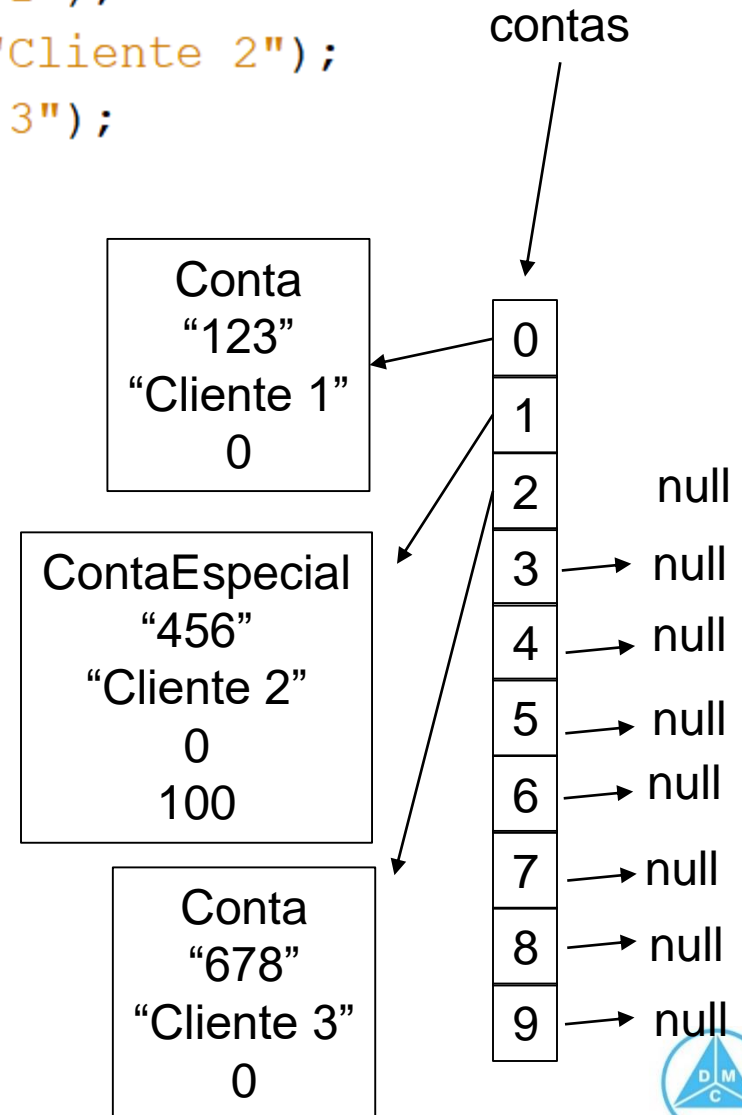
```
public class Conta {  
    protected String numero;  
    protected String cliente;  
    protected double saldo;  
  
    public void depositar(double valor) {  
        saldo = saldo + valor;  
    }  
}
```

i=0

Exemplo – Contas

```
Conta contas[] = new Conta[10];  
contas[0] = new Conta("123", "Cliente 1");  
contas[1] = new ContaEspecial("456", "Cliente 2");  
contas[2] = new Conta("678", "Cliente 3");  
  
for(int i=0; i<3; i++){  
    contas[i].depositar(i*10);  
}
```

i=1



Exemplo - Contas

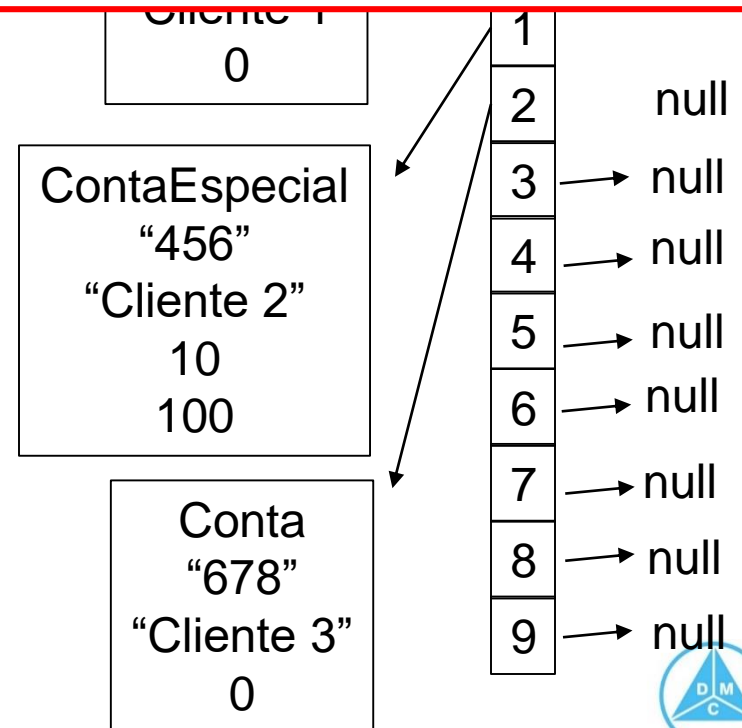
```
Conta contas[] = new Conta(3);
contas[0] = new Conta("123", "Cliente 1", 0);
contas[1] = new ContaEspecial("456", "Cliente 2", 10, 100);
contas[2] = new Conta("678", "Cliente 3", 0);

for(int i=0; i<3; i++){
    contas[i].depositar(10);
}
```

```
public class Conta {
    protected String numero;
    protected String cliente;
    protected double saldo;

    public void depositar(double valor) {
        saldo = saldo + valor;
    }
}
```

