

Classes and objects

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Class

- A **class** is a **blueprint/template** from which objects are created.
- It defines the **properties (fields/variables)** and **behaviors (methods)** that the objects of that class will have.
- It does not occupy memory until an object is created.
- eg.

```
// class
class Car{ 2 usages new *

    // instance variables
    String company ; 2 usages
    String model ; 2 usages

    // instance method
    public void getDetails(){ 1 usage new *
        System.out.println(model + " car by " + company);
    }
}
```

Object

- An **object** is an **instance of a class**.
- It represents a real-world entity with its own **state (values of fields)** and **behavior (methods execution)**.
- Objects occupy memory when they are created using the new keyword.
- eg.

```
// object initialization
Car c1 = new Car() ;
```