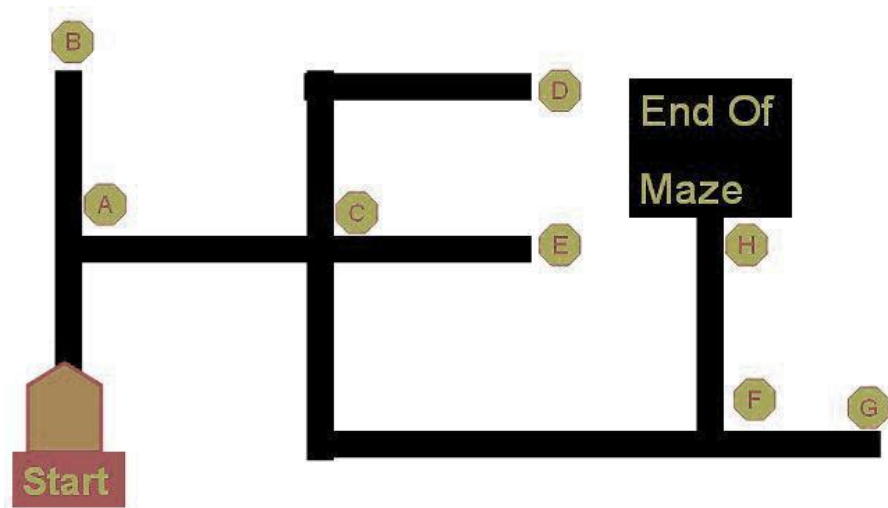


MAZE SOLVER

Objective:

You need to build a robot that is capable of traversing on black lines, intersecting each other at right angles. You need to follow the right path and get to the destination avoiding wrong paths in between. There are different algorithms for this.



General Rules

- ☐ Each competitor will be responsible for setting up one course (totaling 3 different courses) that will be traversed by all competitors' Bots.
- ☐ Round 1 track will be made public two days before the event.
- ☐ Round 2 tracks will be made public only after the successful completion of round 1 and declaration of Round 2 qualifiers.
- ☐ No two teams should participate with the same robot.
- ☐ Computers, programmers and software need to be arranged by the team themselves. We will provide two/three pin sockets with proper
- ☐ The competition is only for autonomous robots; no manual robots will be entertained.
- ☐ The robots should be able to process data on-board. No remotely kept computer should control the robots.

- ☐ The robots have to be designed by the team itself.
- ☐ ☐ Usage of commercially available modules such as sensors, development boards, etc. are allowed; but it is forbidden to use complete robotic-system which is sold readymade for the purpose of this competitions such as Lego kits.

Final Point Calculation

Time taken to complete track will be only awarded to participants who complete the track. Those who fail to complete the entire track or quit mid-way will not be awarded any points and loses their chance to go to next levels.

Time taken to complete track= T

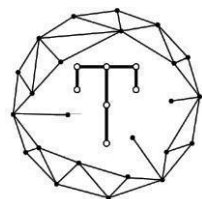
Equivalent point= $T \times 10$

Point scored after crossing the section= P

Final Score= $P - (T \times 10)$

Robot Specification:

- ☐ The robot should fit in a box of dimension 30cm x 30cm.
- ☐ No limitations on height.
- ☐ The maximum weight should not be more than 3.5 kg.
- ☐ The robot can be powered electrically (internal or external). AC power source will be provided near the arena.
- ☐ The bot should be operated at voltage not more than 20V. No Eliminator/Step down converters will be provided (if powered externally).
- ☐ Your robot should be prepared to withstand interferences caused due to background light since the room won't be completely dark.
- ☐



Arena Specification:

The Arena will be declared two days before the event.

Track Specification:

- Track will have multiple sections.
- There will be a checkpoint after each section.
- A bot needs to cross the section and reach the checkpoint to complete the section.
- A checkpoint cross by the bot should be denoted by a buzzer or blinking of led by the bot itself on reaching the checkpoint.
- If a robot reaches a dead end, the owner will have to put the robot to the last crossed checkpoint. Time will not be paused during this.

Teams will be awarded 30 points for each section.
(30*3=90) 10 points will be awarded for start and stop. [5+5=10]

Total of 100 points to be obtained in 1st round.

