ALGORHYTHM 2024 - 2025
AQUA SURGE

Objective :-

A team task , to build a boat from a specific size and should complete its track as fast as possible.

Arena :-

The game field consists of an arena with dimensions 304cm x 182cm (l x b) . It consists of the following :-

1. The arena consists of random paths made up of PVC pipes.
2. The width of all the PVC pipes will be 12 mm.
3. Further in the document is a sample photo of the arena. The actual arena at the competition will consist of alterations in the path.
4. A finish line is present at the end zone of the arena to indicate the end position.

Note :- The dimensions of the arena will be accurate to within5% or 20mm , whichever is less.

Gameplay :-

1. There will be two starting points and one endpoint .
2. The arena will consist of a maze-like structure.
3. Participants must navigate and solve the maze between the start and the endpoint.

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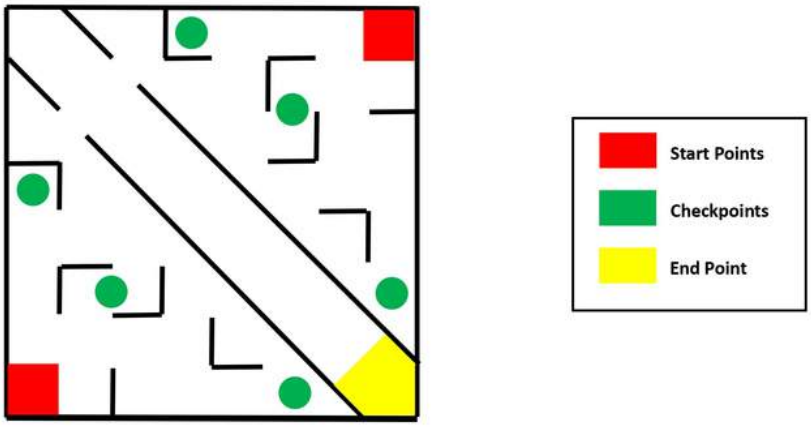
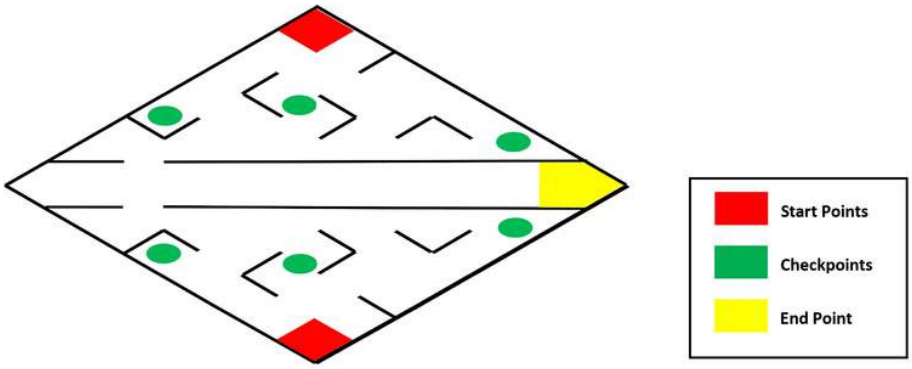
4.After solving the maze, a long stretch will be provided for a speed run.
5. The participant who reaches the endpoint first will be declared the winner and receive a reward.

TOP VIEW



SIDE VIEW



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Bot specification :-

1. The robot must be totally fitting into a 400mm x 200mm x 200mm (l x b x h) cuboid i.e. the bot should be less than the given dimensions.
2. Power supply should be on the board. Individual teams should bring their own power supply.
3. Using lego pieces or any ready-made parts are allowed , but ready made bots are strictly not allowed.
4. Robots should not cause any harm to the arena in a combustible way, or in any other way due to safety reasons.
5. For wired bots, the wire should have minimum length of 4m.
6. For wireless bots they can use Bluetooth, WIFI or NRF module only. The radio used must not cause any harm to the standard frequencies.

Rules :-

General Rules :-

1. Safety Compliance :-
   a. Robots must adhere to safety guidelines, including size and weight restrictions.
   b. Use of hazardous materials or unsafe design is prohibited.
2. Judging and Appeals :-
   a. Referees have the final say on scoring and penalties.
   b. Team may appeal decisions, but the ruling of the head judge is biding.

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3. Arena Maintenance :-
    a. Teams are not allowed to tamper with or modify the arena layout

Performance Rules :-

1. Timing :-
    a. Each match lasts exactly 2 minutes.
    b. Exceeding in the time limit results in penalty.
2. Collision and Damage :-
    a. Robots must avoid collisions with obstacles or other robots.
    b. Intentional damage to the arena or other robots is grounds for disqualification.
3. Reset Rule :-
    a. If a robot gets stuck, it may reset to the start Zone, incurring a time penalty.

Scoring Rules :-

- Total Points = points of extra zones - points deducted in total + points on the maze solved + points for speed run.
- Point structure :-

1. If bots touches the arena walls and maze more than 3 times, 1 point will be deducted
2. After 3 touches , 0.25 point will be deducted for every touch.
3. Maze contains some bonus point zones. If the bot passes through those zones, bonus points will be given.

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4. Some points will be given based on the time taken for speed-run zone.

Team Specification:-

- A team may consist of a maximum of 4 participants. Students from **different educational Institutes** can form a team.

Eligibility :-

- All students with a valid Student identity card of their respective educational institutes are eligible to participate.

Certificate Policy :-

- 1st Position :- 5000 /-
- 2nd Position :- 3000 /-

And all the people participating will get an E-certificate of Participation.

Conclusion :-

- We hope this experience will inspire you to dive deeper into the world of robotics and technology. Stay connected with us for future events, workshops, and challenges that push the boundaries of innovation.
- Until next time, keep exploring, keep building, and keep racing! Safe travels, and we look forward to see you at the next Aquabot Race.

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