

CELESTA '19

LINE FOLLOWER
(FOR SCHOOL)

RULEBOOK



/CelestaIITP



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www.celesta.org.in

Problem Statement

- Teams have to build an autonomous bot that can follow a black line over a contrasting surface

Eligibility

- Eligibility: Team from any recognized School is eligible to participate. All Participants must bring their respective ID cards.

Team Name: Every team must have an appropriate name. Team's name can't be changed once submitted.

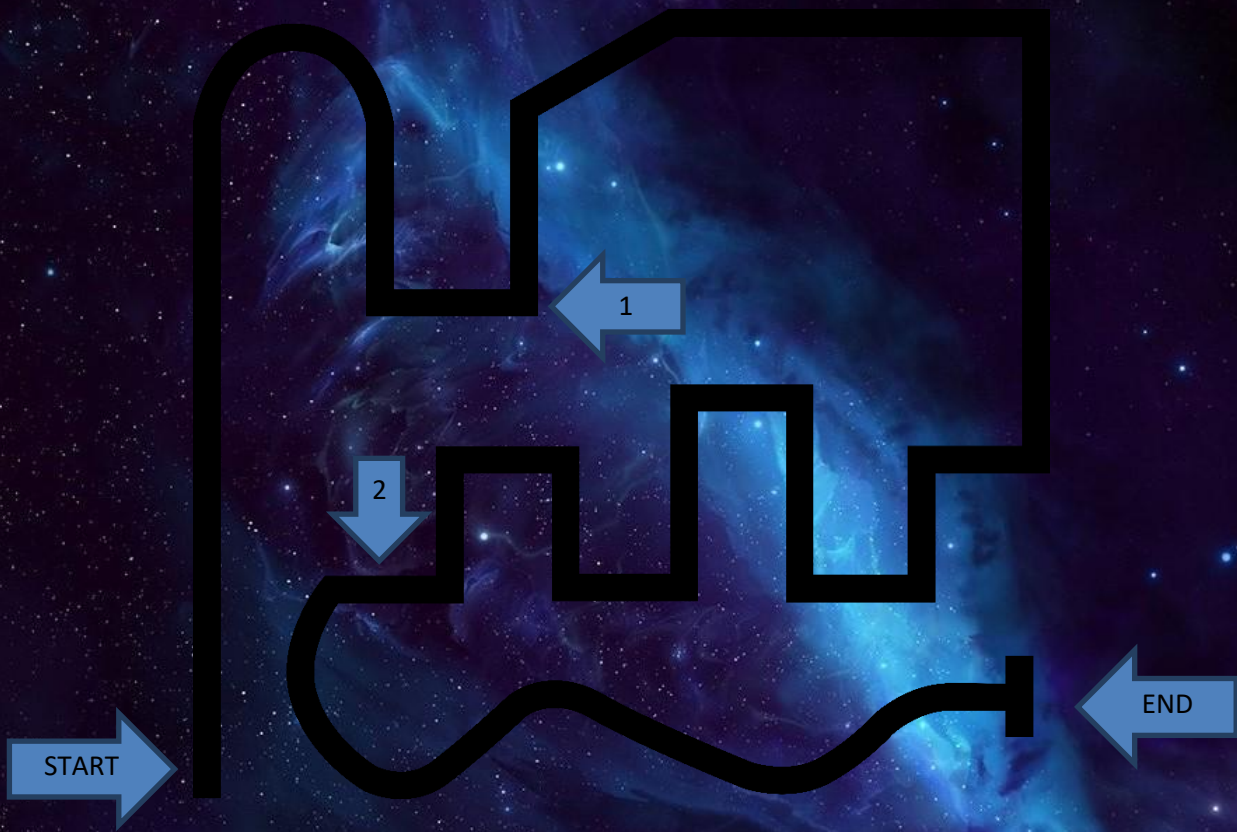
Team Representative: Each team must specify their Team Representative (Leader) at the time of registration on the Website

- All important communications between coordinators and the registered teams will be done through their Team Representative.
- The Team Representatives must submit valid contact details (Mobile no., email ID etc.) at the time of the registration.

Tasks

LEVEL 1

- The first task will check the bot's locomotion capabilities. The bot will have to travel a path by following a thick black line.
- The path consists of curves with some path and have to reach at check point.
- In case of any human intervention, the respective penalties will be awarded.
- Points awarded: ○ 50 points on completion of the level 1 that's checkpoint 1
- -5 points for each human intervention.
- Points inversely proportional to time taken.



LEVEL 2

The Second level is where the real challenge begins.

- The bot will start from start and travel the path to reach checkpoint 2.
- Points awarded same as level 1.

LEVEL 3

Bot with the least time to cover from start to end and max points will be declared as winner.

Tie-Breaker Level

In case of a tie between two or more teams, travel time between T1 and T2 will be used for breaking the tie. In case of a further tie, other quantitative strategies will be employed.

General Rules

- Only one Bot per team is allowed.
- Sharing or exchanging of Bots within teams is prohibited.
- Explicit physical contact with the bot during the course of the event is not allowed without the organizer's permission. Doing so can lead to a penalty or even disqualification.
- In case the bot leaves the defined track, the respective team will have to restart from the Starting Zone. And in case of checkpoints crossed
- Each participant has to bring his/her college Identity Proof to be checked by the organizers at the time of the event.

BOT Specifications

- The size of the bot should not be more than **25x25x10(cm)** proper Care should be taken such that it fits in the arena properly.
- Only DC powered components are allowed. However teams will be provided with an external power source of 220 Volts AC for adapters. Teams are suggested to confine the power source within the bot.
- Teams are allowed to use readymade microcontrollers, an array of LDR, IR or any other sensor as per their requirement.
- Bots with **power source confined within the bot** (i.e. not using an adapter to power the bot) will be **rewarded bonus points**.
- Teams are not allowed to use any ready-made Lego kits or any such assemblies.
- Any type of violation of rules will result in disqualification.

Note: - The organizers reserve the rights to change any or all of the above rules as they deem fit. Decision of organizers will be final and binding on all.