JAVA PROGRAMMEREN – LES 2:
KLASSEN
OBJECTEN
RELATIES

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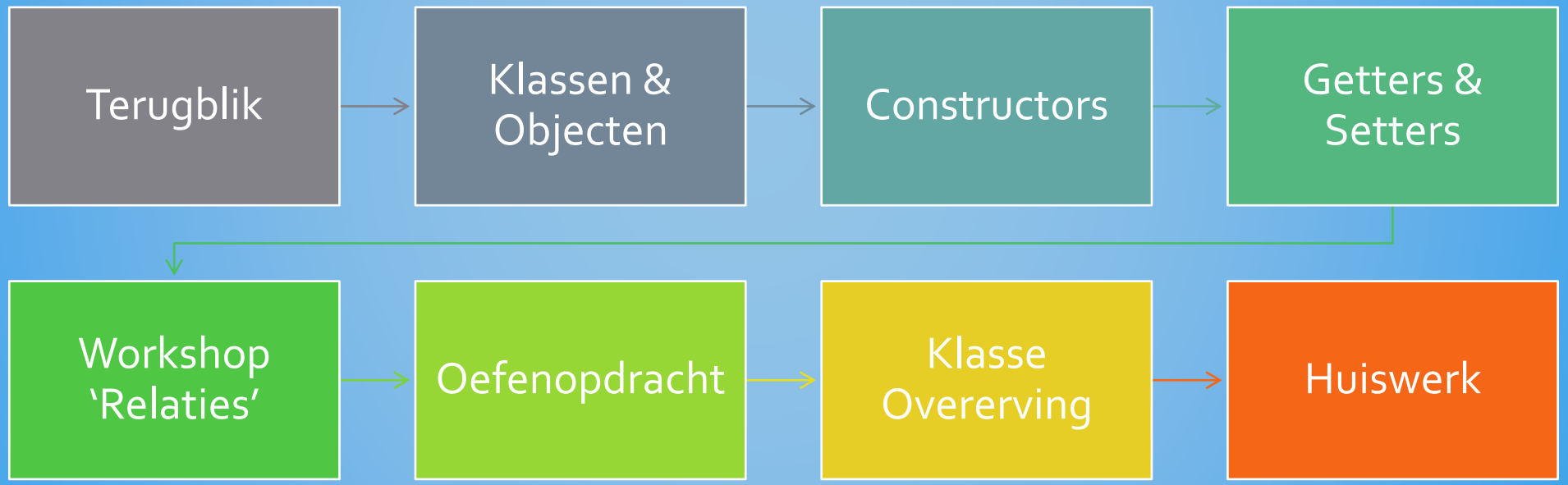
AGENDA


Terugblik
Klassen & Objecten
Constructors
Getters & Setters
Workshop 'Relaties'
Oefenopdracht
Klasse Overerving
Huiswerk