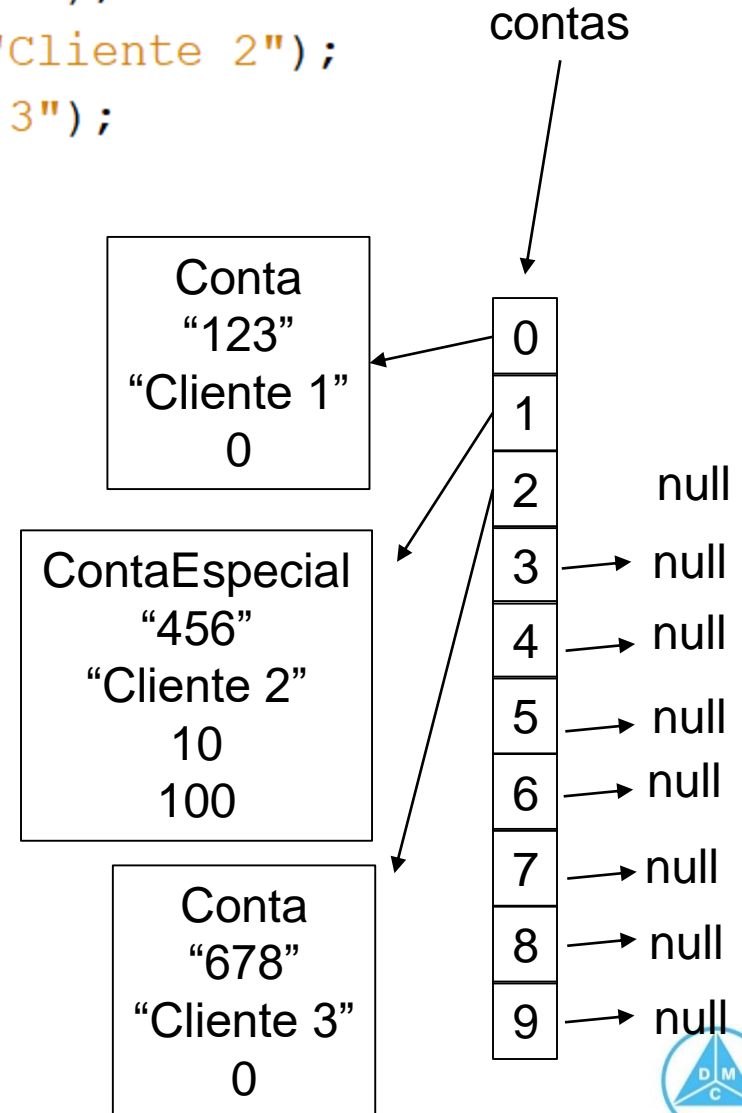
i=1



Exemplo – Contas

```
Conta contas[] = new Conta[10];  
contas[0] = new Conta("123", "Cliente 1");  
contas[1] = new ContaEspecial("456", "Cliente 2");  
contas[2] = new Conta("678", "Cliente 3");  
  
for(int i=0; i<3; i++){  
    contas[i].depositar(i*10);  
}
```

i=2



Exemplo - Contas

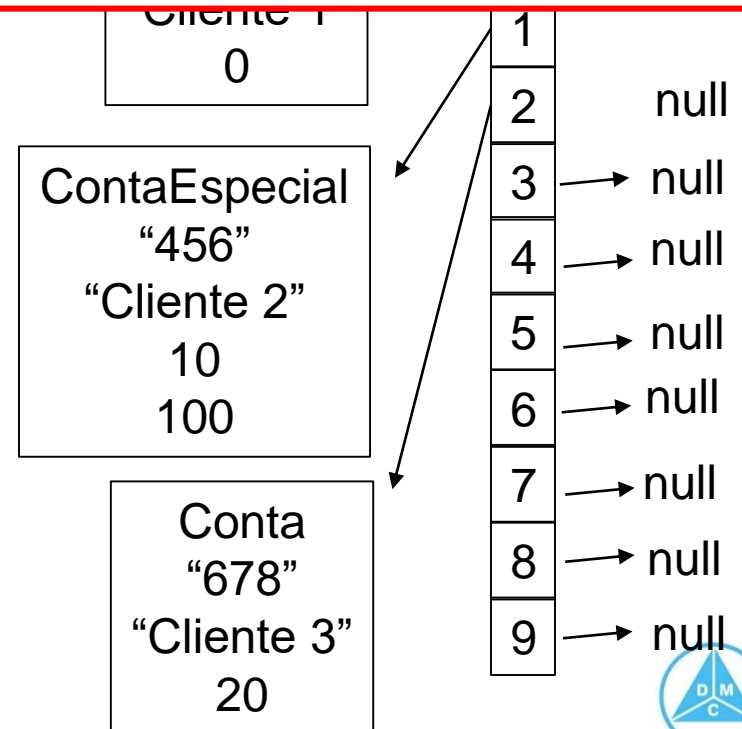
```
Conta contas[] = new Conta(3);
contas[0] = new Conta("123", "Cliente 1", 10);
contas[1] = new ContaEspecial("456", "Cliente 2", 10, 100);
contas[2] = new Conta("678", "Cliente 3", 20);

for(int i=0; i<3; i++){
    contas[i].depositar(10);
}
```

```
public class Conta {
    protected String numero;
    protected String cliente;
    protected double saldo;

    public void depositar(double valor) {
        saldo = saldo + valor;
    }
}
```

