TEAM ISTE PRESENTS

PRODYOGIKI

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LOST LANDER

Abstract:
Once upon a time in a galaxy far away there was an alien species that was much more technologically advanced than us Humans. In their quest for knowledge they had explored various planets. When they discovered the Earth, they were very excited as the planet could possibly harbor life.
They send a rover to this mysterious planet that would act as a pathfinder for future missions. The Lander, however, encounters a problem during atmospheric entry but still manages to land safely. This comes as a major blow to the mission as the camera onboard the rover is now damaged.

Challenge Statement:
The teams are required to design a rover/bot which will be able to complete a given obstacle course and just like real-life scenario the teams would not be able to see neither the obstacle course nor the rover. The rover must be controlled based on the signal it transmits.

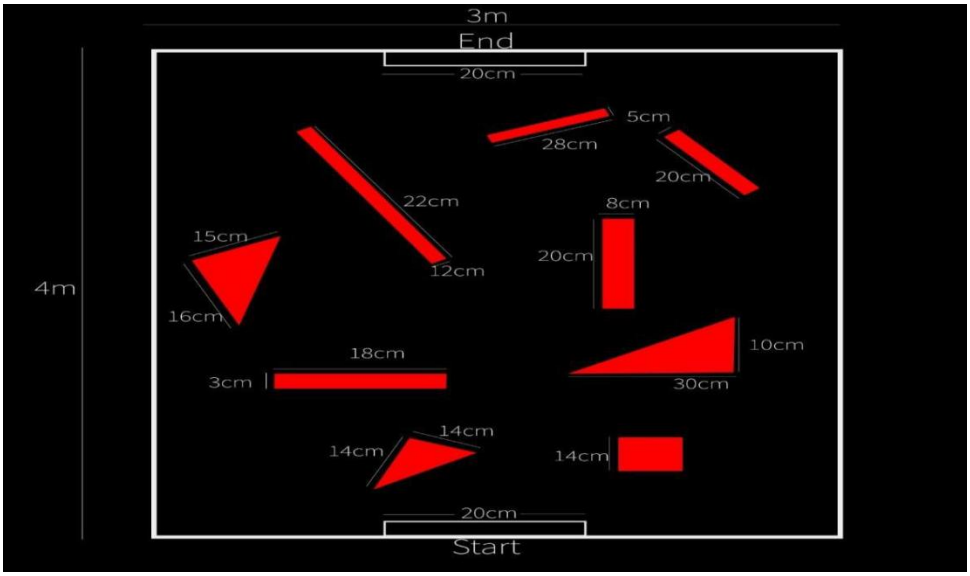
Game play:

- Each team will start from the same starting point when the timer will begin.
- If the rover/bot gets stuck at any obstacle, topples over, or is just unable to move (for example, the wheels lose contact with the ground), the teams will be allowed a restart. **The timer, however, will not be reset.**
- The timer will stop as soon as the bot crosses the finish line.
- The placement of the obstacles will remain the same for all the teams. However, they will be allowed to see it only after completing the task.

Bot Specifications:

The dimensions of the bot must be less than or equal to **250mm X 150mm X 120mm.**
The control mechanism must be **wireless.**
Teams can use a **microcontroller of their choice in their rovers.**
Teams are free to use any kind of sensors (ultrasonic, IR, Proximity sensor etc.) in their rover except camera sensors of any kind in their rover.
Teams are not supposed to use any readymade assemblies.
Teams are not allowed to make use of any sort of camera/visual aids on their bots.

Example Layout of the obstacle course:



Game Rules:

- The bot is not allowed to disturb (slide or move) any components of the obstacle course.
- **A maximum of 10 min will be given to each team.**
- **In case of any disputes/discrepancies, the organizer's decision will be final and binding.**
- **The organizers reserve the right to change any of the above rules as they deem fit.**

Change in the rules, if any will be notified to the registered teams.

Judgment Criteria:

The time taken by the rover will be taken as the basis of evaluation wherein the rover with the least time taken to cross the course will be declared the winner. **If no bot is able to make it to the finish line, the bot that reaches closest to the finish line wins.**