
MARG DARSHAK
MAZE SOLVER BOT COMPETITION
NAVIGATE THE CHAOS | INNOVATION IN MOTION
THE ANNUAL COMPETITION
MARG JARSHAK
TEAM TECHNOVATORS
MARG DARSHAK
MARS DARSHAK

"Marg Darshak" — Maze Solver Competition

1. Overview

"Marg Darshak" is an autonomous robotics competition designed to test the algorithmic efficiency, precision, and problem-solving skills of participating teams. Autonomous robots (Micromouses) must explore, navigate, and solve complex, labyrinthine mazes using onboard sensors and real-time decision-making.

2. Arena Specification (The Field)

- **Overall Dimensions:** The competition field occupies a 144 Sq ft area.
- **Grid Structure:** Built from multiples of **25x 25 cm** unit squares.
- **Wall Dimensions:** Walls are approximately **7cm to 17cm** high to **2.5cm to 10cm** thick 5\% tolerance). The internal navigating width per square is 24cm.
- **Start & Destination Points:**
  - The starting point is located at one of the four corners (bounded on three sides by walls) at cell number.
  - The destination/finish line is positioned near the corner of the field. The maze is designed such that simple wall-hugging algorithms cannot solve it.
- **Surface & Colors: Not Specified**

3. Robot Specifications (The Bot)

- **Autonomy & Control:** The robot must be 100% wireless and both manual and autonomous with external wireless communication (e.g., Bluetooth, RF modules Allowed). Power sources must be embedded onboard.
- **Dimensions**: Must fit within a 20cmx 20cmx 20cm box at all times during the run.
- **Weight Limit:** Maximum 1000g (inclusive of battery) with a maximum 5% acceptable tolerance.
- **Prohibited Mechanisms:** Combustion engines, flying, climbing, suction/air-blowing devices, or any mechanisms that scratch, mark, or damage maze walls are strictly prohibited. The bot must not leave any parts behind while navigating.

4. Competition Structure & Gameplay

The competition consists of four progressive rounds. Every trial starts from the designated start line and ends at the finish square.

Round	Total Time (Gameplay + Readiness)	Qualification / Selection Criteria	Penalties & Rules
Elimination Round	6 mins (5 mins gameplay + 1 min readiness) **Manually controlled**	Top 30 teams with fastest single-run times qualify	Max 3 trials. Max 3 physical touches (30s max hardware repair time). Max 3 direction resets without penalty.
Second Round	10 mins (8 mins gameplay + 2 mins readiness) **Manually controlled**	Top 15 teams qualify for Round 3	Standard rules apply.
Third Round	10 mins (8 mins gameplay + 2 mins readiness) **Manually controlled**	Top 5 teams qualify for Final Round	Standard rules apply.
Final Round	10 mins (8 mins gameplay + 2 mins readiness) **Fully Automated**	Top 3 teams awarded 1st, 2nd, and 3rd place based on minimum final time	Max 3 trials. Touch Penalty: +10s per touch. Rotation Penalty: +15s per orientation change.

5. Scoring & Referee Authority

- **Scoring Criterion:** Winner selection is purely based on the fastest official time to reach the center finish line out of up to 3 permitted trials.
- **Referees:** The Referee holds full and final authority on all match decisions, rule applications, and scorekeeper verification.
- **Communication:** Only designated Bot Handlers or Team Captains are allowed to speak directly with the main referee during match play.

6. Code of Conduct & Prohibited Activities

- Unruly behavior, physical contact, or disrespect toward judges will lead to immediate team disqualification.
- Use of wired devices, laser pointers, ready made, or alcohol/substances in pit areas or arena grounds is prohibited.
- Teams may not touch or alter another team's bot or equipment without explicit consent.

7. Prize Money & Certificate Distribution

- The total prize and recognition **pool for Marg Darshak is ₹15,000,** split into ₹10,000 Cash Pool and ₹5,000 Equivalent Value in Official Certification & Trophies.
- **Breakdown:**
- 1st Place Winner: ₹10,000 Cash + Winner Trophy + Certificate of Excellence
- 2nd Place Runner-Up: ₹5,000 Cash + Runner-Up Trophy + Certificate of Excellence
- 3rd Place Second Runner-Up: Certificate of Excellence
- All Participants: Official Participation Certificates & Meritorious Recognition.

Note:

- **Prior to prize disbursal, all team members must fill out and sign the official Prize Allocation Form.**
- **Minor rules and regulation can be changed on spot by organizers**

8. Official Contact Details

- **Faculty Coodinator :**

1. Mr. P. Sanni Kumar **- +91 6362527976**
2. Mr. Sumeet Hibare - **+91 7975979134**

- **Students Coodinator :**

1. Aditya - **+91 97313 26347**
2. Vaishnavi - **+91 94488 02593**


Thank You