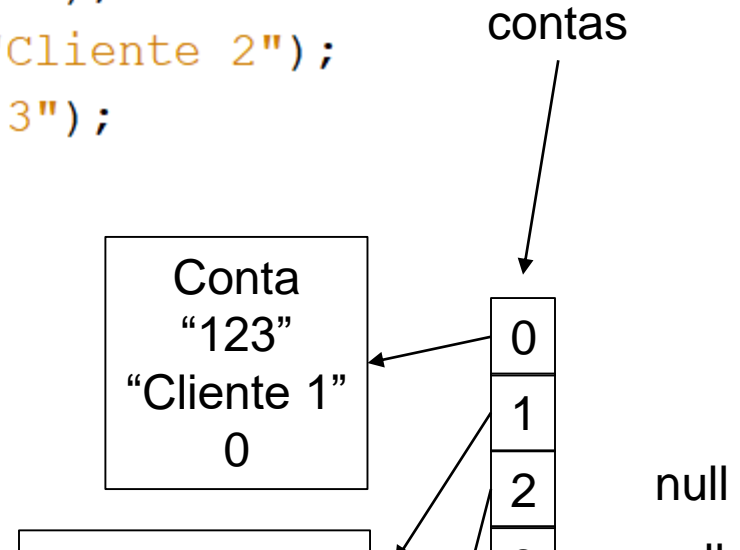
i=2



Exemplo – Contas

```
Conta contas[] = new Conta[10];
contas[0] = new Conta("123", "Cliente 1");
contas[1] = new ContaEspecial("456", "Cliente 2");
contas[2] = new Conta("678", "Cliente 3");

for(int i=0; i<3; i++){
    contas[i].exibir();
}
```



i=0

```
public class Conta {
    public void exibir(){
        System.out.println("\n=====");
        System.out.println("Conta: "+numero);
        System.out.println("Cliente: "+cliente);
        System.out.println("Saldo: R$ "+saldo);
        System.out.println("=====");
    }
}
```

Ex

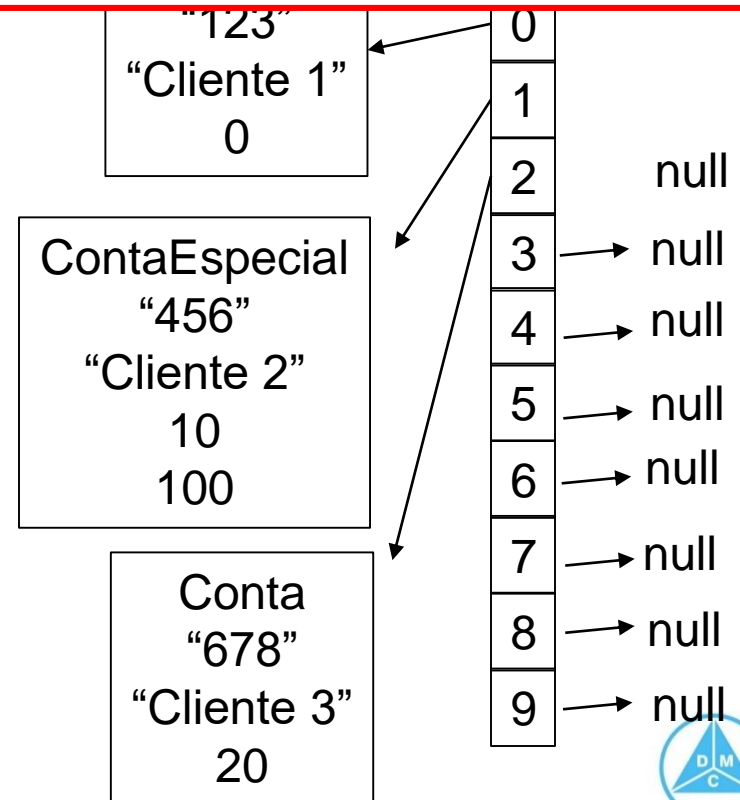
```
Conta contas[] = new Conta[3];
contas[0] = new Conta("123", "Cliente 1", 0);
contas[1] = new ContaEspecial("456", "Cliente 2", 10, 100);
contas[2] = new Conta("678", "Cliente 3", 20);

for(int i=0; i<3; i++)
    contas[i].exibir();
}
```

```
public class ContaEspecial extends Conta {
    private double limite;

    @Override
    public void exibir(){
        System.out.println("\n=====");
        System.out.println("Conta: "+numero);
        System.out.println("Cliente: "+cliente);
        System.out.println("Limite: R$ "+limite);
        System.out.println("Saldo: R$ "+saldo);
        System.out.println("=====");
    }
}
```

