ARM OF ACHELOUS

Problem Statement :

To build a Robot that can lift a given load using a Hydraulic arm.

Robot specifications :

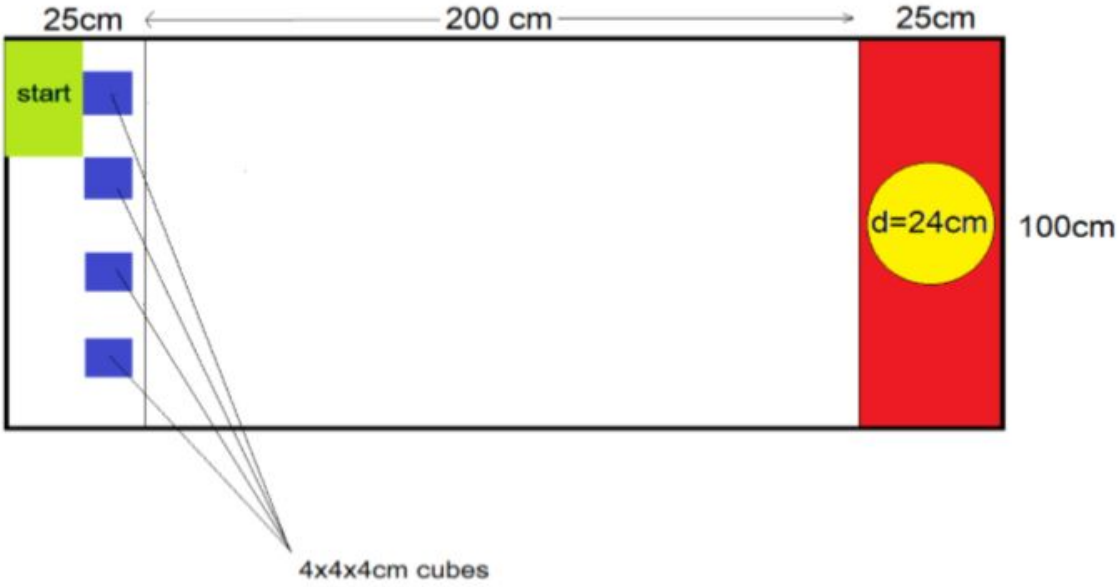
- Participants have to bring a Robot that can lift a given load using a hydraulic arm.
- The locomotive part of the robot must be electrically powered.
- The controller can be either wired or wireless.

Round 1:

1. There will be four balls and four boxes assigned to each other.
2. Teams have to pick the balls and drop them in their respective boxes.
3. All the boxes will be close to the arm such that locomotion does not have any part to play in this round.
4. Maximum time given will be 90 seconds.
5. Teams which perform this in minimum time will be qualified to the next round.
6. Top 24 teams will be selected for the next round.

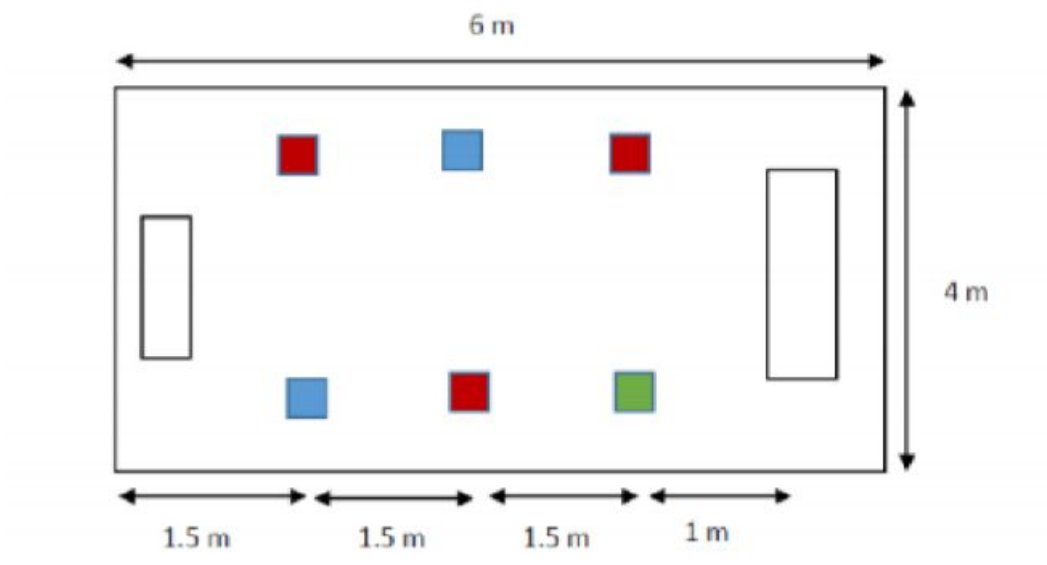
Round 2:

1. The bot will be placed in the start region towards the first cube.
2. The bot must start from there and take the cube to the circle at other end and place there.
3. Within 2 minutes the bot needs to place as many cubes as it can.
4. For the first cube, the team will get 150 points.
5. For each cube stacked, the team will be given 150+(n-1)*75 points.
6. After 2 min of start, the bot must stop and the distance of the bot from the starting line is measured and the team is awarded the points half of that of the distance. This will be not applicable only for the return journey.
8. Top 10 teams will be selected for the next round.



<u>Final Round</u> :

1. In this round, the teams will have to arrange the colored cubes and a prism in a certain pattern at the checkpoint.
2. The top 3 teams to complete the task in the minimum time will be declared winners.



3. The task which has to be performed will be disclosed at the start of the round.

EVENT RULES :

1. All participants are required to report 15 min before their allotted slot to the reporting desk, being late will be subjected to disqualification.
2. Any misbehavior of participant during the event may lead to disqualification.
3. Should not disturb the other participants during the event, this would lead to disqualification.

GENERAL RULES :

1. Every team has to register online on the official Kshitij website for the competition.
2. A Team ID will be allocated to the team on registration which shall be used for future references.
3. LEGO kits or its spare parts or pre-made mechanical parts are not allowed.
4. A team can register at any point of time before and can submit final abstract(as mentioned in the structure).
5. The decision of the organizers or judges shall be treated as final and binding on all.
6. No responsibility will be held by Kshitij, IIT Kharagpur for any late, lost or misdirected entries.
7. Note that at any point in time the latest information will be that which is on the website. However, registered participants will be informed through mail about any changes.

Team:

1) Participating team size should be limited to a maximum of 4 individuals.
2) The students must carry valid student ID cards of their college which they will be required to produce at the time of registration.
3) Students from different institutes can be a part of the same team.

Note

Participants can get a tutorial by clicking here.

Prizes

The Winner will have to mail the following information (immediately after the announcement of results in the Official website of Kshitij) to Kshitij team.
Subject: Kshitij, team id- your position (example- Kshitij, AA1234 – 1st position)
The body of mail-

1. Account Holder's Name
2. Account Number
3. Bank name and Branch name.
4. IFSC Code