



GAME OF BOTS

INTRODUCTION

Any technical fest is incomplete without a ‘Coding Challenge,’ isn’t it? Here we are with Game of Bots, where you must build a Discord Music bot on Replit. This competition stimulates your creativity and encourages you to come up with some imaginative ideas.

PRIZE MONEY

1st Prize: Rs. 3500

2nd Prize: Rs. 2500

3rd Prize: Rs. 1500

PROBLEM STATEMENT

A coding contest consisting of 2 rounds. Participants are required to build a Discord bot on Replit.

ROUND 1 (ABSTRACT SUBMISSION)

In this round, teams must submit a brief Abstract about their bot or game. It must contain the following:

- Statement of Problem- Succinct definition of the problem addressed.
- Introduction to Proposed Solution- A basic idea of the solution to the proposal. It should contain the features the team plans to add to the music bot. A proper explanation and mention of the features planning to include are necessary as that would contain the major part of the judging criterion.
- Thinking- It should contain the thinking behind the proposed solution.

You must be very concise and to the point in the Abstract. It must not exceed two pages (double spaced). The Abstract (as a pdf) must be sent by email to (email) and (replit account) with the team details clearly mentioned in the email. The Team ID should be explicitly mentioned in the email subject, and the abstract file must be in the form of ‘TeamID_TeamLeaderName.’ Any other name for the abstract file will not be accepted.



ROUND 2 (FINAL SUBMISSION)

- A Submission with a functioning Replit link can be defined as valid (supports web player, terminal output, and Linux application through VNC + PulseAudio).
- Submit the Replit link of your publicly visible source code of the hack. Broken links will disqualify the project from the judging process.
- There must be a clear description of the work of the submission in the README file.
- Create a short video demo (~1-2 mins) while making the submission and submit the link to the mail(email). Make sure that the person watching the video is fully able to understand what the hack is and what the functionalities are. The more features and functionality of the bot, the more points you gain.

GENERAL RULES

- Decision Taken by Judges will be final and binding for all
- All decisions taken by the organizing team will be deemed final, and no more changes will be encouraged.
- Plagiarism in any form is strictly prohibited and can even result in contestants' disqualification.
- The team's idea should be original (not protected by patent/copyright/technical publication by anyone else).
- If fewer than five teams are registered, then only the first prize will be given; if fewer than ten teams register, only two prizes will be given.
- No one shall enter the arena except the organizers.
- If any of the above-mentioned rules are violated, teams will not be allowed to participate in the competition.
- Any damage caused to the arena at any point in time will lead to disqualification /penalty.
- If less than 20 teams have registered for the event only two prizes will be given and if less than 10 teams have registered for the event only one prize will be given.

TEAM SPECIFICATIONS

- This will be a team event. You can participate individually or with a team of maximum of 3 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

The judges grade submissions across five equally weighted categories:

- Design: Is it easy to use? Does the visual design delight you? If targeting developers, is the experience smooth and intuitive?
- Novelty/Originality: Does it have unique and novel features or combine features of other products or services in a unique and novel way?
- Number of Features: How many features you can incorporate into the music discord bot.
- Technical Accomplishment: Is the code elegant, clean, and technically interesting? Is the project complete?
- Potential Impact: Does it fill a gap in the universe and have the potential to be used frequently by a large, growing, and diverse audience or market?
- Creativity/Fun: Is it creative, and does it put a smile on people's faces?

EVENT TIMELINE

ROUND 1

Abstract Submission: Before 15th March, 2023

Declaration of shortlisted candidates: 18th March, 2023

ROUND 2

Online event: 29th March, 2023

REGISTRATION DETAILS

Fees : Rs. 30

Registration window will open soon!

CONTACT DETAILS:

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MAZE RUNNER

INTRODUCTION

Do you maze? Now comes the time to make a robot that is capable of mapping out an unknown maze, mark checkpoints and navigate the shortest possible path through the maze in the least amount of time.

