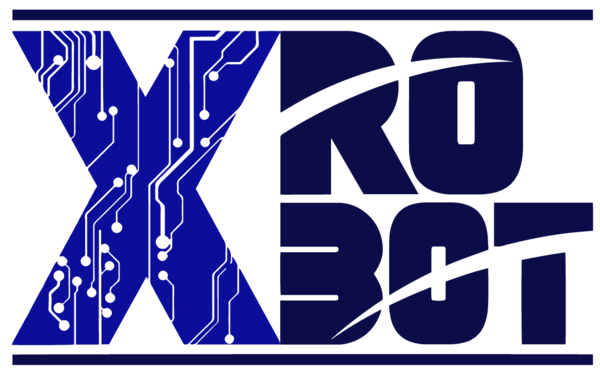
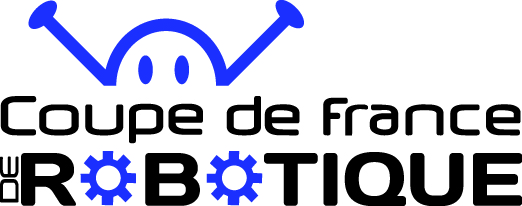
**System requirement specification R2**

**Robot**

**deadline 10th April**

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1. Position

|  |  |
| --- | --- |
| REQU 1 | The robot shall always know its own position with a precision of 10cm |
| REQU | The robot shall have in its code an |

2. Avoiding collisions

|  |  |
| --- | --- |
| REQU 1 | The robot shall have at least one sensor on its front panel |
| REQU 2 | The robot shall be able to detect an obstacle in its path up to 200mm ahead of him |
| REQU 3 | The robot shall be able to stop in less than 100mm |
| REQU 4 | After an emergency braking the robot shall move again in less than 10s |
| REQU 5 | The movement initiated in REQU 4 shall avoid the eventual obstacle |

3. Scoring

|  |  |
| --- | --- |
| REQU 6 | A team of two person shall be able to place the robot on the table in less than 3min |
| REQU 7 | The robot shall be placed in its starting point with the wedges |
| REQU 8 | The robot shall start from its starting zone |
| REQU 9 | The atoms in the chaos zone shall be placed according to the rules |
| REQU 10 | The atoms on the atom sets shall be placed according to the rules |
| REQU 11 | The atoms next to the starting zone shall be placed according to the rules |
| REQU 12 | The team’s particles accelerator shall be set up according to the rules |
| REQU 13 | A randomly placed box (representing the adversary) shall be installed on the table on a spot accessible by the adversary according to the rules |
| REQU 5 | The robot shall be able to move an atom |
| REQU 14 | The robot shall be able to push one of the atoms next to the starting zone in the periodic table |
| REQU 15 | The REQU 14 shall be done in less than a 100s after the beginning of the match |
| REQU 16 | The robot shall stop on its own no more than a 100s after its start |
| REQU 6 | The robot shall be able to determine the path to take in order to put an atom in the periodic table |

**4.design**

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| --- | --- |
| REQU 17 | A free space of 100m x 70mm shall be placed on the side of the robot |