World of Robots

Master 1 Génie Physiologique et Informatique

Del 2-3 : Specification of your "World of Robots"

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Composition of the group :

Group leader: Florian PAILLAS

Timekeeper: Laurène DONG

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The others: Marion DOSPITAL, Lauranne LAIR, Ophélie SOCHARD

Purposes of the project :

This project aims to create an interactive application that represents a “World of Robots”. The window generated represents the World where the robots will be able to evolve in an autonomous way. The users or humans can create new robots and make them move. There are some rules: if robots collide with others or leave the World, they die.

Important parts :

- **Canvas**
  - The canvas is a graphical framework named “CanvasRobot”.
  - It must be able to display our World of Robots.
  - Robots should be able to move through their internal xPosition and yPosition values.

- **Robot** : Mother class of the different types of robots with their own specifications

Name :

- Each robot has a name, which should contain at least 3 characters and no spaces on the first or last character.
- If the conditions are not met, the robot will be given the name “iRobot#”, where “#” is replaced by the number of badly named robots, starting from 1.

→ A name setter

→ A name getter

Position :

- Each robot has a default position when they are created.
- The position is deduced from the xPosition and yPosition attributes.
- The position allows the robot to be seen at a certain place on the canvas.

→ A xPosition getter

→ A yPosition getter

→ A xPosition setter

→ A xPosition setter

Movements :

- A method that allows the robots to move in different directions

Other specifications :

- A method to handle when robots collide or leave the World: they both disappear

Every object of the Robot class creates objects/robots with different colors, so they can be visually different.