i=1



```

Conta contas[] =
contas[0] = new
contas[1] = new
contas[2] = new

for(int i=0; i<5; i++){
    contas[i].exibir();
}

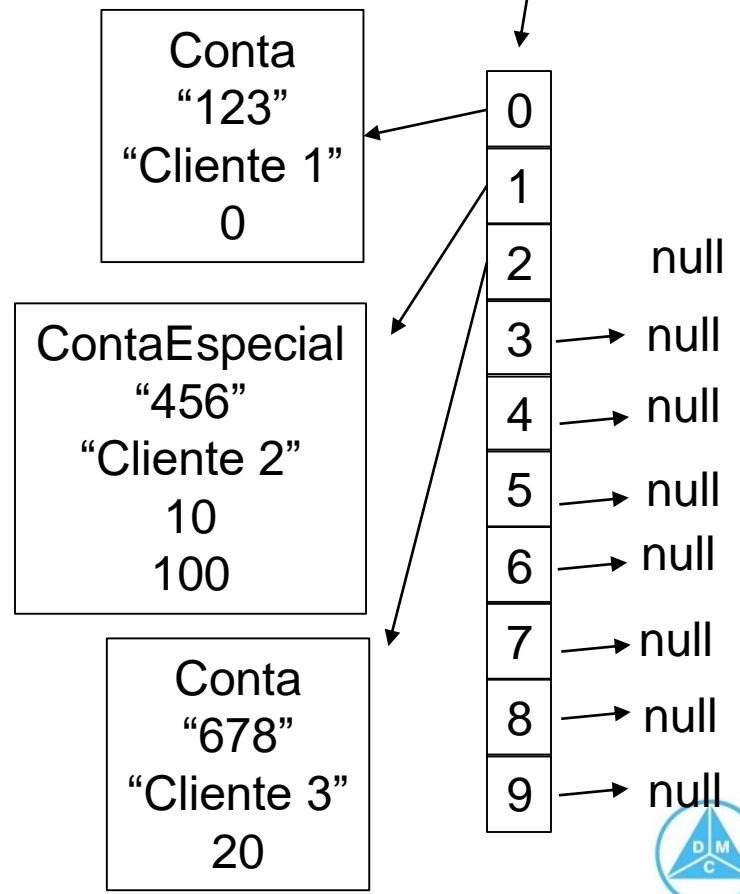
```

```

public class Conta {
    public void exibir(){
        System.out.println("\n=====");
        System.out.println("Conta: "+numero);
        System.out.println("Cliente: "+cliente);
        System.out.println("Saldo: R$ "+saldo);
        System.out.println("=====");
    }
}

