ROBOVANZA

MATCH THE DIMEN

INTRODUCTION:

Still using conventional scale for measuring? Time to use technoly.
Build a robot capable of measuring width of boxes, to compare them.

PROBLEM STATEMENT:

Build an autonomous robot skilled enough to follow a black lined path, measure and compare the dimensions(width) of the cubes places in the path.

QUALIFYING ROUND:

1. A black tape is placed on the white surface in the shapes of a path which will be revealed end of this document.
2. Standard black tape of width 3.0 cms+ or - 10% is used for the path.
3. The surface of the cubes is made of plain white paper.
4. The robot will be placed at the start point.
5. Each team will be given 2 minutes for calibration of sensors.
6. The robot has to follow the path to the END.
7. The robot will come across 4 white cubes placed in the arena(2 on its left and 2 on the right, refer to the diagram below).
8. The cubes are labeled as A,B for the left cubes and C,D for the right ones.
9. The robot has to calculate the widthof the cubes while it follows the path.
10. The robot may stop to measure the width of the cube.
11. .The robot must have 2 LED lights (LED1,LED2).
12. The robot has to compare the width of cube A and C . If their widths are equal then LED1 must glow.

13. The robot has to compare the widths of B and D .If their widths are equal LED2 must glow.
14. The team which indicates LED1, LED2 properly and completes the path in least time will be announced as the winnner.

ROBOT SPECIFICATIONS:

1. The maximum dimensions of the robot are 30cm x 30cm x 30cm.
2. Robot should be autonomous.
3. The weight of the bot should not exceed 5kgs.
4. Power supply to the robot should not exceed 12V
5. Power supply should be ON board.
6. Tolerance of 10% on dimensions, weight and power supply will be allowed.
7. Participants can use any sensors or mechanism to measure the dimensions.

RULES AND REGULATIONS:

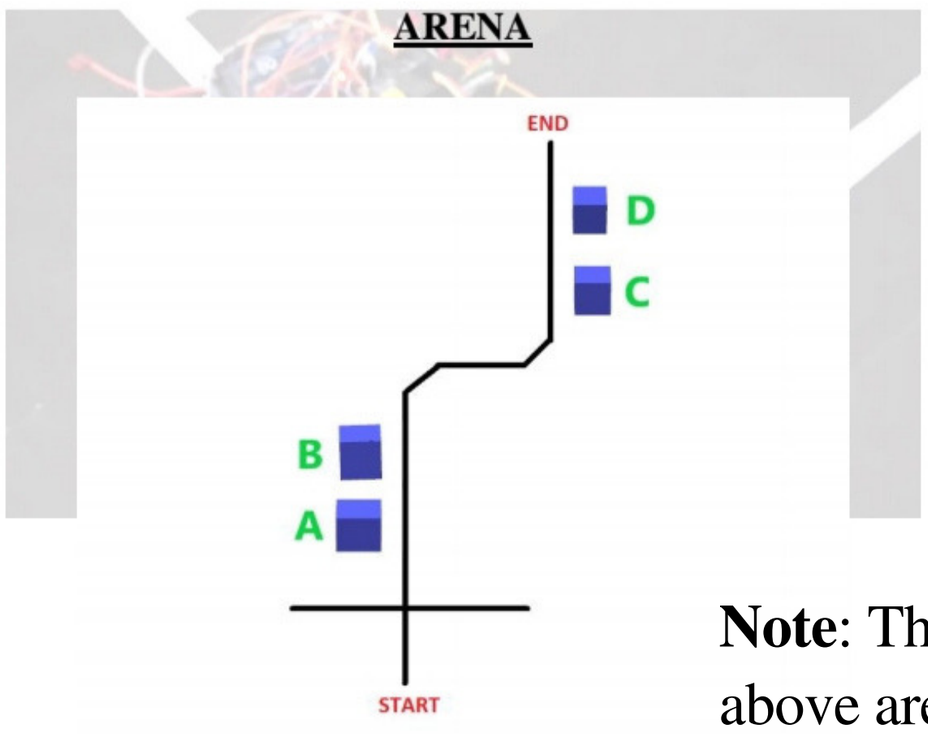
1. A team can consist of a maximum of 4 members.
2. Members of different institutions can form a team and must carry your respective college ID cards.
3. Only 2 members of a team are allowed to stay around the arena(for controlling[at the start and end points] and assisting).
4. Any kind of damage to the arena will not be entertained ,and if done,the robot will be immediately disqualified.
5. No technical assistance will be provided by the coordinators during the time of the event.
6. No practice runs will be provided.

ROBOVANZA

7. Use of an IC engine in any form is not allowed.
8. Human interference (e.g. touching the robot, stepping into the arena) during the game is not allowed.
9. No external power supply will be provided at the time of event.
10. A robot with the base of a toy car and its gearbox as a machine part will be disqualified.
Also, LEGO kits are strictly prohibited.
11. Member participated from a team cannot participate in another team for the same event.
12. A robot is allowed to participate only once in that particular event.
13. The organizers are not responsible for any kind of damage to your robot.
14. In case of any discrepancies, the decision of the coordinator and the event head shall be final, and no further arguments shall be entertained.
15. The teams should bring their own toolkits.

CERTIFICATE POLICY:

A certificate of participation shall be awarded to all participating teams, except for those who were disqualified.
A certificate of appreciation (or excellence) shall be awarded to the winners.



Note: The blue cubes shown above are for representation purpose only.
They will be **white** coloured in the event.

Contact:
Hrithik:7095173368
Date:05-08-2019