EVENT DESCRIPTION:

Robots are essentially a self-contained tribute to the wonders of technology. Today, world's military is building surveillance robots that it hopes will help security and law enforcement personnel detect trouble while remaining out of harm's way.

But for now, your task is to build a wireless video surveillance robot that will be tested for speed and manoeuvrability.

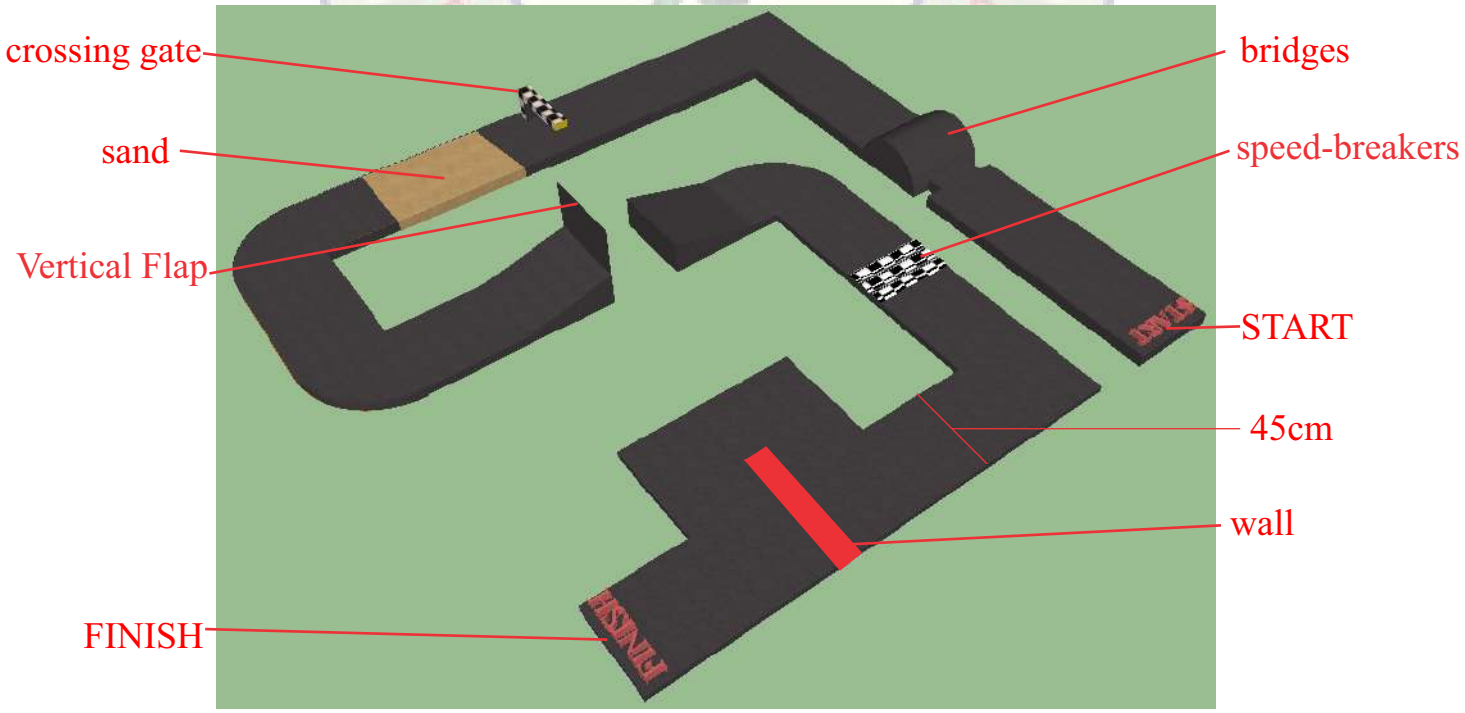
PROBLEM STATEMENT:

This event comprises 2 rounds:

ROUND 1:

It's an elimination round. In this round, the participants have to design a robot that will be tested for speed, manoeuvrability and handling on a path consisting of speed-breakers, bridges, crossing gate and a portion of the track consisting of sand. It requires the participant to build a remote controlled (wireless) car/robot that could traverse the specified track in the least possible time.