PRIZE MONEY

1st Prize: Rs. 13000

2nd Prize: Rs. 10000

3rd Prize: Rs. 7000

PROBLEM STATEMENT

Participants are required to build an autonomous, self-contained robot, which can get to the center of a maze in the shortest possible time. A robot essentially comprises a drive motor or motors to move it; a steering and turning method; sensors to detect the presence or absence of maze walls; sensors or control logic to oversee the activities of the rest and keep the vehicle 'on track' or to solve the maze; batteries to provide power.

ROUND 1(Online):

It will be an abstract round where participants have to answer how to solve the given maze efficiently after analyzing the given track and submit their response.

ROUND 2(Offline):

The robot will be required to follow the path on the arena. The layout of the arena will be disclosed on the spot.

GENERAL RULES:

- Any misbehavior will lead you to disqualification from the competition.
- Decision Taken by Judges will be final and binding for all.
- All decisions taken by the organizing team will be deemed final, and no more changes will be encouraged.
- The idea presented by the teams should be original (not protected by patent/copyright/technical publication by anyone else).
- If less than 5 teams will be registered, then only the first prize will be given and if less than 10 teams will register, only two prizes will be given.



- No one shall enter the arena except the organizers.
- If Any of the above-mentioned rules, if found violated, teams would not be allowed to participate in the competition.
- Any damage caused to the arena at any point in time will lead to disqualification /penalty.

TEAM SPECIFICATIONS:

- This will be a team event. You can participate individually or with a team of a maximum of 3 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 CRITERION

- All contesting machines shall be collected before the maze is unveiled.
- After the maze is unveiled, the mouse handler is given 3 minutes before the start of his/her run to make adjustments (if any) to the mouse sensors and calibrate the sensors.
- Each contesting robot is allocated a total of 5 minutes of access to the maze after the 3 minutes sensor adjustment time. The maze-time clock will commence after the expiry of the 3 minutes time limit even if the handler is still making adjustments to the sensors.
- The time taken to travel from the start square to the destination square is called the "run" time. Traveling from the destination square back to the start square is not considered a run. The total time taken from the first activation (after calibration is done or calibration time is over, whichever is less) of the micro mouse until the start of each run is also measured. This is called the 'maze' or 'search' time. If the micro mouse requires any manual assistance at any time during the contest, it is considered "touched." Scoring is based on these three parameters.



- A contestant should not feed information on the maze to the micro mouse. Therefore, changing ROMs or downloading programs is NOT allowed once the maze is revealed.
- However, contestants are allowed to:
 - Replace batteries between runs
 - Adjust sensors (gain, position, etc.)
 - Change speed settings
- The contestants should be prepared with the circuit diagrams, algorithms, and code listings to convince the judges that any alteration they do in the total 5 minutes span does not add topological information about the maze to the mouse.
- Participants are allowed to restart once and suitable penalty will be added.

ROBOT SPECIFICATION

- A robot shall be self-contained. It shall not use an energy source employing a combustion process.
- A robot should be such that it fits between the given wall specifications.
- The method of propulsion is at the discretion of the builder, provided that the power source is non-polluting and should not harm the arena.
- A robot shall not leave anything behind while negotiating the maze.
- A robot shall not jump over, climb, scratch, damage or destroy the walls of the maze.

TRACK SPECIFICATION

- The walls constituting the maze shall be 15 cm high and 25 cm thick. Passageways between the walls shall be 15 cm wide, outside wall shall enclose the entire maze.
- The sides of the maze shall be white. The floor of the maze shall be made with non-gloss black paint.

EVENT TIMELINE

ROUND 1

Abstract Submission: Before 15th March, 2023

Declaration of shortlisted candidates: 18th March, 2023

ROUND 2

Offline Event: 1st April, 2023

REGISTRATION DETAILS

Fees : Rs. 200

Registration window will open soon!

CONTACT DETAILS:

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SKY HIGH

INTRODUCTION

Water rockets have long been a source of entertainment and education. They are usually made by filling an empty two-litre plastic soda bottle with water and pressuring it with air for launch.

