Cerintele de software:

1. The robot does not have an ON/OFF switch.

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| 1. Using the optimal maze solving algorithm, the robot shall be able to navigate within the labyrinth and seeking a hiding spot. |
| 1. The recommended maze solving algorithms are: Left Hand Rule and Right Hand Rule. |
| 1. The robot shall be able to found a hiding place in less than 2 minutes but not sooner than 30sec. |
| 1. If the robot finds a hiding spot (see ID SYSH\_18) in less than 30 seconds, then the robot shall leave the current hiding spot and proceed to find another one. |
| 1. To leave a hiding spot, the robot shall go in reverse until at least the delta lateral value between current and previous value is greater than 5 cm. |
| 1. After going in reverse, if the robot finds itself in a situation when both delta lateral values are greater than 5cm, then the robot shall choose the direction based on the algorithm used (for Left Hand Rule go to left, for Right Hand Rule go to right). |
| 1. The robot shall start with a 5 sec delay after it is powered on. |
| 1. A hiding spot is defined in the Requirements\_Labyrinth/SYSL\_4 |
| 1. When going forward, the robot shall not have a lateral distance Lt\_dist / Rt\_dist greater than 8 cm (excluded when it has to make a turn). |
| 1. A junction in labyrinth is determined when distance to a wall is smaller than 8 cm and the other two distances are greater than 12 cm. |
| 1. When turning right into the labyrinth (no junction), the distances to the wall shall be as follow:  - left wall : between 6 cm and 8 cm;  - right wall : greater than 12 cm;  - front wall : between 7.5 cm and 10 cm. |
| 1. When turning left into the labyrinth (no junction), the distances to the wall shall be as follow:  - left wall : greater than 12 cm;  - right wall : between 6 cm and 8 cm;  - front wall : between 7.5 cm and 10 cm. |
| 1. When the hiding spot is found, the robot shall go forward until the distance to the front wall is less than 2 cm. |
| 1. When the hiding spot is found, the robot shall start emitting the a message via IR emitter. The message should be "VEONEER". |
| 1. When the robot is searching for a hiding spot, the RGB led shall blink continuously. |
| 1. When the hiding spot is found, the RGB led shall stay ON until is found.   18. |
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| 1. **2.2. Right Hand Rule** |
| 1. The robot shall make a left/right turn until the distance to the right wall is 8cm. |
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