ROBO-MAZE

A **maze** is a tour puzzle in the form of a complex branching passage through which the solver must find a route. The pathways and walls in a maze are fixed. Maze denotes a complex and confusing series of pathways. A maze solver robot is used to find an appropriate path. It is an autonomous vehicle that can drive itself from one point to another without any external assistance. Navigation is accomplished by a system of sensors that drive the corresponding actuators on the vehicles.

Objective:

Build an autonomous, maze solving robot which traverses to find an exit path in the least possible time. The "path" is simply a route which the robot has to find starting from the start point to the finishing point.

Event Description:

All the students enrolled in high school, undergraduate, postgraduate (excluding PhD.) program at any recognized institute are eligible to participate. Each team can consist of maximum 4 members. Each team must declare a name for their machine at the time of competition. All participants must carry valid ID cards of their respective schools/colleges. There will be one and only one round.

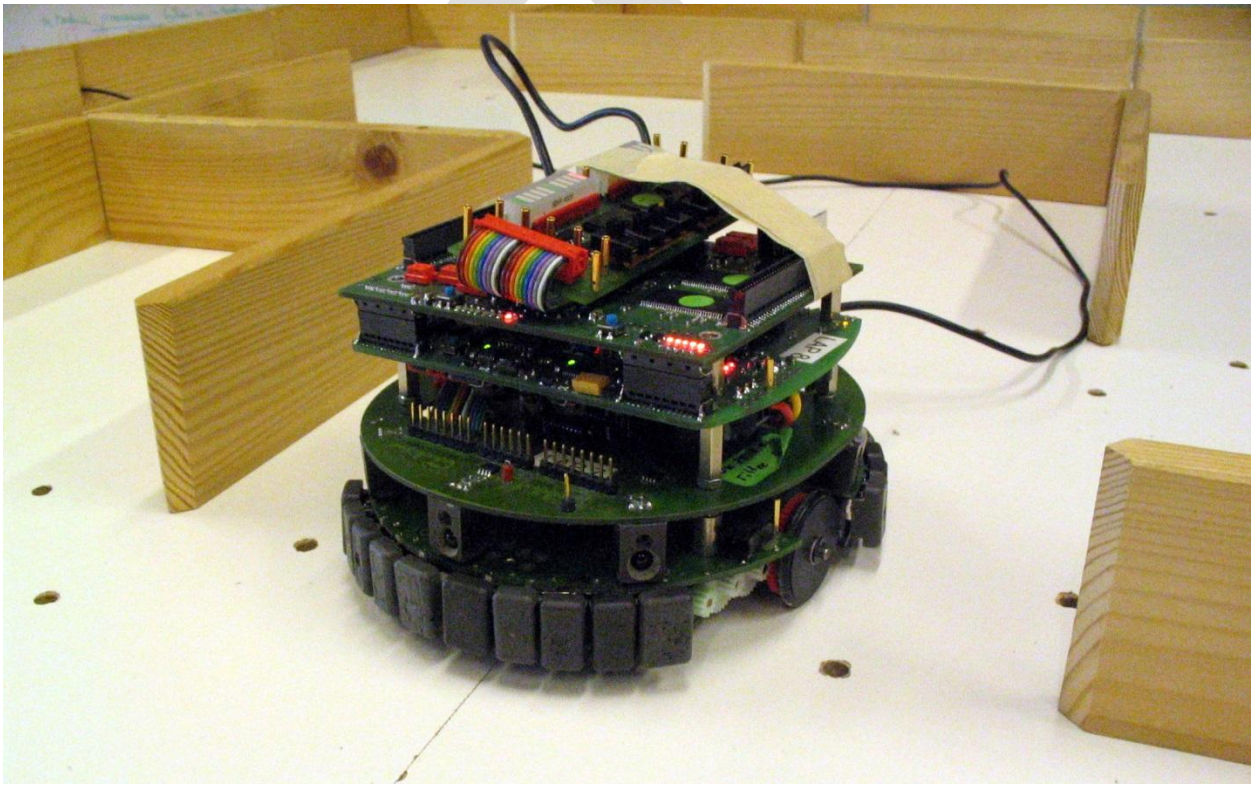
Arena Specification:

Arena size shall not be more than 4m x 4m. Arena will consist of 15-20cm high walls and 25cm wide path. The track will have three way junctions, intersections, and dead ends. Bots will be placed on start point from where they must start solving the maze and reach the end point in minimum possible time. Arena will be unveiled only on the day of competition. Sample arenas will be put up on the website. Teams will be given sufficient time to calibrate their bot for arena before the start of the event.

Rules & Instructions:

1. The bot (with batteries and sensors) must be able to fit in a cube of side 20cm at all times during the course of competition.
2. The maximum permissible weight of bot is 5kg (all inclusive).
3. Bot has to be powered on its own. Maximum operating voltage of robot should not exceed 12V. No wiring or external power supply will be provided.
4. Replacement of battery during the competition is allowed for a maximum of 2 times. Points may be deducted for this. However, replacement of any hardware is not allowed during the competition.
5. Bots can be restarted maximum 4 times during the competition. If it is still not able to reach the end point, bot will be disqualified.
6. Judgment shall be made upon the total time taken to complete the path by bot and upon the number of checkpoints completed successfully. In case, all the competing bots fail to find the correct path in given limit of time, distance covered by each of them will be evaluated.
7. If any team member touches the Robot, in any case except for the restart, team will be disqualified.
8. For every restart, penalty of 5 seconds will be applied. Points will be deducted in this case.
9. In case of restart, the bot will have to start from the latest checkpoint that was completed successfully i.e. bot doesn't need to begin from the start square.
10. Each team will comprise of Maximum 4 students. Only the captain of the team will be allowed to touch the bot, only in case of restart.
11. Qualifying teams from the First round will participate in Second or final round.
12. 10 minute practice sessions may be available on sample tracks before the competition begins.
13. Online registration is compulsory.

Sample Maze :-



NOTE: This is only a sample maze & will not be chosen for competition.

INCEPTUM team wishes you all the best...!!!

For further queries contact the following :-

Apoorv - 9999965329

Hardik - 9811939537

Samnit - 9013290517