```

i=2



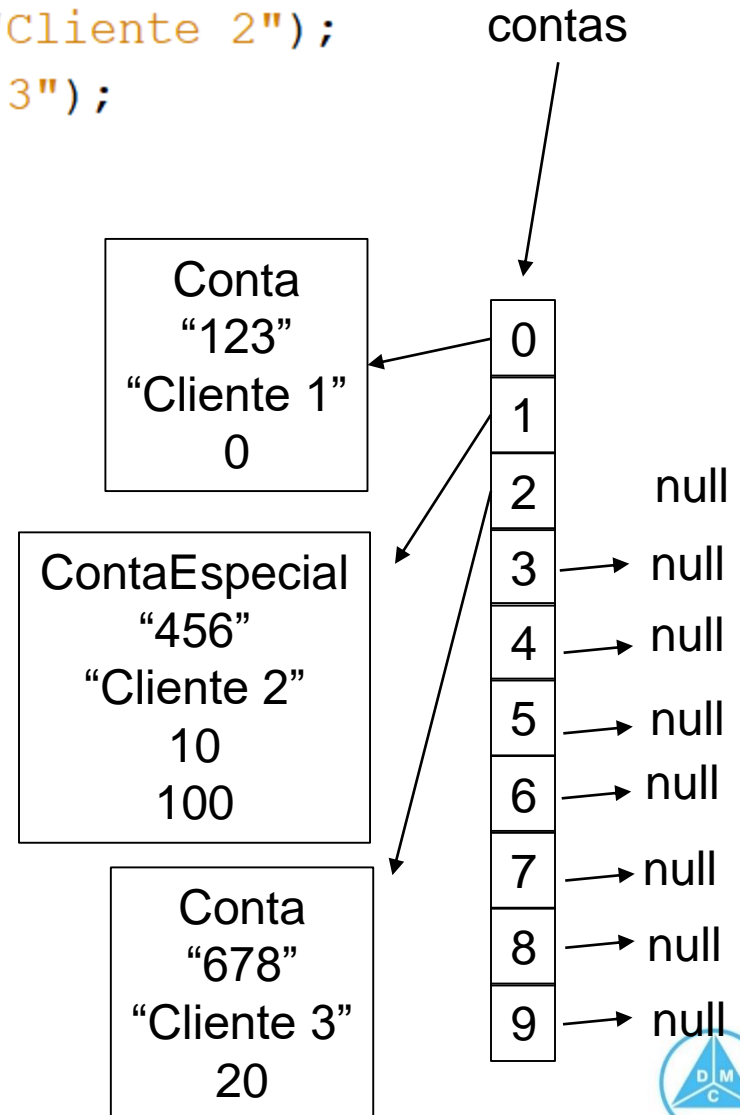
Exemplo – Contas

```
Conta contas[] = new Conta[10];
contas[0] = new Conta("123", "Cliente 1");
contas[1] = new ContaEspecial("456", "Cliente 2");
contas[2] = new Conta("678", "Cliente 3");
for(int i=0; i<3; i++){
    contas[i].exibir();
}
```

```
=====
Conta: 123
Cliente: Cliente 1
Saldo: R$ 0.0
=====

=====
Conta: 456
Cliente: Cliente 2
Limite: R$ 100.0
Saldo: R$ 10.0
=====

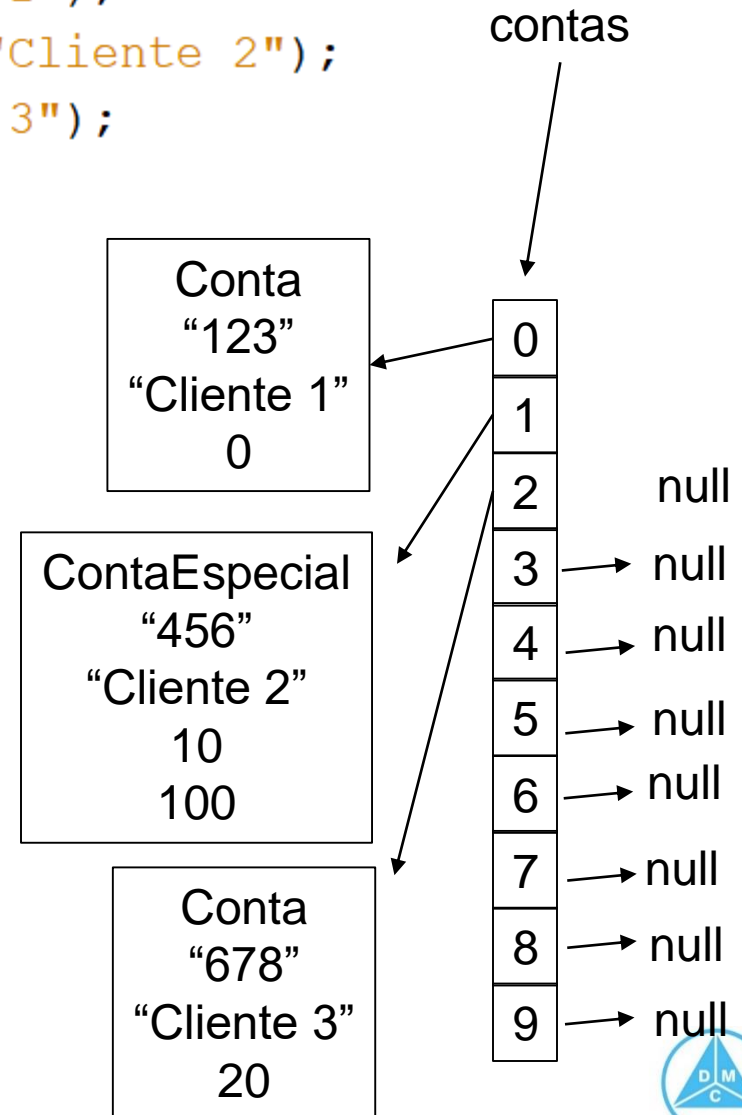
=====
Conta: 678
Cliente: Cliente 3
Saldo: R$ 20.0
=====
```



Exemplo – Contas

```
Conta contas[] = new Conta[10];  
contas[0] = new Conta("123", "Cliente 1");  
contas[1] = new ContaEspecial("456", "Cliente 2");  
contas[2] = new Conta("678", "Cliente 3");  
  
for(int i=0; i<3; i++){  
    contas[i].sacar(50);  
}
```

i=0



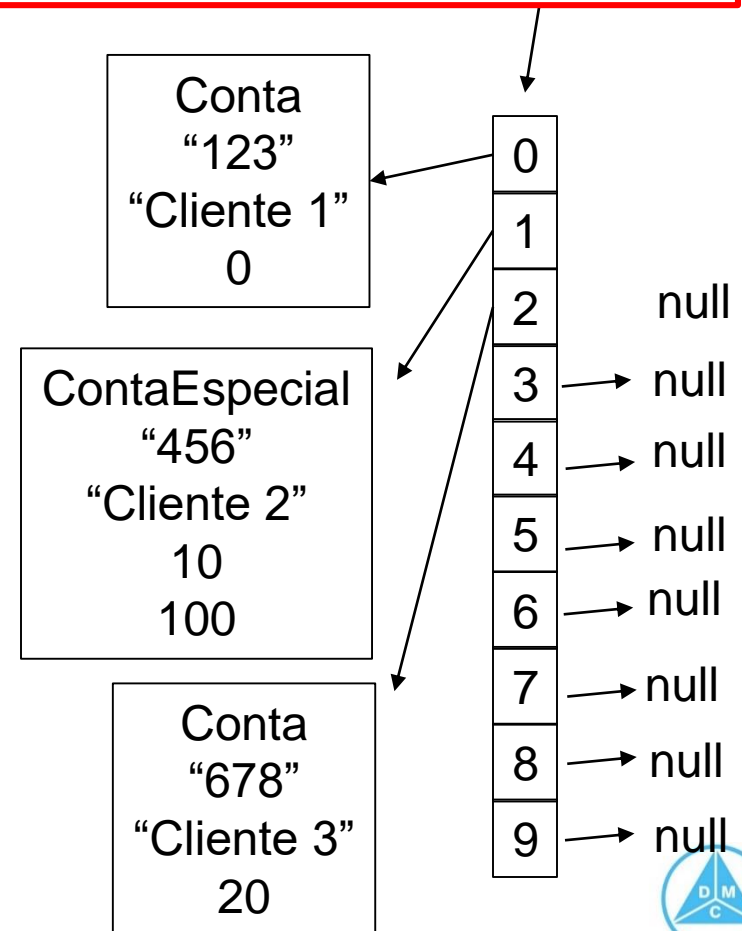
Exem

```
Conta contas[] = new Conta  
contas[0] = new Conta("123"  
contas[1] = new ContaEspec  
contas[2] = new Conta("678"
```

```
for(int i=0; i<3; i++){  
    contas[i].sacar(50);  
}
```

