For this project we had to construct and implement a mobile robot able to perform path finding method and movement based on vision-oriented programs. The robot we are using here is a Thymio-II robot.

The code will follow these guidelines:

* Create an environnment: The environment has to contain a set of obstacles that the Thymio avoids through global navigation. That is to say, the Thymio should avoid these obstacles without using the sensors to detect them.
* Find the best path: The objective is that the Thymio goes from an arbitrary position in the map to a target that can be placed anywhere in the environment.
* Motion control and position estimation: We have to control the robot to help it move along the path. This requires an accurate estimate of the position of the robot which you will have to obtain through bayesian filtering.
* Local navigation: While moving, the Thymio has to use local navigation to avoid physical obstacles that can be put in its path at any point in time.