



Exemplos Factory Method

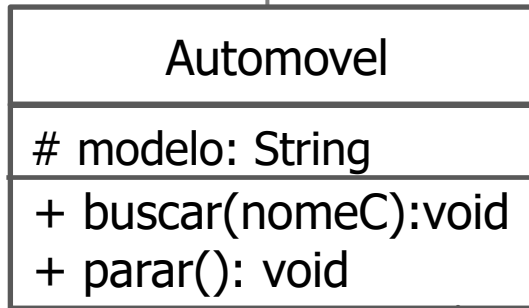
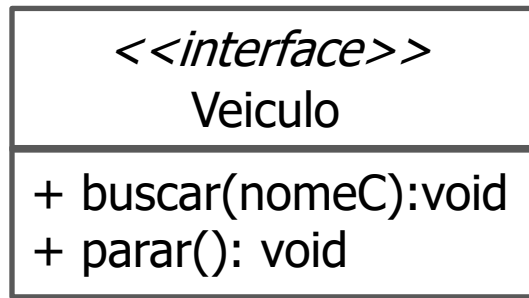
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Exemplo 1: Aplicação Uber

- Empresa que oferece o serviço de transporte de pessoas (similar ao taxi) em carros e motos.

Exemplo 1

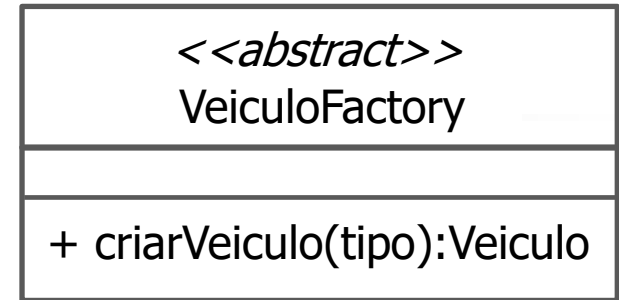


Carro

- + buscar(nomeC):void
- + parar(): void

Moto

- + buscar(nomeC):void
- + parar(): void



AutomovelFactory

- + criarVeiculo(tipo):Veiculo

```
public interface Veiculo{  
    public abstract void buscar(String nomeC);  
    public abstract void parar();  
}
```

Veiculo.java

```
public abstract class Automovel implements Veiculo{  
    protected String modelo;  
  
    public Automovel(String modelo){  
        this.setModelo(modelo);  
    }  
  
    // Implementar métodos get/set  
  
    public abstract void buscar(String nomeCliente);  
    public abstract void parar();  
}
```

Automovel.java

```
public class Carro extends Automovel
{
    public Carro(String modelo){
        super(modelo);
    }

    public void buscar(String nomeC){
        System.out.println(this.modelo + " buscando " + nomeC);
    }
    public void parar(){
        System.out.println(this.modelo + " parado ");
    }
}
```

Carro.java

```
public class Moto extends Automovel
{
    public Moto(String modelo){
        super(modelo);
    }

    public void buscar(String nomeC){
        System.out.println(this.modelo + " buscando " + nomeC);
    }
    public void parar(){
        System.out.println(this.modelo + " parado ");
    }
}
```

Moto.java

```
public abstract class VeiculoFactory
{
    public abstract Veiculo criarVeiculo (String modelo);
}
```

VeiculoFactory.java

```
public class AutomovelFactory extends VeiculoFactory
{
    public Veiculo criarVeiculo (String tipo, String modelo)
    {
        if(tipo == "carro")
            return new Carro(modelo);
        else if(tipo == "moto")
            return new Moto(modelo);
    }
}
```

AutomovelFactory.java

```
public class Principal
{
    public static void main(String []args)
    {
        // Código usando o padrão Method Factory
        VeiculoFactory autoF = new AutomovelFactory();
        Veiculo v = autoF.criarVeiculo("carro", "Fusca");

        if (v != null){
            v.buscar("Joana");
            v.parar();
        }
    }
}
```



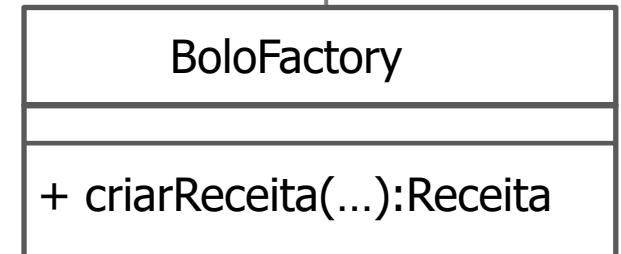
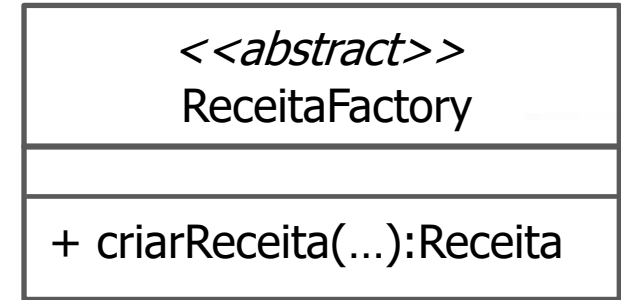
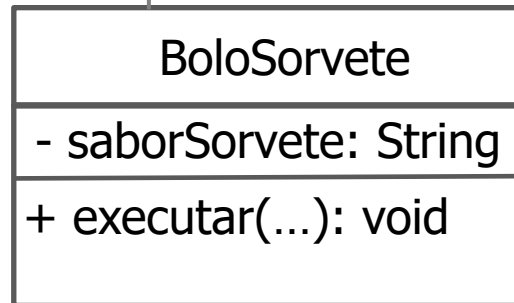
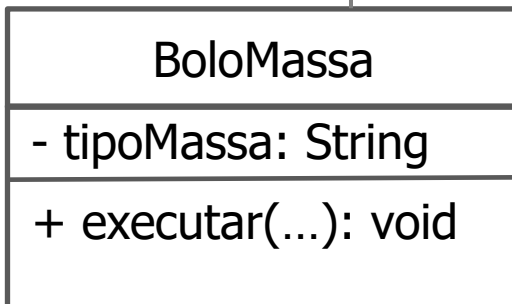
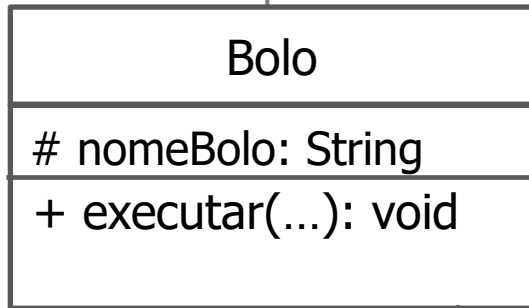
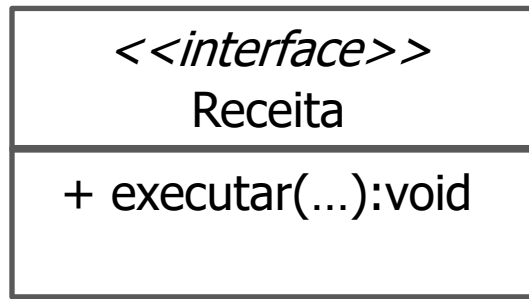
Principal.java



Exemplo 2: Aplicação de Receitas

- Empresa com objetivo de produzir diferentes tipos de bolo.

Exemplo 2





Exercício

- Implemente as classes/interface do Exemplo 2. Verifique que parâmetros podem ser incluídos nos métodos `criarVeículo(...)` e `executar(...)`.