

Object-Oriented Analysis & Java

Practical 3: Java classes

Florentin Bekier

Exercise 1:

1. Implement the three subclasses of the `RacingCar` class.
2. Add a co-driver attribute to the `Rally` class.
3. Create a `Vehicle` interface for the `RacingCar` class and put the methods inside the interface.
4. Create a new class called `Motorbike` implementing the `Vehicle` interface.

Exercise 2:

In this exercise, we want to write a program for the local post office.

A **mail** has a **destination**, a **weight**, a **price** (computed value) and can be an **express** shipping or not.

A mail is only valid if the destination is not empty. It can be either a parcel or a letter.

A **parcel** also has a **volume** and its price is equal to $0.25 * \text{volume} + \text{weight}$. The price is doubled if the parcel is an express shipping.

A **letter** also has a **format** value (A3, A4 or A5) and its price is equals to the weight plus 2.5 for an A5 format and 3.5 otherwise. The price is also doubled if the parcel is an express shipping.

1. Represent the described situation with classes.
2. Add a Main class with a main method to your program that allows the user to compute the price of a shipping of 1 or several mails.

NB: To ask the user to input a value in command-line, you can use the `Scanner` class.

```
// First, you need to import some packages
import java.util.Scanner;
import java.util.*;

Scanner sc = new Scanner(System.in);
System.out.println("Please enter a word:");
String str = sc.nextLine();
System.out.println("You wrote: " + str);
```