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Variabelen

Datatypes

Methods

TERUGBLIK

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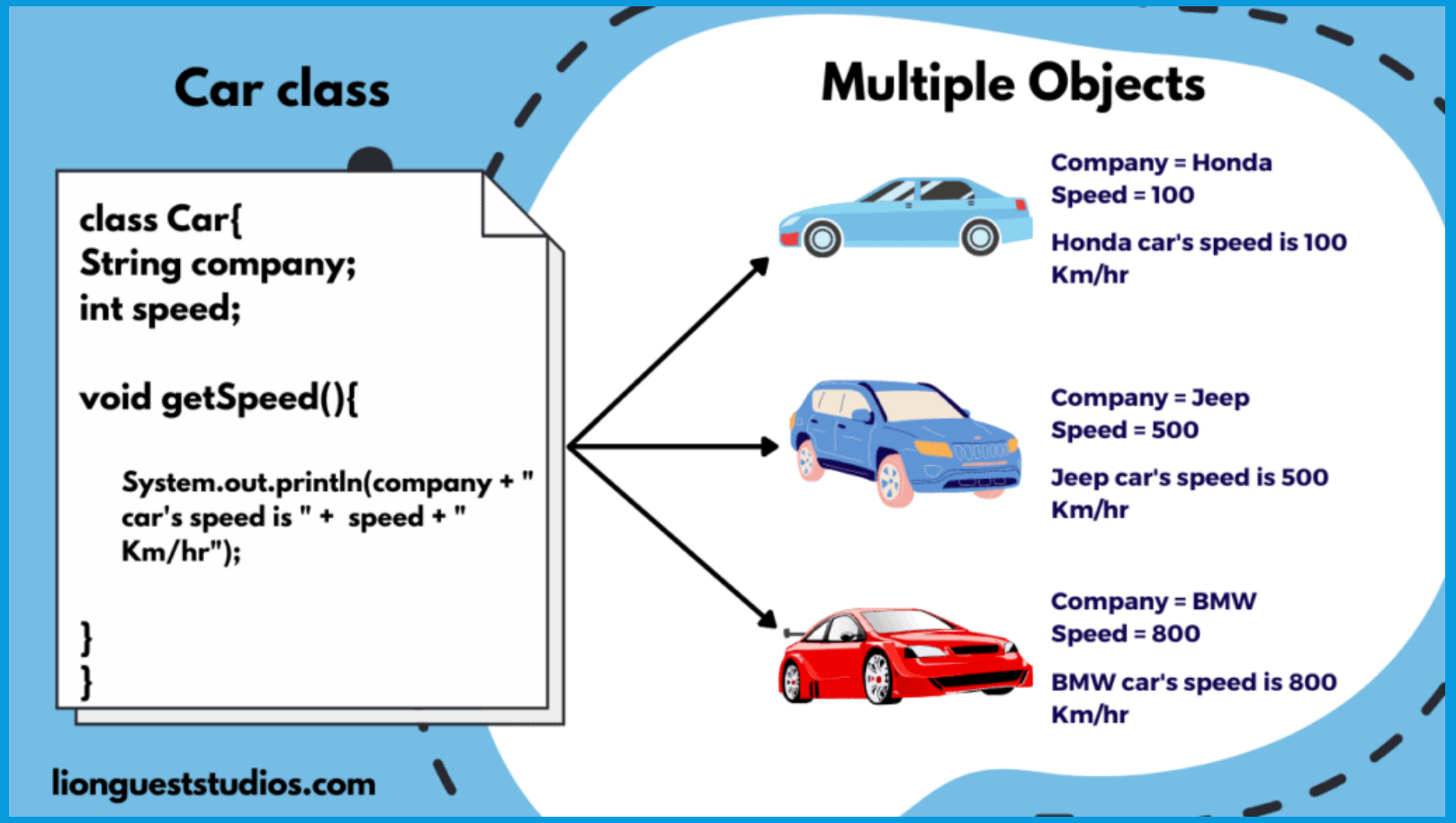
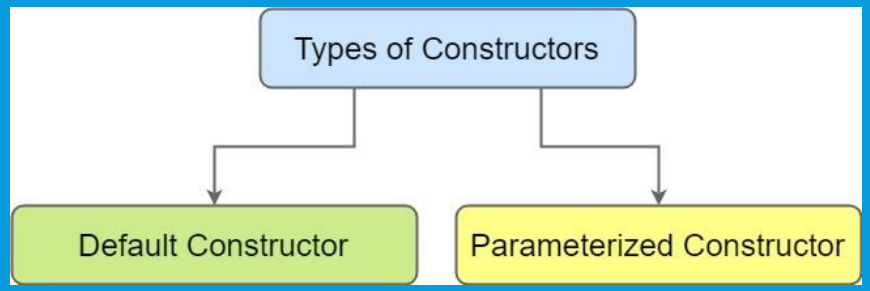
KLASSEN & OBJECTEN



