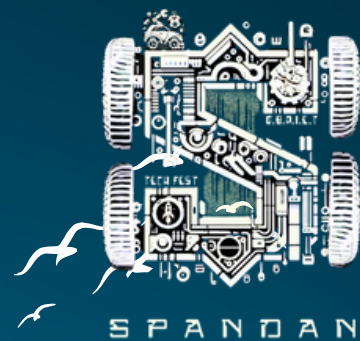




# SPANDAN 2K23



## LINE FOLLOWER ROBOT (LFR)



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# INTRODUCTION

Team will build their own autonomous robot within the specified dimensions to achieve the maximum speed on the given track and reach the destination in minimum time. The robot must start behind the starting point and is considered to have crossed the finishing line if any part of the robot crosses it in a full lap of the course. The robot must follow the black line.

## OBJECTIVE

The task for line following robots is to drive through the track marked with a black line as fast as possible.



# The Robot Specification

## RULES FOR ROBOTS:

1. Batteries must be sealed, immobilized electrolyte type (gel cell, lithium, NiCad, or dry cells).
2. The electric voltage anywhere in the machine should not be more than 12V DC at any point in time for each robot.
3. The robot must be autonomous.
4. Robots must be constructed and programmed in a way that their movement is not limited to only one direction and must move in all directions.
5. No wireless communication between bot and operator will be allowed. Bluetooth, RF Module, etc not allowed on bots.
6. Any robotic parts/building material can be used until the robot meets the above specifications and if the design and construction are primarily the original work of the team.
9. The participating bots must be wireless and autonomous. It can be circular / Rectangular in style.



# The Team: Eligibility For Participation

1. The competition accepts participation of teams.
2. A maximum of 4 members will be allowed to form a team for the competition.



# LFR Game Play

- The robot will be placed at the starting point with the consent of the referee.
- Bots may restart the run if the person handling it feels the necessity. A restart can be requested only if the robot doesn't follow the line, has stopped halfway, or has lost the directions/Black line.
- It is not allowed to add/remove parts on the robot during the run, but adjusting the sensors and changing power supply is permissible with the consent of the referee.
- Checkpoint system will be adopted at the time of competition. All final decisions will be made by referee.
- Team which cover maximum number of check point will be winner.

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Scoring: The robot's performance will be evaluated based on factors such as speed, accuracy, time and successful completion of the maze.

A step function graph is shown. The graph starts at a point labeled "Start" at the bottom right and moves upwards in a series of steps. The final horizontal segment is labeled "Stop".

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