Arcade Run

Problem Statement:

Each team will have to build an autonomous microcontroller based line follower bot capable of accepting some manual input at times. A screening round will be held to check if the bot really is a line follower by test-running it on a continuous smooth curved black path. In the next round the bot will have to follow lines on a square grid and upon reaching an intersection, stop and wait for input from the user's manual controller and turn based on the input given.

Game Rules:

1. Starting and End Points will be diagonally opposite to each other.

2. Only 1 member from the team is allowed to control the bot during the play.

3. The junctions will be of three types: Normal, Green and Red. The number of Green and Red junctions will be fixed,   they will be arranged randomly for each team before each play.

4. If bot leaves the line, then penalty will be imposed.

5. The starting procedure of the bot should be simple and should not involve giving bot any manual force or impulse in any direction.

6. Countdown will start when the organizer gives the signal to start.

7. A maximum of 2 restarts will be given to a team. Restart will be given if the bot goes outside the arena. No penalty will be imposed for a restart. During a restart, the bot will have to be restarted by putting it back on the starting point and turned on again on the signal of the judges. In a restart, the timer will not be set back to zero.

8. After Restart, Bot will not be allowed to pass through green and red junctions through which it has already passed. If it goes, it will be considered as penalty and will not be considered for scoring

9. During a restart, a contestant must not feed program to the bot.

10. Maximum time for completion is 5 minutes.
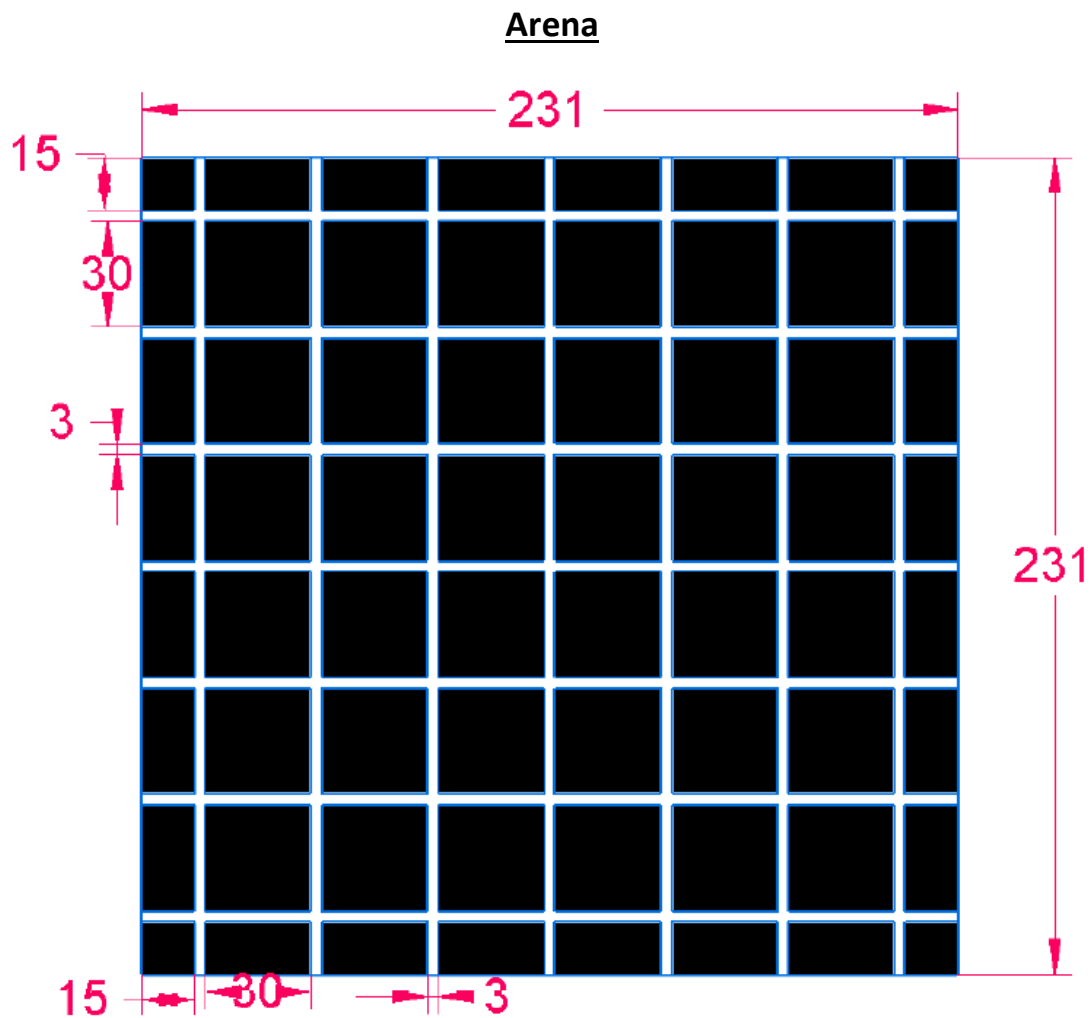
11.Bot should fit within 25cm * 25cm * 25cm box.

Rules and Regulations:

1. Maximum 3 members per Team.

2. Maximum Voltage between any 2 points may be 12 volts.

3. The team will be given 1 minute time before the run for calibration.

4. The time measured by the organisers will be final and will be used for scoring the teams. Time measured by any contestant by any other means is not acceptable for scoring.

5. Organizers' decision shall be treated as final and binding on all.

6. If the team fails to reach the end point, it will be disqualified.

Judging:

Scoring system:

1. 10 points will be awarded for moving through the green junction.

2. -5 points will be awarded for moving through the red junction.

3. -5 points will be awarded for each penalty.

*The team which completes the task with maximum points will be the winner.

*In case of a tie, the team which has taken least time will be the winner.

Arena

*All the dimensions are in cm.

Important Dates:

           1st October   last date for giving team names

           4th October   Club session regarding this event

Participants should form a team and send the mail to following mail IDs for registration to the event.

For any queries contact:

Ashwin Nandpurkar:- +919494424934 (me11b021@iith.ac.in)

Bhavik Ameta:- +919494823575 (ee10b008@iith.ac.in)

Nikhil Bichukale:- +917382186681 (me11b008@iith.ac.in)