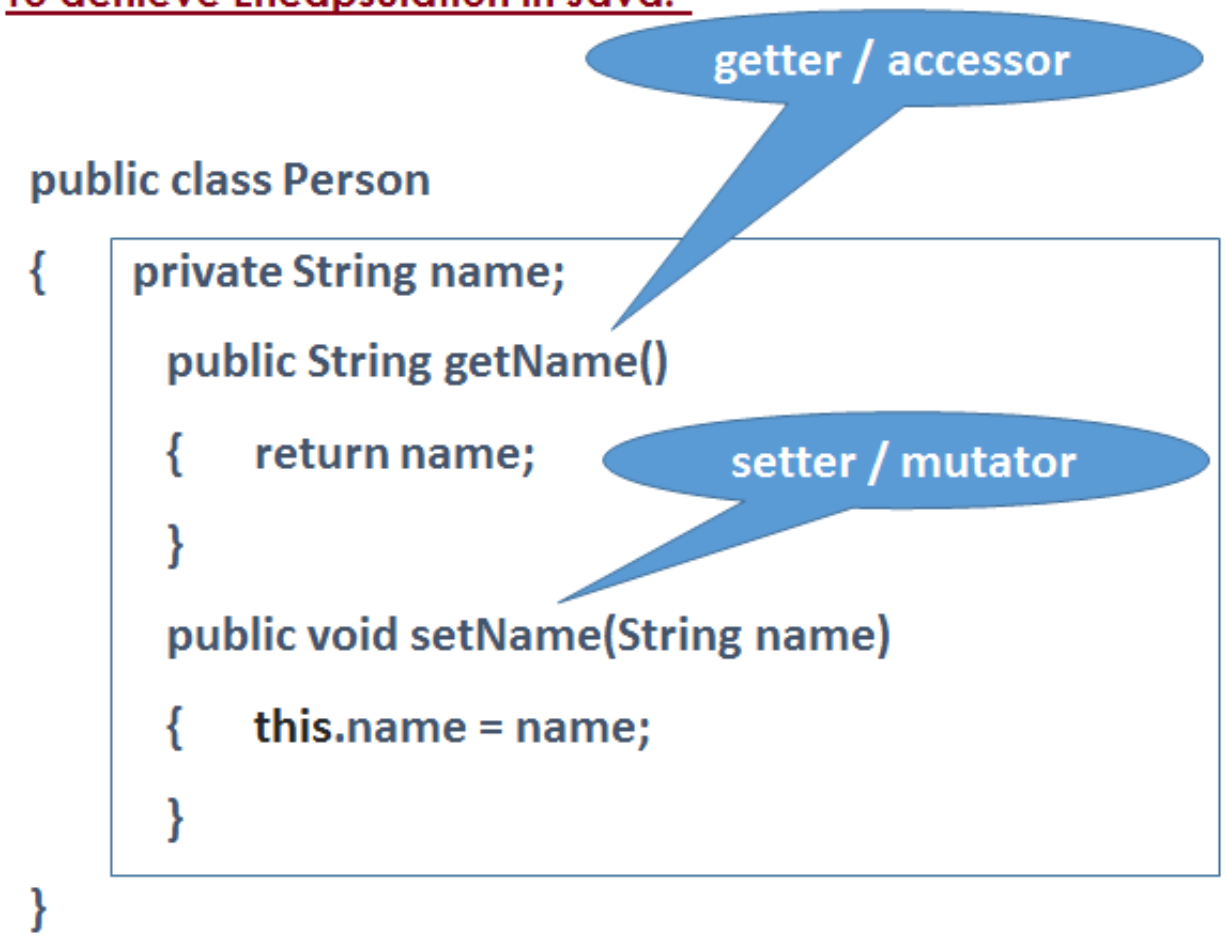
CONSTRUCTORS

Maak een instantie (object) van een klasse




```java
public class Employee {
    private String firstName;
    private String lastName;

    public Employee() { //constructor 1

    }

    public Employee(String firstName) { //constructor 2

    }

    public Employee(String firstName, String lastName) { //constructor 3

    }
}
```

To achieve Encapsulation in Java:-



GETTERS & SETTERS

Every thing in Java is in a Class - Structure

Import Statement

Class name

Field Data
Line 4 and Line 5

Constructor
There are 2 constructors
One is overloaded
constructor.