PRIZE MONEY

1st Prize: Rs. 7000

2nd Prize: Rs. 5000

3rd Prize: Rs. 3000

PROBLEM STATEMENT

Teams have to fabricate a water rocket that uses the thrust of pressurized water to launch and travel the maximum distance.

ROUND 1

- This is an online video submission round.
- Teams must prepare a video demonstrating their water rocket and explaining their design.
- The video must be in mp4 format.
- Duration must be at most 3 minutes.
- The team name should be the name of the video file.
- The same rocket model has to be used in Round 2 if selected.

ROUND 2

- This round would be held offline in the college.
- Each team will get two chances to launch the rocket.
- The rocket would be launched at 45 degrees from ground level.
- The event coordinators would provide the launchpad.
- The launch angle will be kept the same for all rockets launched at the event.
- Coordinators will measure the flight time and horizontal range each time. The best flight out of the two will be considered.



ROCKET SPECIFICATION

- Materials allowed are given below
 - a) Body: PET/ Plastic
 - b) Fins: Cardboard
 - c) Nose: Any material
- Only cardboard can be used as the building material for the fins.
- Usage of any ready-made kits is not allowed. The rocket must be made of plastic and have a maximum capacity of 2 litres.
- The rocket must only have water propulsion; no other propellant can be used.
- Metal, glass, hard plastic, rocks, styrofoam, or spikes cannot be used to construct the rocket. Using these restricted materials will automatically disqualify the team from the competition.
- The rocket must be clear of any coverings to approximately 7 cm from the throat of the rocket.
- The maximum allowed total height of the rocket is 50.0 cm.
- The width/diameter, including the rocket's fins, must be at most 30 cm.
- The mouth of the pressurized bottle must fit over a 15 mm PVC pipe.
- The release mechanism can be made of any material other than restricted ones.
- The rocket should be built as per the given specifications.

LAUNCH SPECIFICATION

- The launchpad will have a ramp inclined 45 degrees from the ground level.

FIELD SPECIFICATION

- The field area of the water rocket event would be 100 meters X 100 meters (approx.).
- A fixed spot for the launching pad will be marked on the event field.
- White lines mark the penalty area.
- Rocket is considered to have made a penalty if it falls outside the defined area. The penalty lines would be on the left and right side of the field area.



JUDGING CRITERIA

ROUND 1

- The teams would be evaluated on the following criteria:
 - The aesthetics of their water rocket
 - The originality of their work.

ROUND 2

- The rocket with the maximum airtime and distance travelled will be nominated as the winner.
- The team covering more horizontal distance would be the winner in a tie-like situation.
- The team will be penalized if the water rocket lands outside the defined area.

EVENT RULES

- Only the team leader will be allowed to handle the rocket launcher during the gameplay.
- The event coordinators would provide the launchpad.
- To ensure the safety of bystanders, the rockets would be inspected first by the event coordinators.
- Each team will get two chances to launch the rocket and achieve the maximum air time and range.
- Coordinators will record the air time of the rocket for each attempt; the maximum air time will be considered from all the attempts and will be declared as the official air time of the rocket. Simultaneously distance will be calculated for each attempt, and the longest range will be considered.
- The decision of judges would be final in case of conflict.

TEAM SPECIFICATIONS

- The team should have 2 to 4 members.
- Team members may be from the same college/school or different (K12/UG/PG).
- Any number of teams can participate from one college/school.
- Professionals are not allowed. Only students can participate.
- Participants are required to bring their school/college ID cards.
- Once registered, the same team cannot register with another name or for another rocket other than the previously registered one.
- Team name should not be offensive, conflicting, or inappropriate.
- Organizers have the right to reject entries for any inappropriate team name.