i=0

```
public class Conta {  
  
    public void sacar(double valor) {  
        if (saldo - valor >= 0) {  
            saldo = saldo - valor;  
        }  
    }  
}
```



Exemplos

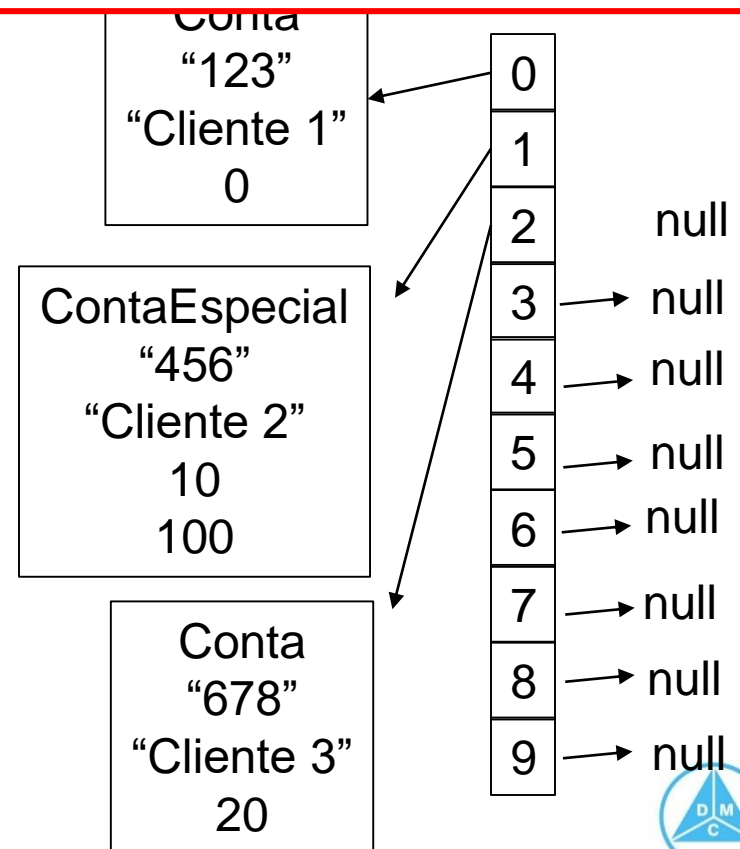
```
Conta contas[] = new Conta[10];
contas[0] = new Conta("123", "Cliente 1", 0);
contas[1] = new ContaEspecial("456", "Cliente 2", 10, 100);
contas[2] = new Conta("678", "Cliente 3", 20);

for(int i=0; i<3; i++){
    contas[i].sacar(50);
}
```

i=1

```
public class ContaEspecial extends Conta {
    private double limite;

    @Override
    public void sacar(double valor) {
        if (saldo + limite - valor >= 0) {
            saldo = saldo - valor;
        }
    }
}
```



Exemplos

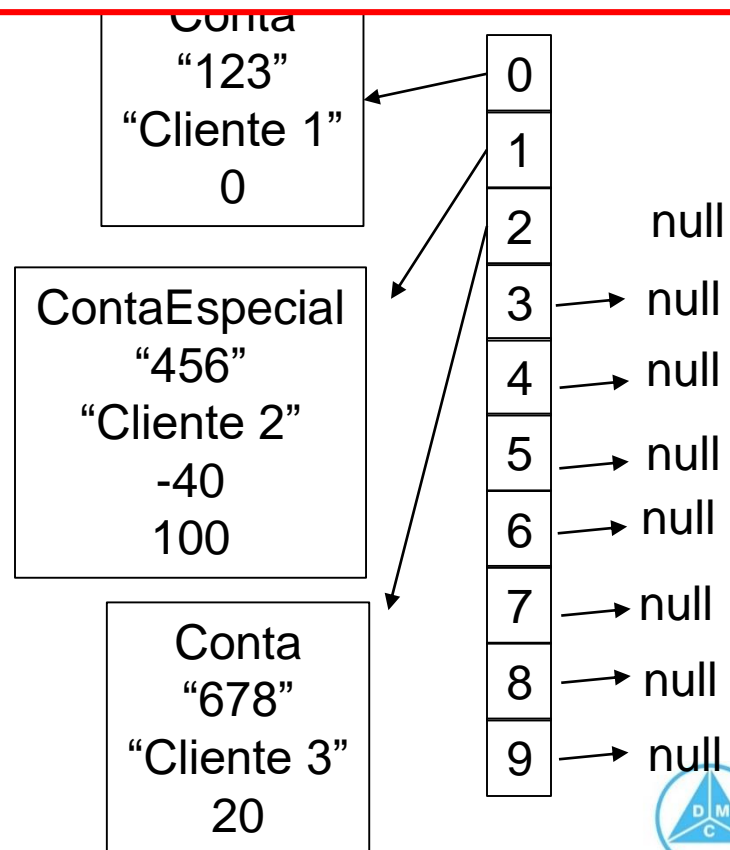
```
Conta contas[] = new Conta[10];
contas[0] = new Conta("123", "Cliente 1", 0);
contas[1] = new ContaEspecial("456", "Cliente 2", -40, 100);
contas[2] = new Conta("678", "Cliente 3", 20);

for(int i=0; i<3; i++){
    contas[i].sacar(50);
}
```