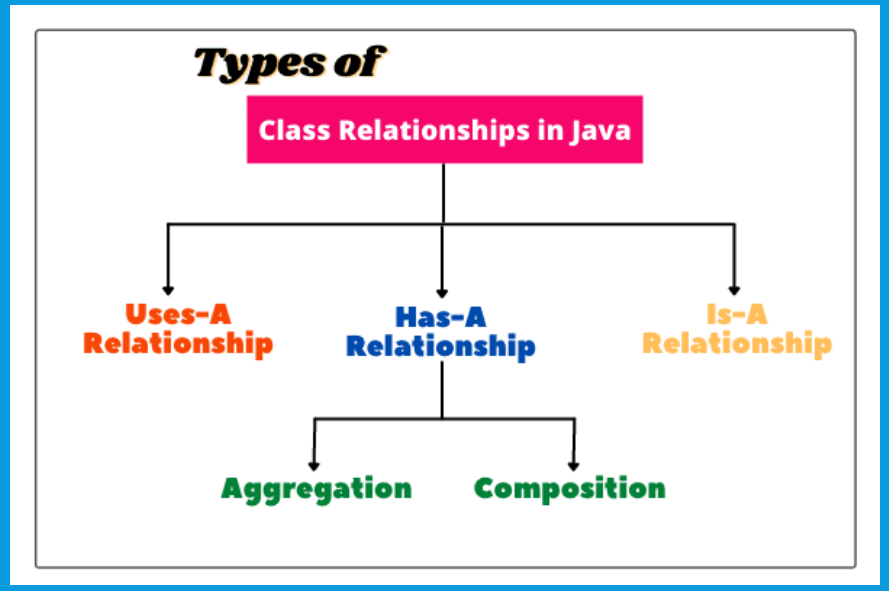
Mutator Methods
aka setter method

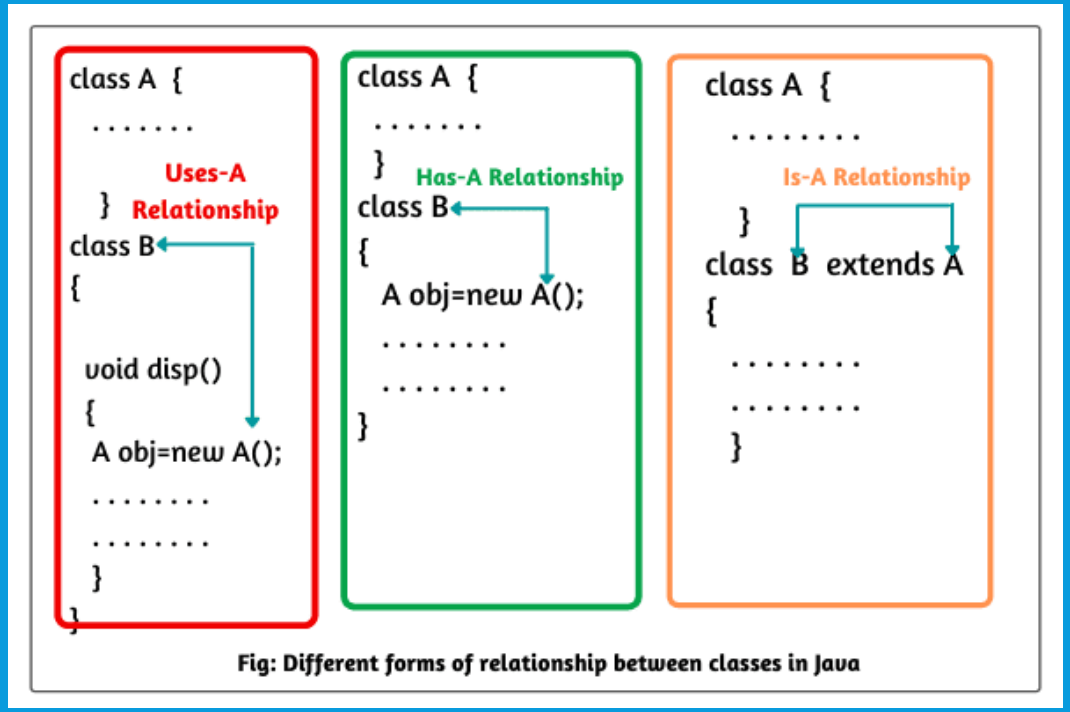
Accessor methods
aka getter method

```
1  import java.util.ArrayList;
2  public class Student
3  {
4    private String name;
5    private static int countObjects = 0;
6
7    public Student()
8    {
9      name = "Student";
10     countObjects++;
11   }
12   public Student(String n)
13   {
14     name = n;
15     countObjects++;
16   }
17   public void setName(String n)
18   {
19     name = n;
20   }
21   public String getName()
22   {
23     return name;
24   }
25   public static int getCount()
26   {
27     return countObjects;
28   }
29   public String toString()
30   {
31     return "Name: " + name + " number of Objects "
32                     + Student.countObjects;
33   }
34 }
35
```

KLASSE STRUCTUUR

RELATIES TUSSEN KLASSEN





ARRAYLIST

```java
import java.util.ArrayList;

public class Main {

    public static void main(String[] args) {

        ArrayList<String> colours = new ArrayList<>();

        colours.add("Red");
        colours.add("Green");
        colours.add("Blue");
        colours.add("Yellow");

        System.out.println(colours);
    }
}
```

WORKSHOP

Relaties tussen klassen:
House with Rooms

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OEFENOPDRACHT

In Teams :

