Catch'em All

Problem Statement:

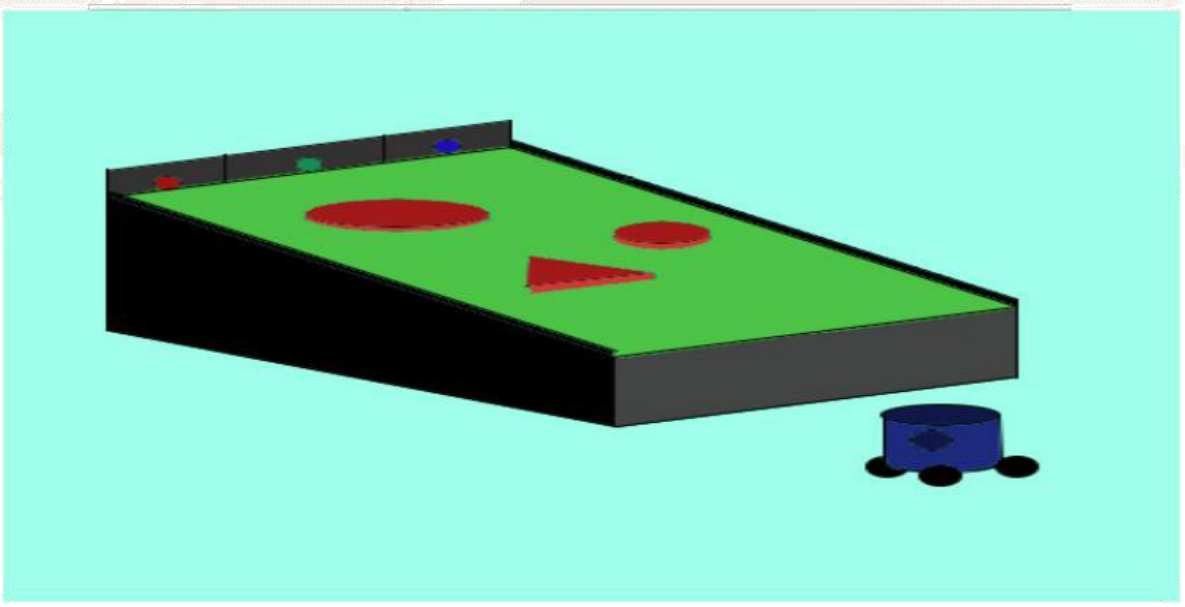
Lord Arjun goes in swayamvar of Draupadi and the one who wanted to win her was to look below in the oil and aim at the rotating fish overhead. Lord Arjun with his skills struck successfully right in the eye of the fish. The task is to bring out the Arjun inside you and aim masterfully. You need to prepare manual bots which need to catch the balls right in the target which is like the eye of the fish. The one having the knowledge, determination and concentration like Arjun will achieve his ultimate goal of victory.

Description:

The manually controlled bot will travel an obstacle course to reach the main play arena. A bot is supposed to travel front and back in order to catch the balls. The main arena is an inclined surface containing different types of obstacles so that the balls while coming down change their paths many times in order to confuse the participant maneuvering the bot. The balls are of different colors having different points. The bot would have to move such that it catches the most number of balls and simultaneously not catching the balls having negative points. The bot having the maximum number of points wins this event.

The Arena:

- The manually controlled bot will cross an obstacle course to reach the main play area. The course may consist of obstacles like wedges, rocks, etc.
- The main play area will consist of an elevated inclined surface on which several obstacles will be placed.
- The colored balls will be released from the slits shown in the figure.
- The **obstacles will be placed randomly and would be rotating based on the speed of ball in the original arena**. (Here they are shown for understanding purpose only).

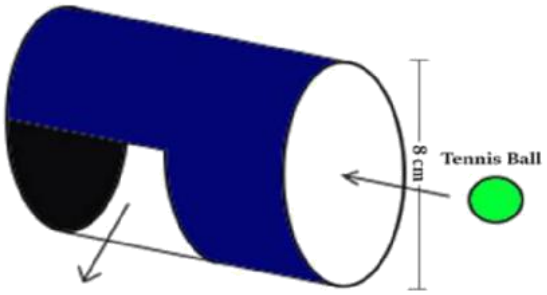


www.pecfest.in

Punjab Engineering CoIlege Sector 12,
Chandigarh 160012

Jatin Batra
Event Coordinator
+91 - 86070 96404

Utkarsh Uppal
Event Coordinator
+91 – 89686 59922



GAMEPLAY:

Game procedure:

- The bot will cross the obstacle course to reach the play area. The time (seconds) required to cross the obstacle course will be deducted from the initial score.
- Four different colored balls of different points will be **released simultaneously** from one end when the bot reaches the play area.
- The balls will collide with the obstacles and change its direction. The bot will have to track the ball and catch it when it will arrive at the opposite end. **This will be repeated 15 times and the score will be noted in all cases.**
- **Ball specification:** A standard **"table tennis ball"** or **"Rubber Ball"** of four different colors will be used for the event. There will be **2 minion balls (Karan, Arjun)** also for bonus points.

POINTS CRITERIA:

1. Initial score of 100 points will be given to each team. The time taken to cross the obstacle course will be deducted from the initial score.
2. If the bot catches a **BLACK** ball, it loses **20 points** (-20).

www.pecfest.in

Punjab Engineering CoIIege Sector 12,
Chandigarh 160012

Jatin Batra
Event Coordinator
+91 – 86070 96404

Utkarsh Uppal
Event Coordinator
+91 – 89686 59922

3. If the bot catches a **RED** ball, it loses **10 points** (-10)**.**
4. If the bot catches a **GREEN** ball, it earns **20 points** (+20).
5. If the bot catches a **BLUE** ball, it earns **30 points** (+30)**.**

Note - Total 2 minion balls having 50 points each will be randomly released in between the total 15 throws.

In case of a tie then the team having the least number of negative points will win.

Bot Specifications:

1. The manually controlled bot must fit in a cube of 25x25x30 cm.
2. **No** kind of AC power supply will be provided at the event.
3. Each team is allowed to have only one bot.
4. The catching area of the bot must be a hole of diameter 8 cm only. There must not be a hole on side of the mechanism attached to catch the ball and release it.

Points to be noted:

1. The dimension and inclination of the arena can be modified.
2. Obstacles are dummy model only. These are subject to change.

ELIGIBILITY

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

Team Specifications:

1. Each team must not exceed 4 members.
2. They may not necessarily be from the same institute.
3. Each team must have a team leader who must be present when called upon by the organizers.