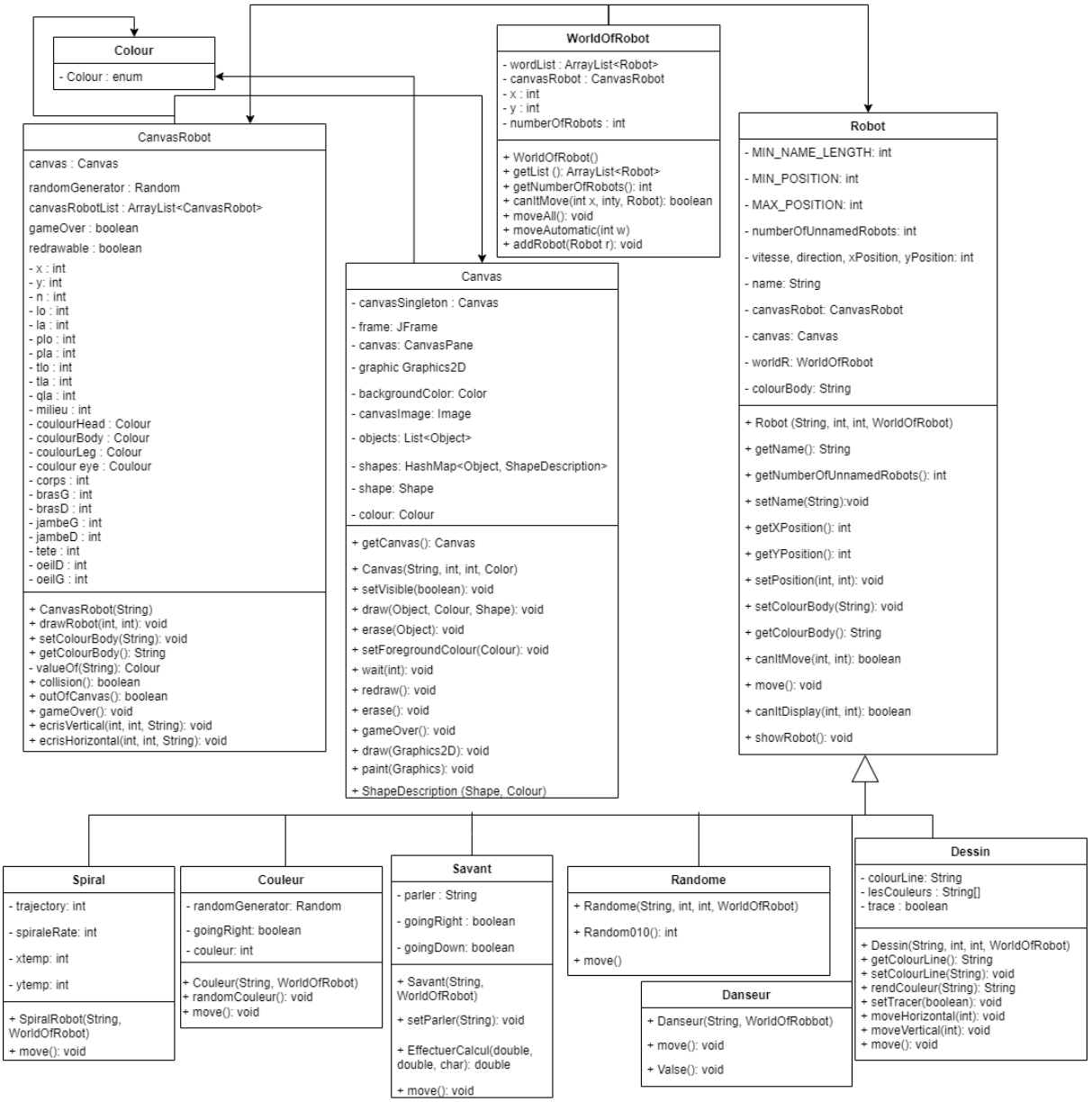
World of Robots

Master 1 Génie Physiologique et Informatique

Del 6-3: Final synthesis

Group 14 : Laurène DONG, Marion DOSPITAL, Lauranne LAIR, Thibault NIGGEL, Florian PAILLAS, Ophélie SOCHARD

This is the UML diagram of the final project :



These are the notions used in our project :

- **Inheritance**

We were able to use inheritance, especially for the creation of the robot and its variants. Initially, we created a parent class for the robot with all the generic methods for different types of robots. Then, we created various child classes without duplicating the code from the parent class, each having a different method of movement. This allowed us to program by extension, avoiding the need to rewrite the same code multiple times.

Inheritance also allows for the protection of attributes in different classes. To call methods from the parent class, we used "super".

- **Override**

Thanks to the use of the presence of inheritance, we've been able to experiment with the use of overrides. With the Move() method for example. It is present in the parent Robot() class, but it's empty. It is also present in the Robots() daughter classes, such as Randome() or Colour(). However, in these daughter classes, it is filled with different functions depending on the daughter class.

- **Javadocs**

During this project, we were able to implement the Javadocs principle. This involves adding comments to classes, constructor(s), and methods to explain how they work, as well as providing information about method parameters or class attributes. We tried to write it in a clear and concise manner so that anyone unfamiliar with the code can understand how our program functions."

- **Debugging**

To find out where our errors were coming from, we used debugging when testing our methods and unit tests. This method has allowed us to be more efficient in finding solutions.

The realization of this project was complicated and dense. Despite this, we learned to communicate effectively, organize the work in time, share our understanding and our questions to ensure that everyone follows the project and understands well. In terms of skills, we were quite complementary which was a considerable advantage and we were able to motivate ourselves in moments of relaxation. The team leader, the secretary and the time manager allowed us to carry out this project but each member of the group played a decisive role, whether in the understanding of English, concepts and programming, synthesis writing and work organization. For World of Zuul, we will seek to improve the organization, review certain concepts such as debugging and motivation throughout the project.