X-CONSTRUCTION

Introduction

You may delay but time will not...so buckle up! As time and tide waits for none

Mr. Baba is a newly recruited delivery man working in a COURIER COMPANY. Delivering couriers at the right place, to the right person, within the stipulated time is the only way he earns to live. The one condition that Baba needs to fulfill is to deliver his courier in the least possible time, failing which his salary will be deducted to some extent. Being a newly recruited member Baba is not familiar with the path. To earn his living Baba need to construct the right path from amongst the two different paths, violating which deducts his salary.

PROBLEM STATEMENT

Build an autonomous bot (Line Follower) that can reach to its final destination. But the path to the destination is broken at a few places and it has to be fixed before the autonomous bot traverses the path. A manual robot will be provided at the event to first fix the path and only after that the autonomous bot will get going!

Event Rules

- The event will consist of only one round.
- Each team can take two runs and the best score out of the two runs will be recorded.
- In case of any run time errors two timeouts each of 30 sec will be given to rectify the mistake in the bot.
- Any damage to the arena by the bot will lead to its immediate disqualification.

BOT

a) Autonomous Bot

1. Each team is allowed to have only a single bot.

2. Bot dimensions should not exceed 25cm*25cm*15cm (l*b*h).

3. Ready-made sensors & development boards can be used but no other part of the robot should contain any ready-made components.

4. The bot shouldn't be constructed using Lego kits or readymade mechanism.

5. Bot may have an on-board or off board power supply.

6. The maximum voltage difference between any two points should not exceed 12V.

b) Manual Bot

It will be provided by the organizers at the event.
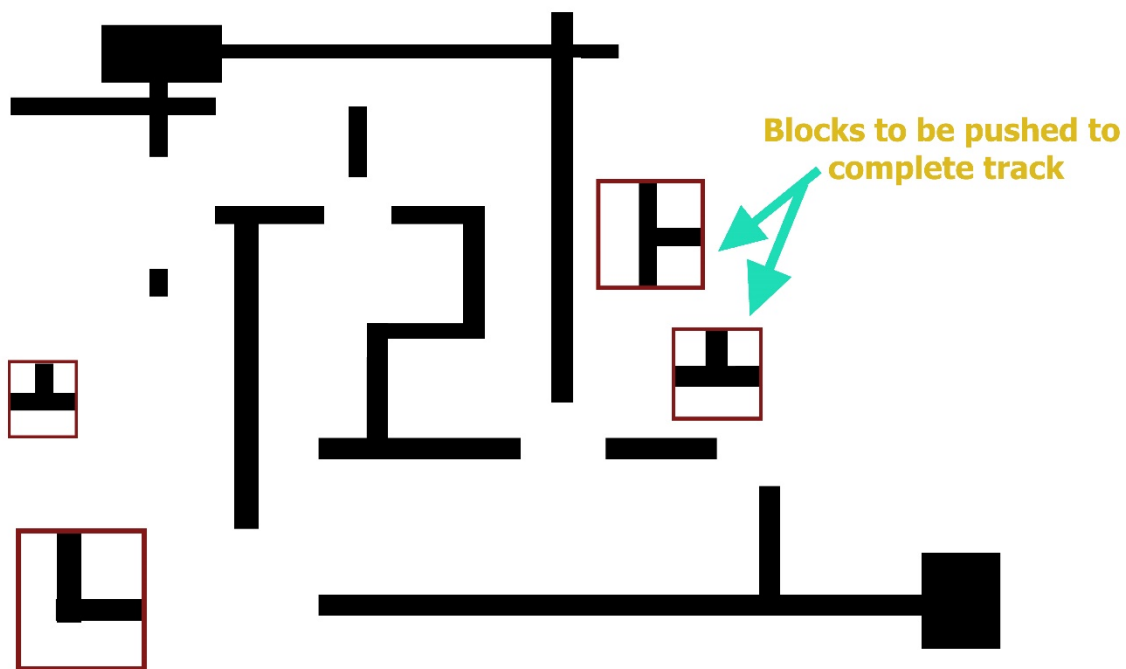
TRACK-

1. Width of the track is 40cms (for autonomous robot).

2. The autonomous bot has to traverse black line over white arena and the width of the black line is 2cm.

3. The path will consists of curves, turns of up to 90 degrees and cross points.

4. There will be no hurdles in the path of manual robot.

5. The block to be fixed by the manual robot will have a maximum dimension of (40 cm * 40cm * 40cm) (l*b*h).

SCORING

1. Each team will be given 300 points initially.

2. The maximum time limit for completion of event is 3 minutes.

3. Team can take only one restart but the in case of restart time will not be stopped.

4. For each man handling 25 points will be deducted. There is no limit for man handling.

5. In case of man handling the bot will be placed on previous checkpoint.

6. A team cannot skip any obstacle/gap without at least attempting it once.

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7. A team can skip as many times as they wish to, but it will result in a penalty of 50 points from their total score, each time.

8. Points fetched on clearing checkpoint will depend on its complexity. (will be declared at the time of event)

9. The team taking minimum time to complete the path using manual bot and with maximum points in autonomous bot will be declared as winner.

ARENA-

Blocks to be pushed to complete track

RULES-

1. Each team can consist of a maximum of 4 members.

2. Each team should have unique participants i.e. no two teams can have even a single participant common.

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3. The team members can be from different institutes or colleges.

4. All participants should carry a valid identity card of their respective educational institutes during the event.

5. The right spirit of participation is expected from the participants.

6. The decision of the JUDGES shall be final and binding.

Certificate & Prize policy

Certificate of Excellence and prize money will be given to top 2 teams.

Event Coordinator

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