The arena for this round is somewhat like this:

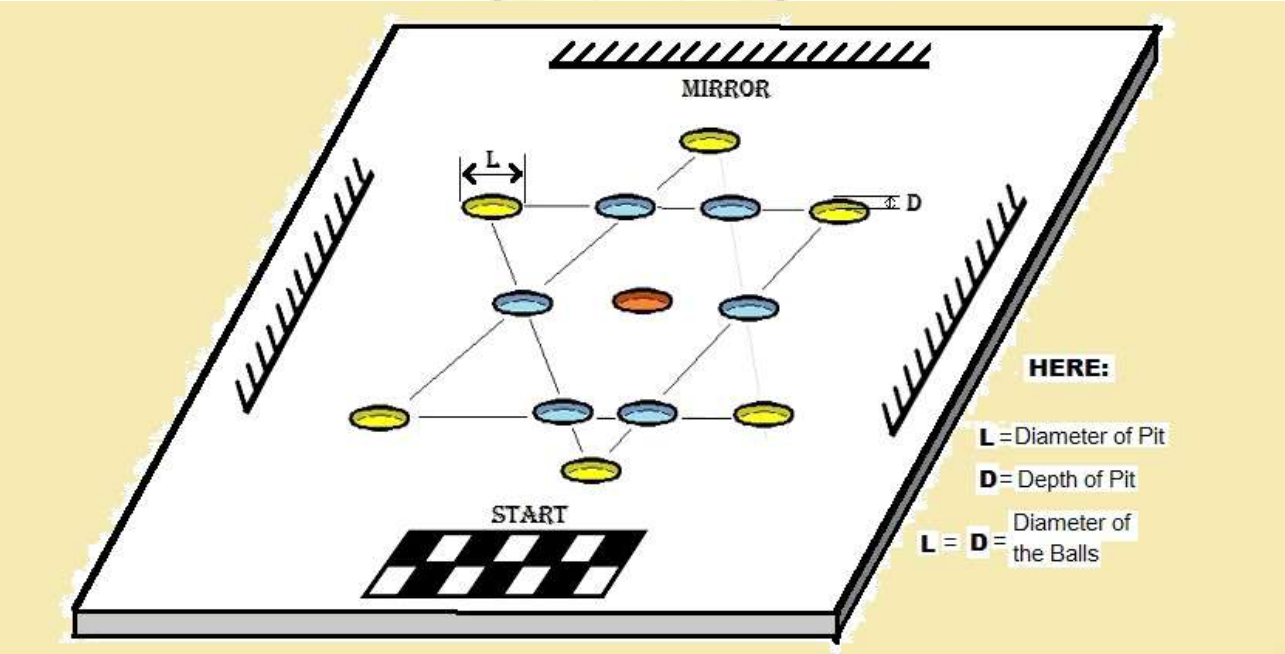


Arena Description:

- **Crossing Gate:** In order to pass through the gate, robot has to press a button fixed at one side of the crossing gate.
- **Vertical Flap:** It is used to connect the two dissociated platforms as shown in the figure above.
- All the inclinations will not be more than 15 degrees.

ROUND 2:
The arena consists of some pits at the centre as shown in the image below. Teams have to place the right coloured ball in the appropriate pit (e.g. Blue ball in blue pit). This sounds a little easy so to increase the difficulty, some portions of the walls surrounding arena will be having mirrors. The faster you complete this challenge, the more points you earn.

The arena for this round is somewhat like this:



JUDGING CRITERIA:

ROUND 1:
- Each team will be given two attempts to complete this stage.
- The teams have to complete the task in the minimum time possible.
- There will be a certain number of check points on the track. If a robot falls from a height off the track or gets stuck, then it will be placed back on the last check point the robot has passed. This will be done by the organizers.
- Points will be deducted for each/every human interference.
- Points will be deducted if the robot touches the crash barriers on sides of the track.

ROUND 2:
- Points will be deducted if the wrong coloured ball is placed in a pit.
- Some surprise hurdles will be added at the time of event.
- This round will be judged on the basis of timing and handling skills.

BOT DESCRIPTION:

- The actual arena will be disclosed at the time of the event. Though, the hurdles will remain same. Only their positions will be changed.
- The maximum dimensions of the robot allowed are 30cm x 30cm x 30cm (lxbxh).
- There is no limitation on the weight of the robot.
- There is no limitation on the type or number of motors or servos that can be used.
- Power supply to the robot can be wired or wireless.
- Voltage must not be more than 24V between any two points.
- If robot is supplied with AC power, RMS voltage between any two points can't be greater than 24V.
- To eye the track/arena, teams will have to use their android mobile phone. The mobile phone should be fixed on the Robot properly with a protective cover to protect it from any mishap.
- Participating teams will have to send a clear photo of their model and a short description on it by Sunday, 1st October at effulgenceknit2k17@gmail.com
- Robot found damaging the arena will be immediately disqualified.

NOTE: Teams should bring spare parts (Batteries, Motors, etc.) to the event along with the necessary tools for immediate repairs. The organisers will not provide/sell any such equipment.

RULES:

- Registration can be done on the spot, though it is highly appreciated to register in advance.
- Only teams of maximum four members can participate in this event.
- There is no restriction regarding year and branch for the team members.
- The members of a team can be of different colleges.
- Event coordinator's decision will be final in case of any conflicts.
- Rules and regulations are subject to change. If any changes are made, it will be duly informed to the participants.

NOTE: Participants are requested to keep checking this webpage 1-2 weeks prior to the event in case of any modification.

CONTACTS:

Event co-ordinators:-

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