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GENERAL RULES:

- Each team will consist of maximum 3 members including a team leader
- The teams have to make an autonomous line follower robot that follow black lines on the white surface under various conditions which includes curved lines, intersections, right angles (90 degree turn), acute angle, line gaps, dot bridge
- The contest will have two rounds - Primary Round and Final Round. A limited number of teams will be selected for the Final round based on total points of the Primary round.
- Number of teams selected for the Final round will be decided on the competition day based on the number of participating teams.
- Primary round consist of basic line following challenges which include curved lines, intersections, right angles (90 degree turn), acute angles.
- In the selection/primary round there will be a mystery box
- The primary round track will be disclosed to public 48 hours before the competition except the what is inside the mystery box
- The final round track will not be disclosed in any case
- There will be 4 checkpoints in the Primary round and 8 checkpoints in the Final round.
- Each team will be given 3 minutes in the Primary round and 5 minutes in the Final round complete the tasks.
- The winning team is declared based on its points.
- Each team has 5 restarts for each round.
- Only 1 member from the team is allowed in the arena during the main run. The following comportments could lead a team to be disqualified:
- Evidence of disrespect to other teams and competitors.
- Evidence of disrespect to competition judges.

ARENA SPECIFICATION:

- The arena is a white rectangular surface with the dimension of 250 cm x 250 cm.(changeable)
- The autonomous robot will have to follow the black lines (on the white surface) which is 2.5 cm wide.
- There will be a Start zone and a Finish zone on the beginning and the end of the line respectively. Both the Start and the Finish zone will be marked with black square shaped boxes with the dimension of 25 cm x 25cm.

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- The distance between two adjacent black lines will be at least 15 cm from center to center.
- The acute angles are not less than 20 degree.
- The curved lines have a radius of curvature of at least 15 cm.
- There is a 10 cm line gap.
- The obstacle is a white cube with the dimension of 10 cm x 10 cm x 10 cm.
- The ascending angle of the bridge will be not more than 30 degree and the descending angle will be not more than 35 degree.

AUTONOMOUS ROBOT SPECIFICATION:

The autonomous robot must satisfy the following design rules.

- Height: Maximum 15 cm
- Length: Maximum 25 cm
- Width: Maximum 25 cm
- Weight: Maximum 2 kg
- Power: Maximum 24 Volt power supply
- Maximum Number of switch allowed is two including the power switch and the reset switch.
- No wired/wireless communication between the operator and the line follower is allowed. If found the team will be disqualified immediately.

FLEXIBILITY:

- If any robot exceeds the maximum dimension, the team will not be disqualified but in that case, the team will concede a penalty of 5 points per cm.
- The robot chassis can be ready-made or hand-made. The teams with Hand-made chassis will get 10 points.
  However, readymade line follower robot (i.e. PiBot of Pololu, Easy LFR of Techshopbd) is not allowed in the competition.
- The robot can have ready-made or hand-made sensor array. The teams with Hand-made sensor array will get 10 points. Sensor Arrays on pcb will not be considered as hand-made.

N.B. If any robot causes any harm to the arena, the team will be disqualified.

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GAMEPLAY:

- The teams must submit their robots for the ratification before the competition. During one's turn, he can receive the robot from the organizers.
- Each team will get 1 minute of calibration time before the main run. In case any team takes more than 1 minute of calibration time, the extra time will be subtracted from the main run time.
- At the start of the main run, the timer is reset and with the instruction of the host the timer starts. The operating member of the team then starts the robot from the Start zone.
- During the run time, picking up the robot or even touching it will cost a restart for the team.
- During any turn, if the total chassis of the robot gets out of the line, it will cost a restart.
- In case of a restart, the operating member of the team can pick up the robot only after the declaration of a restart by the host. Then s/he will have to put the robot before the checkpoint marking.
- During the run time, if the operating member wants to take a restart at any instant, s/he can do so by informing the host.
- In the Final round, if the robot touches the obstacle, it will cost a penalty.
- If the robot stops at the Finish zone, the team will get bonus points.

POINT CRITERIA:

Criteria	Points
Design Bonus	10 + 10
Leaving Start Zone	10
Crossing each checkpoint	50
Stopping at the Finish zone	50
Complete without Restart	20
Crossing the Bridge	50
Avoiding the Obstacle	80

Timer point = Ttotal
- Tcalculated

Here,

Ttotal = The total assigned time in seconds. For Primary round, it is 300 and for Final round, it is 420.

Tcalculated = The total time taken by a team to complete the task.

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PENALTY:

Criteria	Points
Design Penalty	5 points / cm
Restarts	50
Touching the Obstacle	50

N.B. Any decision by the judges are final. In case of any confusion, the team leader can contact the judges during the competition.