- Organizers must be notified if a team's name has been changed.
- Each team must specify their Team Leader at registration on the website. All critical communications between the organizer and the registered team will be done through their Team Leader. The Team Leader must submit valid contact details (mobile number, email id, etc.) at the time of registration.
- If teams don't show up in the allotted slot, they will be disqualified.

GENERAL RULES

- Any misbehavior will lead you to disqualification from the competition.
- Decision Taken by Judges will be final and binding for all
- All decisions taken by the organizing team will be deemed final, and no more changes will be encouraged.
- Plagiarism in any form is strictly prohibited and can even result in the disqualification of contestants involved.
- The idea presented by the teams should be original (not protected by patent/copyright/technical publication by anyone else).
- If less than 5 teams will be registered, then only first prize will be given and if less than 10 teams will register, only two prizes will be given.
- No one shall enter the arena except the organisers.
- Any of the above-mentioned rules, if found violated, teams would not be allowed to participate in the competition.
- Any damage caused to the arena at any point in time will lead to disqualification /penalty.

EVENT TIMELINE

ROUND 1

Video Submission: Before 15th March, 2023

Declaration of shortlisted candidates: 18th March, 2023

ROUND 2

Offline Event: 2nd April, 2023

REGISTRATION DETAILS

Fees : Rs. 50

Registration window will open soon!

CONTACT DETAILS:

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Cat-a-Pult

INTRODUCTION

Most of us have learned projectile motion in class 11. So now it's time to apply that knowledge in real life. So, here we cat-a-pult to all physics those enthusiasts, where they will build a catapult not just for distance but most importantly for accuracy. Rounds of this event are planned based on this year's theme of mindbend. Get ready with your amazing catapult to conquer the enemy region!!

PRIZE MONEY

1st Prize: Rs. 7000

2nd Prize: Rs. 5000

3rd Prize: Rs. 3000

PROBLEM STATEMENT

Participants have to design an object-throwing mechanism.

ROUND 1: 'SMASH THE ENEMY'

In this round, participants must target the enemy regions and throw the object into their area. The more you can go into the area, the more points you get. According to the points scored, a specific number of participants will qualify for round 1. Participants have to smash four enemies in a single chance. All areas must be hit once during your round with in Time limit of 3mins.

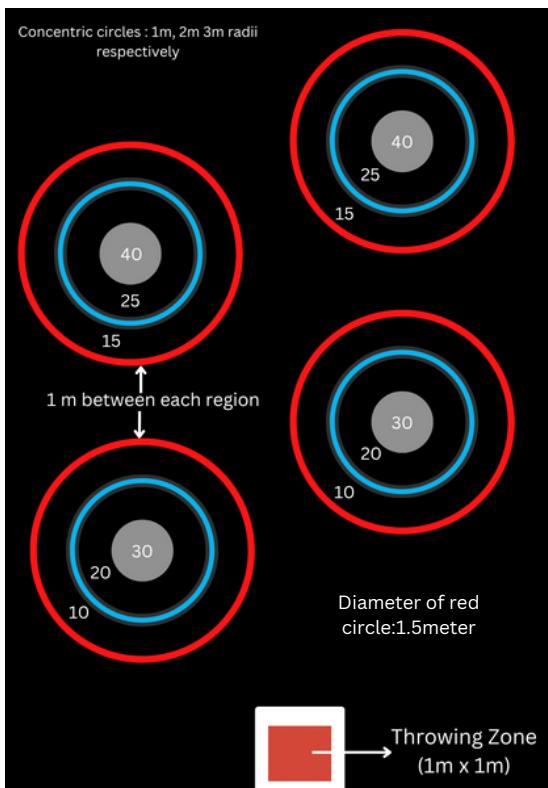
ROUND 2: 'CONQUER'

Participants have to attack the targets in a specific time limit. The more targets hit, the more you score. Any number of balls can be used within the given time limit of 5 mins. This round will also test your model's precision and accuracy.