General -> Lesmateriaal -> Les 2

DogOwnerMain.java

Dog & dogowner

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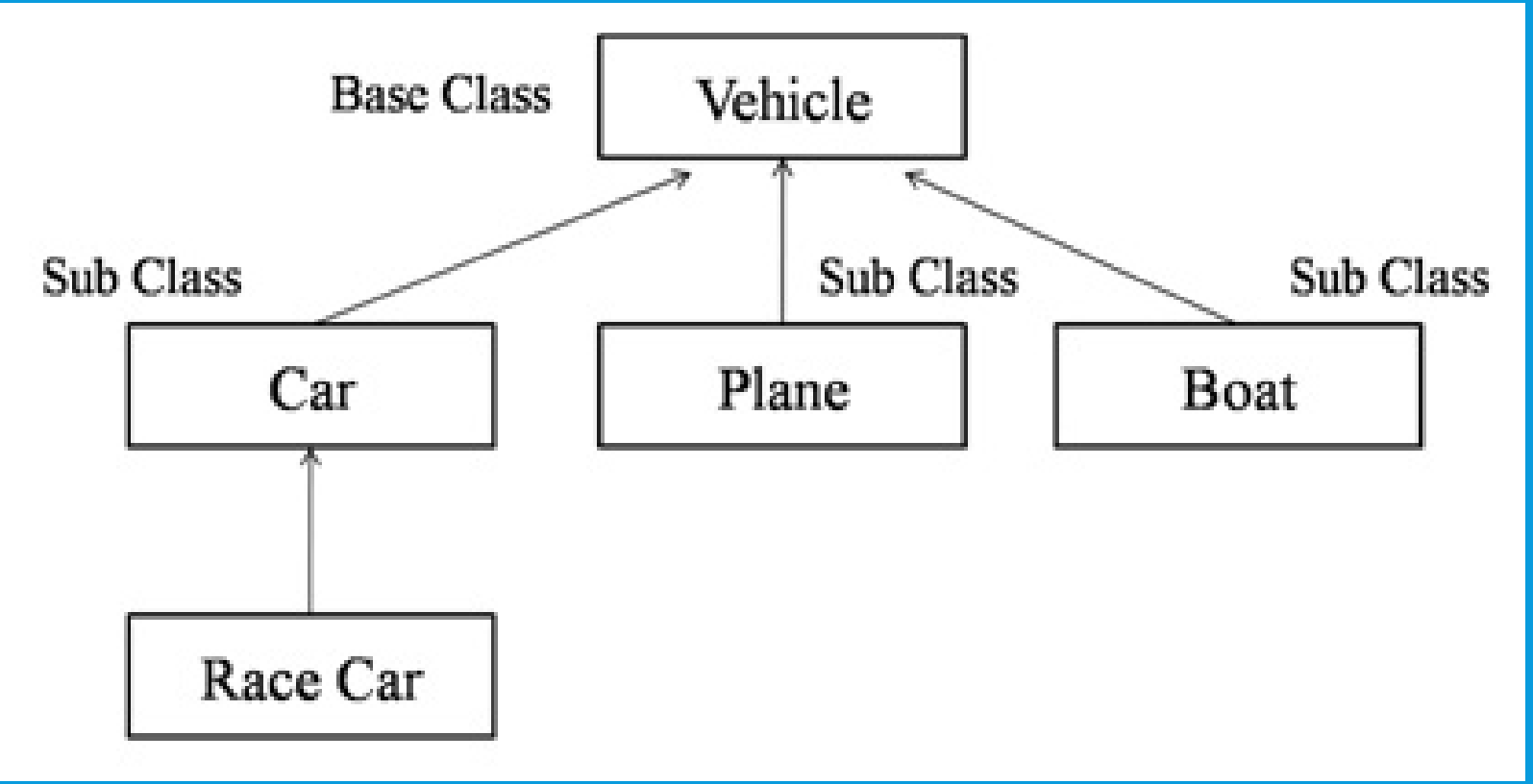
KLASSE OVERERVING



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OPDRACHT ‘KLASSE OVERERVING’

- Werk in tweetallen
- Kies een onderwerp voor een klasse structuur
- Uit welke klassen bestaat de structuur? Maak een schets.
- Welke velden horen bij welke klassen?

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HUISWERK

- Maak oefenopdracht af
- Bestuderen EdHub Java Programmeren :
  - Hoofdstuk 2.7 t/m 2.9 (Arrays, Collecties, Lussen)