



RRC AUTONOMOUS

General Rules:

1. The team who will complete the track in minimum time will win.
2. A team may have a maximum of 5 members. Solo participation is accepted as well.
3. Maximum dimension of the bot: **20 cm x 20 cm x 20 cm.**
4. The track width provided to you will be **2.5 cm.**
5. There will be 2 rounds for all events: Prelims and Finals (except Flash Event).
6. There will be different tracks for prelims and finals.
7. No ready-made bots will be allowed.(e.g. Kakarobot /ItchiBot)
In case any participants uses ready-made bot then the coordinator has the full right to ask participants to make changes in the code on the spot . If they fail to do so , then the coordinator has the full right to disqualify them.
8. Adopting unfair means will lead to the disqualification of the team.
9. The right spirit of participation is expected from every participant.
10. Once the bot is on track for final run then **no code** change will be allowed.
11. If anyone is using wifi or Bluetooth module they need to disconnect it before giving final run.

Event Name: **Track-Hunter**

Participants must design an autonomous bot that follows a predefined track from the starting point to the endpoint while navigating obstacles and checkpoints in minimum time.

Some rules must be followed during this event:

1. The bot will follow either **white line on black surface** or **black line on white surface** or **both**
2. The bot must complete the whole track and can pass through every hurdle in it, they can skip the hurdle too and also it must stop at the endpoint.
3. The time taken by the robot to finish the run will be recorded in **seconds**.
4. Whenever a bot reaches the checkpoint, it is supposed to indicate that with a suitable indicator (like LED blinking or buzzer).
5. At the endpoint , the bot must stop for at least **5 Secs** .
6. For a clear indication at every checkpoint, from your timing **15** second will be reduced.
7. On each hand touch, **15** seconds will be added to your total timing.
8. On stopping the bot at the endpoint, **20** seconds will be reduced from your total timing.
9. On skipping any hurdle, **30** seconds will be added to your total timing.

10. Some hurdles would be specified as **unskippable** before the event starts.
11. If a hurdle is Partially crossed or incorrectly bypassed → Judges decide if it counts as **skipped**.

Prelims:

1. All the participants will be provided some time for trials on the track and then a final will be taken.
2. While performing the final, one restart can be given without deducting any points (if there is any technical problem).
3. Depending on the time taken by the bot to complete the track winners will be qualified for the finals.
4. One hand touch will be free.

Finals: -

1. All the participants will be provided some time for trials on the track and then a final will be taken.
2. Depending on the time taken by the bot to compete the track winners will be selected.
3. Two hand touch will be free.

Contacts:

Jeetu : +91 7008799264

Ankit : +91 7602004834

Satwik : +91 8116379009

Event Name: Line Follower Race (Flash Event)

There will be two bots running at the same time from the starting to the ending point. The bots must follow a black line on the white surface passing through simple hurdles in the track.

1. Both the bots must complete the whole track and pass through every hurdle in it; also it must stop at the endpoint.
2. There will be two same tracks on which the bots will start the race.
3. The time taken by the robot to finish the run will be recorded in seconds.
4. No money will be refunded once paid.

Rules: -

1. One trial will be given to each team just for calibration.
2. Any team can challenge another opponent.
3. Both the bots will start at the same time.
4. On hand touch team will be disqualified.
5. Spot registration with amounts of Rs. 300/400/500 per team.
6. Winning team gets an amount of Rs. 450/600/750 on the spot.
7. Between the two bots which will reach the endpoint first will be the winner.

Contacts:
Jeetu : +91 7008799264
Ankit : +91 7602004834
Satwik : +91 8116379009

Event Name: **Maze Solver**

The competition will be conducted **without a preliminary round**. All registered teams will directly participate in the final format.

Participants will be provided a designated time slot to test their bots on a **partial section of the track prior to the mapping run**. During this period, they may perform **calibration, debugging, and necessary adjustments** to ensure optimal performance.

Phase I (Mapping Run)

1. Each team will be allowed **one initial run** to map and analyse the maze. This run is intended solely for understanding the track layout and optimizing the bot's navigation strategy.
2. Each team is allowed **one technical timeout** during their turn. The duration and conditions of the timeout will be determined by the organizers.

Phase II (Final Run)

1. Teams must perform a **final run** after the **mapping run**.
2. **Hand touch is allowed** during the final run; however:
 - The bot must be **restarted from the last successfully crossed checkpoint**.
 - The decision of the checkpoint crossed will be at the discretion of the judges.
3. Multiple **checkpoints will be marked on the track using visible indicators (dots)**. There will be no bonus for crossing checkpoints.
4. The winner will be determined based on the **least time taken** to successfully complete the maze.
5. The bot must **come to a complete stop at the designated endpoint**. Failure to stop at the endpoint will result in a **penalty of +10 seconds** added to the total time.

Contacts:
Jeetu : +91 7008799264
Ankit : +91 7602004834
Satwik : +91 8116379009

The decision of the referees/judges shall be final and binding. Any failure to comply with their decision may result in penalties or direct disqualification, at the discretion of the organizing team.

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