i=1

```
public class ContaEspecial extends Conta {
    private double limite;

    @Override
    public void sacar(double valor) {
        if (saldo + limite - valor >= 0) {
            saldo = saldo - valor;
        }
    }
}
```



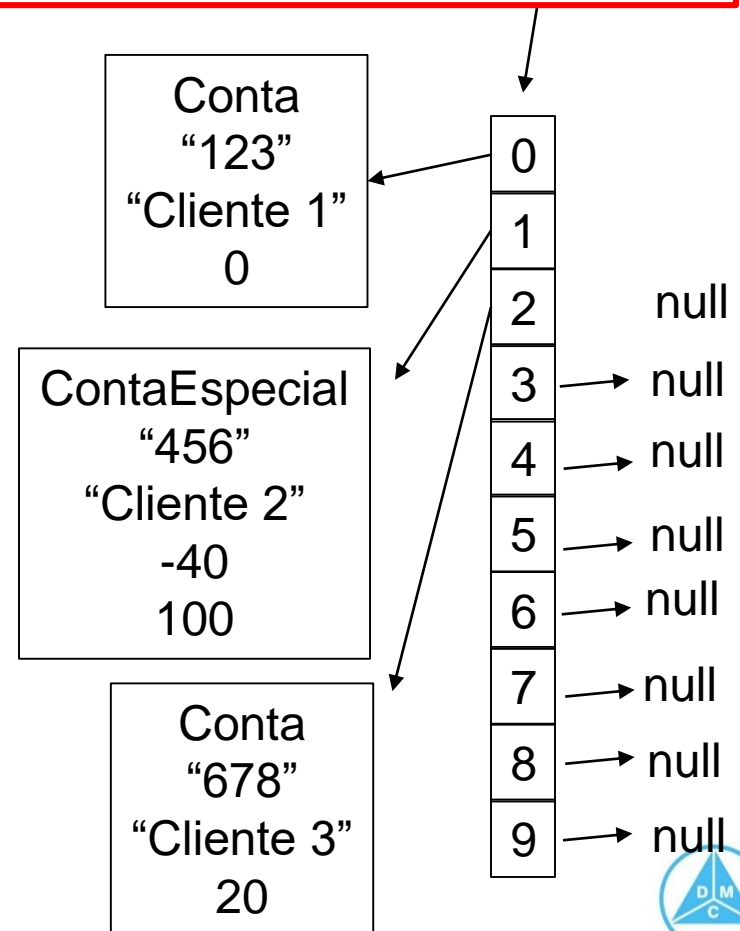
Exem

```
Conta contas[] = new Conta  
contas[0] = new Conta("123"  
contas[1] = new ContaEspec  
contas[2] = new Conta("678"
```

```
for(int i=0; i<3; i++){  
    contas[i].sacar(50);  
}
```

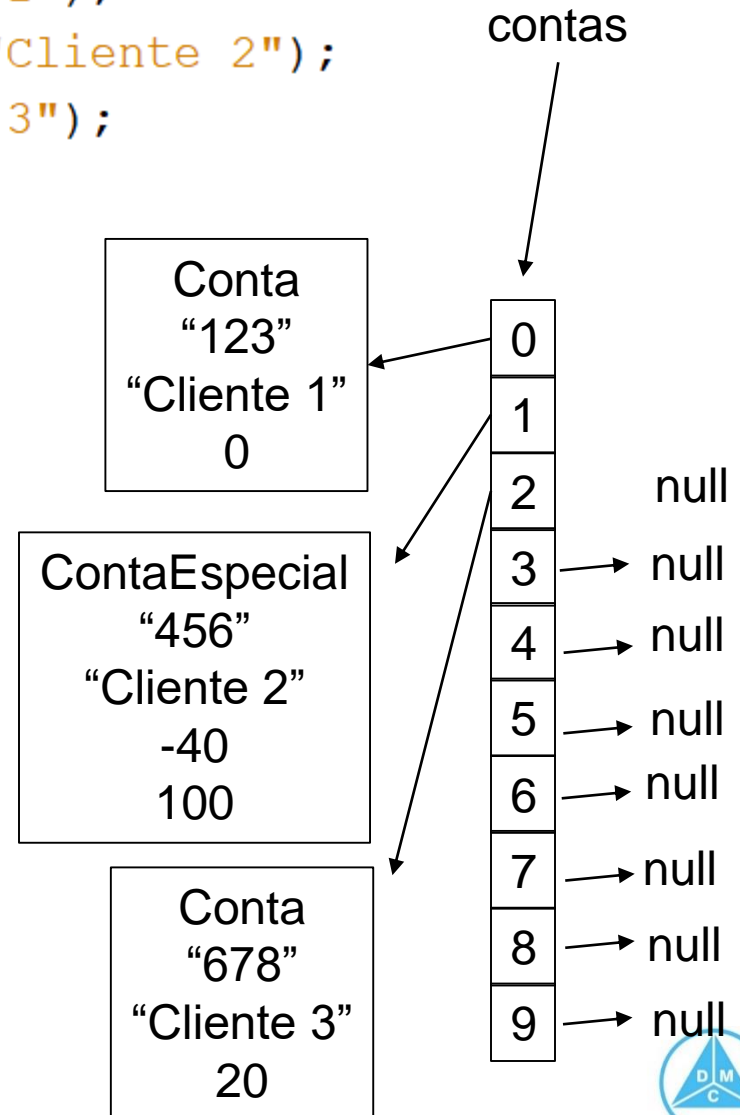
i=2

```
public class Conta {  
  
    public void sacar(double valor) {  
        if (saldo - valor >= 0) {  
            saldo = saldo - valor;  
        }  
    }  
}
```



