

Licenciaturas em Engenharia Informática

Modelação e Design

AULAS LABORATORIAIS – 2017 / 2018

FICHA 5 – OBJECT DIAGRAMS

1. Construct the object diagrams (for the class diagrams corresponding to the general situation), for the following situations:

- a) A vehicle has an owner. An owner can have several vehicles.

"John has a BMW i3 and a BMW F-800-GT. Celia has a yellow Fiat 500."

- b) A person has a name and a group of friends.

"Luis's friends are Joseph and Carlos. Carlos's friends are Joseph, Luis and Celia."

- c) A race consists of a set of vehicles, which will compete on a track. Vehicles can be cars or motorbikes. Each vehicle has a driver. The lane consists of a sequence of interconnected segments. Each of these segments has a certain length and a turning angle. The race has a duration, measured in the "number of laps."

"Race - GT Grand Prix

Track - Silverstone:

Track layout: "500 metres straight, followed by a left turn of 120 degrees and 100 m in length, followed by a straight line of 50 m, another curve to the left of 120 degrees and 50 m in length, a straight line of 80 m and a new curve to the left of 120 degrees, followed by a 120 m straight to the finish line."

Participants: B. in the BMW M4 and the L. in the Mercedes F2000

Number of Laps: 40 "

2. Consider that:

- A text consists of several lines of text.
- The font of the text is represented by the font name (for example, Arial) and its size (for example, example, 12pt).
- The formatting of the text is represented by its source, the information about the colour and the alignment (left, right, centred or justified).
- The text may contain different formatting in different zones. A zone is defined (for example) by a starting and ending point in the text.

Construct an appropriate object diagram to represent

"Ai que prazer
Não cumprir um dever,
Ter um livro para ler
E não o fazer!
Ler é maçada,
Estudar é nada.
O sol doira
Sem literatura."

The alignment is on the left; the text is written in Arial (10 pt), except between the fourth character of the second line and the fifth character of the third line, where the font Times New Roman (12 pt) is used.