Track-O-Luna

[INTRODUCTION]

Sherlock Holmes and Dr. Watson are on a leave after solving some awesome mysteries thrown by Moriarty. But then they find Mrs. Hudson missing from home. No wonders, again Moriarty is back into action. Now they have to rescue Mrs. Hudson by deciphering the riddles by Moriarty. Dr. Watson is on the way to Mrs. Hudson but then he finds himself in a dungeon. Sherlock should solve the puzzles and help Dr. Watson to rescue Mrs. Hudson.

[PROBLEM STATEMENT]

All you have to do is to prepare an autonomous robot capable of making some lower level decisions itself and a manual robot capable of picking and dropping blocks on the arena and perform given task.
The OBJECTIVE is to complete tasks as fast as possible. The score will be awarded on the basis of completion time.

[GAME PLAY]

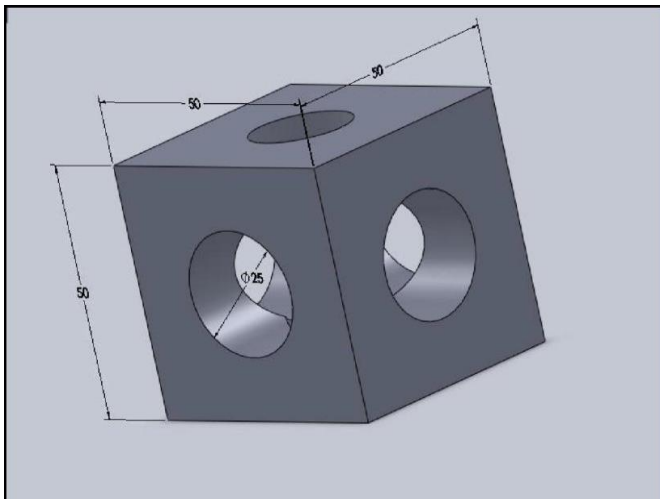
- **Pre-Game Setup**
  1. Each team will be given a slot of 15 minutes to calibrate their Autonomous bot.
  2. Starting Areas for Manual Robot and Autonomous Robot are Manual Start Zone and Autonomous Start Zone.
- **Tasks and Stages**

1. A puzzle will be given to the teams to solve whose answer will be a two digit numbers.
2. Manual robot picks up the first digit of the puzzle answer block and puts it in the slot to open the gate of check point 2.
3. As soon as the gate is opened the autonomus bot has to be switched on and it has to move on the given path.
4. Autonomus robot follows the curve ,reaches the end of the line and pushes a button to open gate to the final check point.

5. Now the manual robot brings the remaining digit to complete the puzzle code.
   - ❖ **If the teams do not have a manual robot, then it will be provided by the organizers.(Under this condition, some penalty points will be deducted from the final scores of the team)**

[ARENA SPECIFICATION]

1. Line follower will have to follow white line of width **30 mm** on a black background.
2. Arena will be disclose on the event day.
3. The dimensions of the block to be lifted will be **50 mm x 50 mm x 50 mm** with holes of **25 mm** diameter drilled through all sides.



[ROBOT SPECIFICATION]

1. Manual Robot cannot exceed its dimensions more than **35cm X 20cm**(length X width).There are no limitations for height and weight for robot.
2. The autonomous robot must fit within a box of dimension **20cm x 20cm x 20cm** before starting the match and weigh less than 3 kg.

[GENERAL RULE]

1. All the students enrolled in high school, undergraduate, postgraduate (excluding PhD.) program at any recognized institute (identity card will be checked) are eligible to participate.
2. A team can consist of a maximum of **5 members.**
3. Students from different educational institutes can form a team.
4. The controlling of robot can be wired or wireless.
5. On board Power supply or external power supply can be used. We will only provide 220v 50Hz AC power source.
6. The motors used in the robots should not have voltage rating more than 24V
7. The robots must not contain any combustible, corrosive, or otherwise dangerous materials for safety reasons. No explosive compression or decompression, either internal or external is permitted.
8. The organizers hold the right to change any or all of the above rules as they deem fit.
9. Change in rules, if any, will be highlighted on the website and notified too.
10. Judges have the right to disqualify any team whose working mechanism or game strategy is considered hazardous in any way.
11. In case any kind of dispute arises **the judges' decision will be considered final and binding to all** and **no argument** will be entertained.