Exemplo – Contas

```
Conta contas[] = new Conta[10];  
contas[0] = new Conta("123", "Cliente 1");  
contas[1] = new ContaEspecial("456", "Cliente 2");  
contas[2] = new Conta("678", "Cliente 3");  
  
for(int i=0; i<3; i++){  
    contas[i].exibir();  
}
```



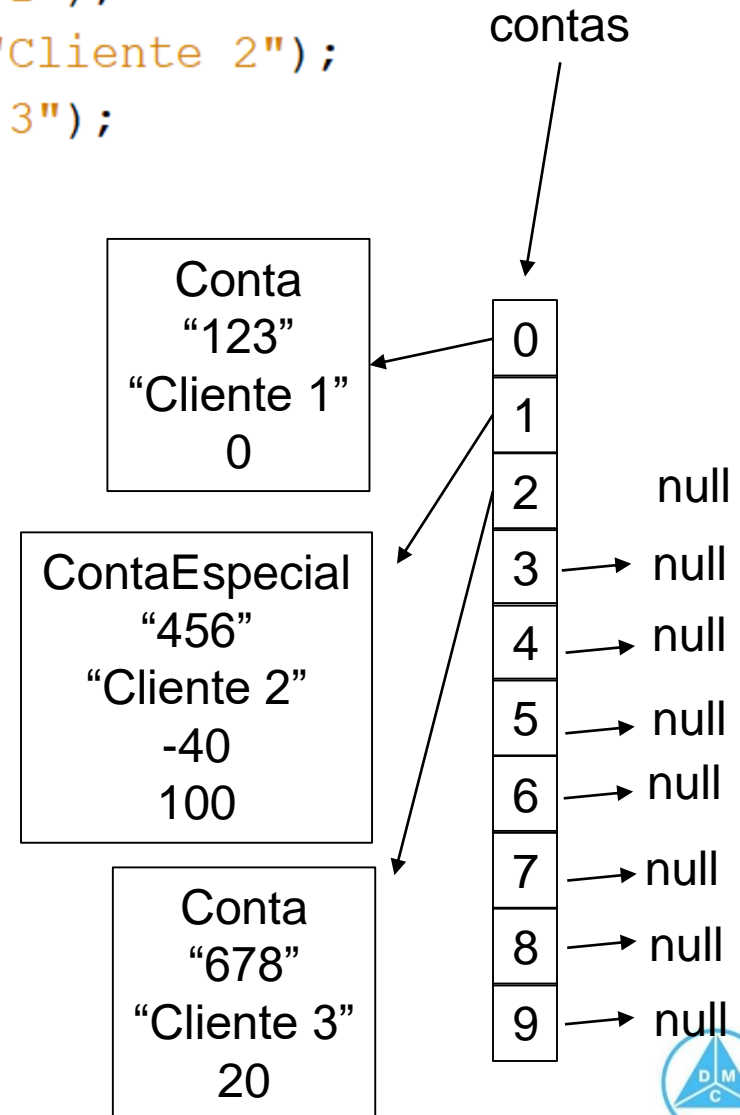
Exemplo – Contas

```
Conta contas[] = new Conta[10];
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contas[1] = new ContaEspecial("456", "Cliente 2");
contas[2] = new Conta("678", "Cliente 3");
for(int i=0; i<3; i++){
    contas[i].exibir();
}
```

```
=====
Conta: 123
Cliente: Cliente 1
Saldo: R$ 0.0
=====

Conta: 456
Cliente: Cliente 2
Limite: R$ 100.0
Saldo: R$ -40.0
=====

Conta: 678
Cliente: Cliente 3
Saldo: R$ 20.0
=====
```



Modificadores de Acesso

- Vimos que os membros de uma classe (e.g., atributos e métodos) podem ter modificadores **public** e **private**
- No caso de herança, todos os membros **public** podem ser acessados a partir das subclasses
- Por outro lado, os membros **private** não podem ser acessados pelas subclasses

Modificadores de Acesso

- Para permitir que uma subclasse acesse um membro de classe protegido, existe o modificador de acesso **protected**
- Em java, um membro **protected** é acessível pela classe à qual ele pertence, pelas subclasses e também por qualquer classe que esteja no mesmo pacote
 - Ele pode ser visto como um nível intermediário entre o **public** e o **private**

Referências

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a Objetos**
Herança – Parte 2

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