



Walchand College of Engineering, Sangli
(An Autonomous Institute)



VISION 2016

Presents

TRANSPORTER

... Pick n place competition

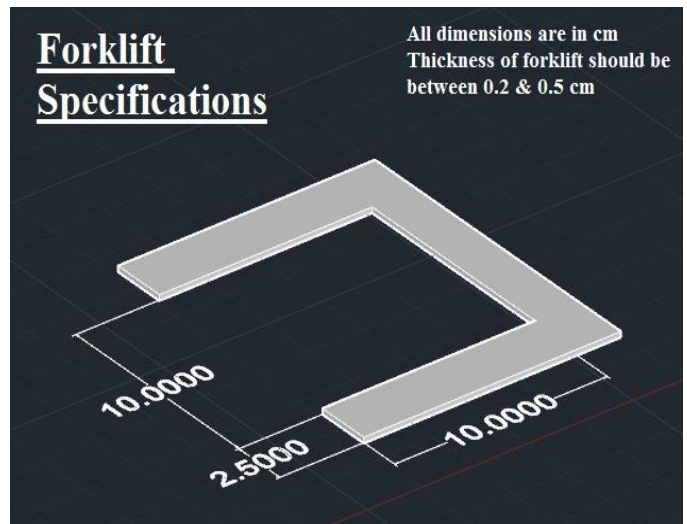
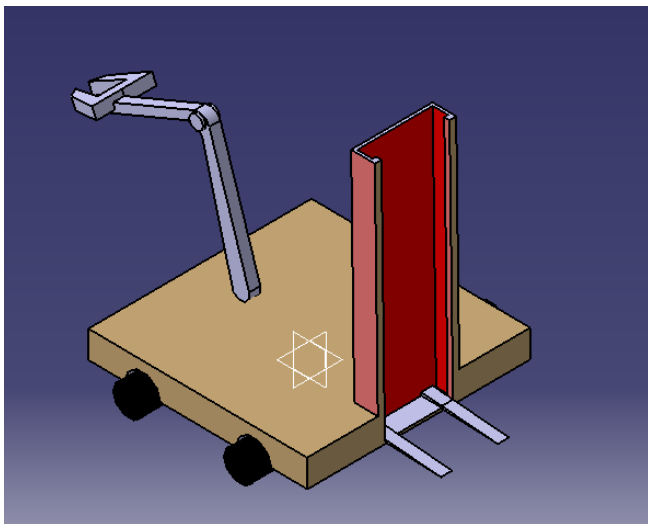
INTRODUCTION

This brings a perfect chance to show your robotic acumen, blend your intellect & fighter instinct, & controlling skill. We provide you a perfect platform to think over the unimaginable and challenge the unchallenged. Play out with your creativity.

EVENT

Problem statement

Design a robot with a mechanism of pick n place and a pair of forklift which is capable of performing the given task.



Round 1: (short listing round)

First round of this competition will be based on participant's operating skill and a bit of luck. As the theme is "*casino royale*". Participants have to perform 5 different tasks which will be decided by the rotating table within the specified time by using proper mechanism. Points obtained from this round will help participant to perform better in next round.

