



BALANCE IT

INTRODUCTION:

You have seen a Circus man balancing himself on rope and performing stunts, Ladies balancing matki on her head and performing the traditional ghoomar dance in the similar manner here the participants have to make a self balancing bot which can balance a ball. You might be known about the two wheeler self balancing where the bot has to travel only on two wheels and complete the track which will consists of various stages.

PRIZE MONEY:

1st Prize: Rs. 6000

2nd Prize: Rs. 4000

3rd Prize: Rs. 3000

PROBLEM STATEMENT:

To make a two-wheeler self-balancing bot which has to travel the track having various stages and complete the trajectory. The bot has to be manual controlled (can be wired or wireless) and complete the different stages.

ROUND 1

In round 1 participants have to balance various numbers of ping pong balls which will be kept in the container of the bot and travel the arena having rough surfaces with turns.

| Sr No. | Objects | Dimension |
|--------|--------------------|------------|
| 1. | Container height | 10-15 mm |
| 2. | Container diameter | 150-180 mm |
| 4. | Ball Diameter | 40 mm |
| 5. | Ball weight | 2.7 gm |

CONTACT DETAILS:

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Round 2

Those teams which qualify round 1 has to now balance a single large ball on its head and move along the arena having 3 stages.

- Stage 1 consists of a rough surface.
- Stage 2 consists of a zig-zag path having various turns at different angle.
- Stage 3 consists of a wedge.

For both the rounds the container will be provided, the participants do not need to bother about it. The participants only need to make sure that they have enough space for mounting of the container.

| Sr No. | Object | Dimension |
|--------|--------------------|------------|
| 1. | Container height | 20-25 mm |
| 2. | Container diameter | 150-180 mm |
| 3. | Ball Diameter | 140 mm |
| 4. | Ball weight | 200 gm |

GENERAL RULES:

The bot may be manual controlled in detecting the track.

- The maximum width of the bot should be 40 cm (as the width of the track = 40-60 cm)
- Each team should give a certain space to fix the plate of the container.
- No further mechanism should be involved to support the container except the 4 marks.
- Participants will be given 2 chances even in the case the ball on their head falls down.
- In round 2 the best of two scores will be considered in the final judging.
- In round 1 if the bot gets out of track then the team has to resume the game from that particular point only.
- In any condition, if the bot moves out of the track then every time the team has to resume the game from the checkpoints marked after every stage in round 2.
- If less then 15 teams have registered for the event only two prizes will be given and if less then 10 teams have registered for the event only one prize will be given.





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TEAM SPECIFICATIONS:

- You can participate individually or with a team of a maximum of 6 members.
- Any number of candidates can participate from one college/school.
- Participants are required to bring their school/college ID cards.
- Once registered, the same candidate cannot register with another name for the event.
- Organizers have the right to reject entries for any inappropriate username of the candidate.
- Organizers must be notified if a candidate's username has been changed.

JUDGING CRITERIA :

Round 1

- A -5 score will be awarded with the fall of one ping pong ball.
- An additional -10 score will be awarded when 2nd ball falls off and the successive decrement of -5 in score will be accordingly every time the ball fall off the container.
- If the bot goes out of track each time the deduction of a -5 score will be counted.
- The total time of the bot reaching the endpoint is noted.
- The total score of the remaining number of balls in the container is calculated as each ball has +50 points.

Round 2

- If the bot goes out of track each time the deduction of a -5 score will be counted.
- If the ball falls off the container for the first time and the team opts for a second chance then -20 to the score will be counted.
- The total minimum time a team takes to complete the whole track.
- If the team cannot complete the track with 2 chances also then the total number of checkpoints a team passes will be considered in assigning scores.

REGISTRATION DETAILS:

Fees: Rs. 100

Register at: <https://mindbendsvnit.in/>

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