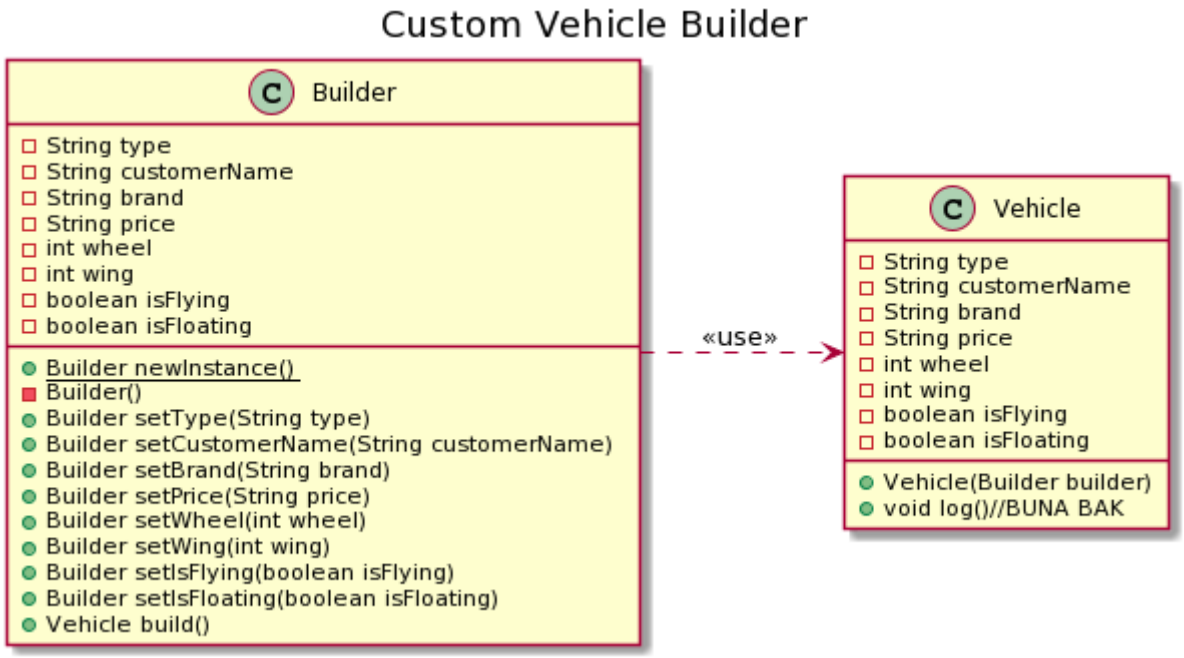
Builder

Builder Pattern, bizi olusturulacak nesnede, parametrelerin durumlarina gore, karmasik ve gereksiz yapici fonksiyonlarin tanimlanmasindan kurtarir. Olusturulacak sinifin icine bir yapici sinif eklenir. Bu sekilde **Vehicle** sinifi, icinde bulunan **Builder** sinifinin fonksiyonlari ile birden fazla yapici fonskyionuna gerek kalmadan uretilir.

UML



Vehicle.java

Vehicle sinifi ve **Builder** ic sinifinin bulundugu java dosyasidir.

```
public class Vehicle {

    private String type; ①
    private String customerName;
    private String brand;
    private String price;
    private int wheel;
    private int wing;
    private boolean isFlying;
    private boolean isFloating;

    public Vehicle(Builder builder) { ②
        this.type = builder.type;
        this.customerName = builder.customerName;
        this.brand = builder.brand;
        this.price = builder.price;
        this.wheel = builder.wheel;
        this.wing = builder.wing;
```

```
        this.isFlying = builder.isFlying;
        this.isFloating = builder.isFloating;
    }

    public static class Builder{

        private String type; ③
        private String customerName;
        private String brand;
        private String price;
        private int wheel;
        private int wing;
        private boolean isFlying;
        private boolean isFloating;


        public static Builder newInstance() { ④
            return new Builder();
        }

        public Builder setType(String type) { ⑤
            this.type = type;
            return this;
        }
        public Builder setCustomerName(String customerName) {
            this.customerName = customerName;
            return this;
        }
        public Builder setBrand(String brand) {
            this.brand = brand;
            return this;
        }
        public Builder setPrice(String price) {
            this.price = price;
            return this;
        }
        public Builder setWheel(int wheel) {
            this.wheel = wheel;
            return this;
        }
        public Builder setWing(int wing) {
            this.wing = wing;
            return this;
        }
        public Builder setIsFlying(boolean isFlying) {
            this.isFlying = isFlying;
            return this;
        }
        public Builder setIsFloating(boolean isFloating) {
            this.isFloating = isFloating;
            return this;
```

```
        }
        public Vehicle build() { ⑥
            return new Vehicle(this);
        }
    }

    public void log() { ⑦
        System.out.println("vehicle: "+this);
        System.out.println("type : "+type);
        System.out.println("customerName : "+customerName);
        System.out.println("brand : "+brand);
        System.out.println("price : "+price+"TL");
        System.out.println("wheel : "+wheel);
        System.out.println("wing : "+wing);
        System.out.println("isFlying : "+isFlying);
        System.out.println("isFloating : "+isFloating);
        System.out.println("");
    }
}
}
```

① Olusturulacak nesnenin parametreleri bos tanimlanir.

② **Builder** sinifini parametre alan yapici fonksiyonudur. Gelen parametrenin degerlerini kendi degiskenlerine atar.

③ **Vehicle** sinifindaki degiskenleri, **Builder** sinifi ile atanmasi icin tanimlanirlar.

④ **Builder** sinifini new ile turetmemek icin kullanilan fonksiyondur. Kullanildiginda yeni bir **Builder** nesnesi uretilir.

⑤ **Builder** sinifinin degiskenlerinin degistirildigi **setter** fonksiyonlari.

⑥ **Builder** ile yapilandirma bittikten sonra nesneyi olusturmak icin kullanilan fonksiyondur. Ayarlanan Builder sinifini bir **Vehicle** olarak dondurur.

⑦ Vehicle sinifinin bilgilerini ekrana yazan fonksiyondur.