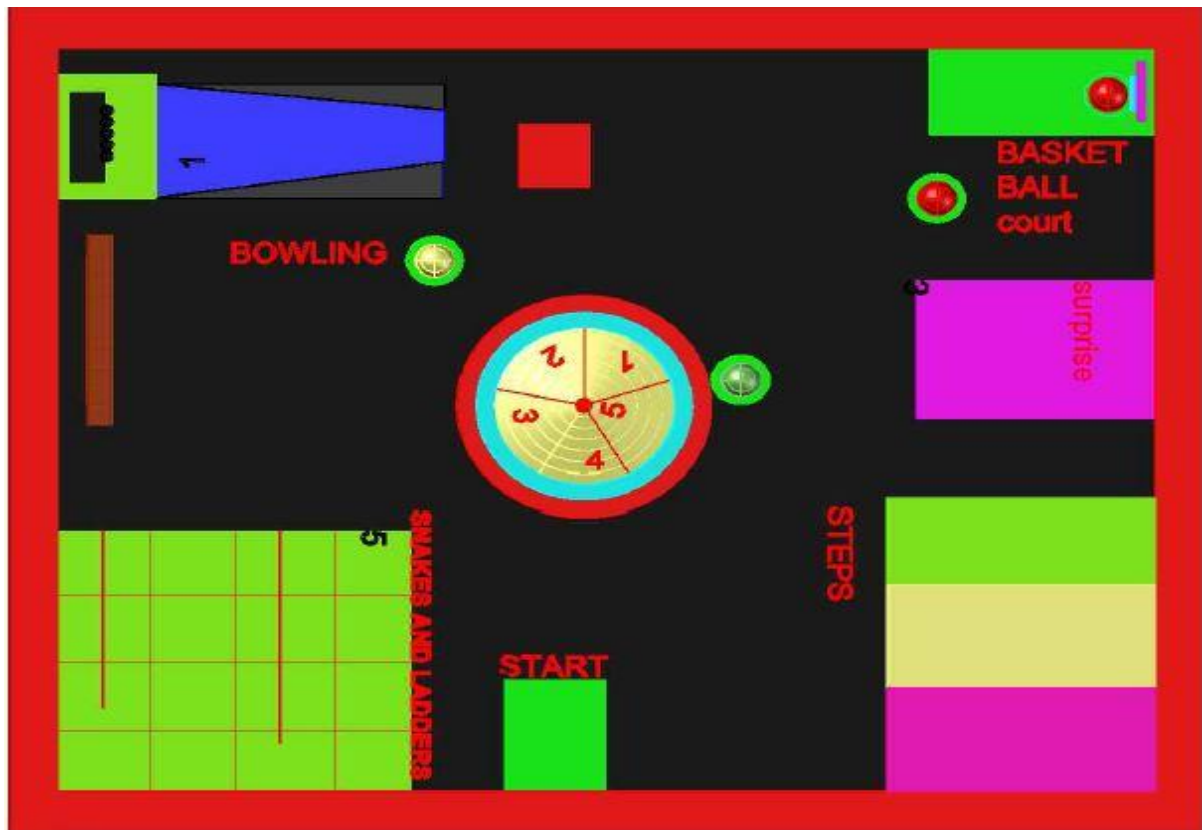
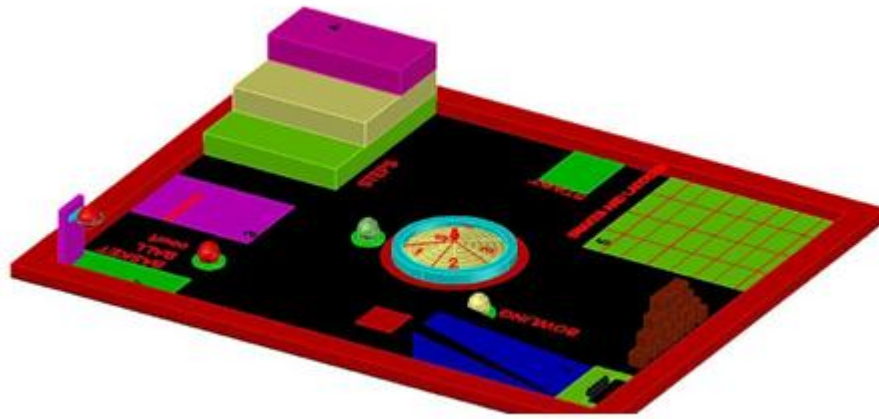


Fig.: Top View

Tasks:

1. Robot has to pick up the green ball and place on the circular rotating disk, Participant has to perform that task selected by the disk
2. Task no. 1 is bowling task, robot has to play bowling game.
3. Task no. 2 is basketball task, robot has to lift that ball by forklift and goal it.
4. Task no. 4 is lifting boxes by arm and place it on the steps.
5. Task no. 5 is playing snakes and ladders.
6. Task no. 3 is a surprise task.
7. Sequence of task may vary participant to participant.





Round 2:

This round will be a surprise round for all participants.

ROBOT SPECIFICATIONS

1. Dimensions of robot (l*b): $40 \times 40 \text{ cm}^2$ (excluding forklift)
2. Weight of robot: 7 kg (max)
3. Height of robot (including folded arm): 50 cm
4. Height upto which forklift can move (from ground): 30 cm(max)

OBJECT SPECIFICATIONS

1. Dimensions of box (max): $6 \times 6 \times 6 \text{ cm}^3$
2. Dimensions of ball (max): 6 cm diameter

Rules:

1. The team will be required to pick and place objects using a robotic arm.
2. Scoring will be based on Maximum goal "run" time and accuracy of the placement of the designated objects.
3. The robot is expected to start from a designated "home" position and reach to the "final" position.
4. Each team will be supplied with the power strip.
5. The footprint will be provided at the competition.
6. The decisions of the judges are final and binding.
7. Every team will be provided with a single variable 24V DC (5Amps) & 230 AC Power Supply.

General Rules:

- Students must bring their valid college identity cards while coming to the event.
- Any team that is not present at the specified time will be disqualified immediately.
- Rules may be changed without prior intimation. Participants are requested to check the website regularly for updates.

NOTE: Major changes will be notified on the web-site.

Certification Policy:

- All the students will be given participation certificates.
- Top two teams will be awarded the Certificate of Excellence.

Team Details:

- A team can have a maximum of 3 members.
- Team members can be from different colleges or years.

Entry fees: Rs. 200/- per team.

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