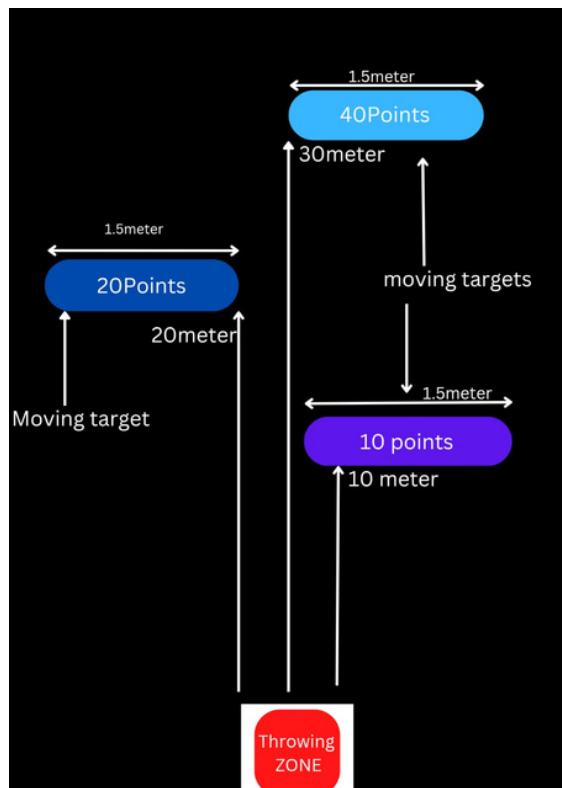


Arena for Round 1:

(10, 20 and 30 refer to the points earned in that region)



Arena for Round 2:



TEAM SPECIFICATIONS

1. You can participate individually or with a team of a maximum of 3 members.
2. Any number of candidates can participate from one college/school.
3. Participants are required to bring their school/college ID cards.
4. Once registered, the same candidate cannot register with another name for the event.
5. Organizers have the right to reject entries for any inappropriate username of the candidate.
6. Organizers must be notified if a candidate's username has been changed.

MODEL SPECIFICATIONS

- You have to make a manually operated Throwing Mechanism.
- The bot can only rotate at the same place.

CONTACT DETAILS:

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RULES

- Flammable substances like gunpowder, etc., cannot be used.
- Size of the object to be thrown: Lightweight ball of table-tennis ball's size
- Maximum range of arena: 40 to 50 meters
- Any misbehavior will lead you to disqualification from the competition.
- Decision Taken by Judges will be final and binding for all.
- All decisions taken by the organizing team will be deemed final, and no more changes will be encouraged.
- If Any of the above-mentioned rules, if found violated, teams would not be allowed to participate in the competition.
- If less than 15 teams have registered for the event only two prizes will be given and if less than 10 teams have registered for the event only one prize will be given.

JUDGING CRITERIA

- Judging criteria is according to the specific rounds mentioned above.

EVENT TIMELINE

ROUND 1

Offline Event: 31st March, 2023

ROUND 2

Final submission: 31st March, 2023

REGISTRATION DETAILS

Fees : Rs. 50

Registration window will open soon!

CONTACT DETAILS:

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CAD CRACKER

INTRODUCTION

The most intriguing topic to learn as a mechanical engineer is how to design models (Cars, planes or Robots). So, here we present the CAD CRACKER to all CAD enthusiasts. Models should be designed, assembled, and analyzed.

PRIZE MONEY

1st Prize: Rs. 3500

2nd Prize: Rs. 2500

3rd Prize: Rs. 1500

PROBLEM STATEMENTS

Participants have to design 3D parts from the 2D sketch of a military vehicle given and assemble them to complete military vehicle.

ROUND 1:

- Design the Parts of the given Defense Vehicle. 2D views of those parts will be provided.
- The models to be designed would be presented to every participant. They must complete their design in the fixed time allotted for each design that has to be submitted in .SLDPRT format.

ROUND 2:

- Participants have to make that defense vehicle by assembling those parts (made in round 1) with provided body parts, within the given time constraint.
- It has to be submitted in .SLDSAM and .STEP.

Event Platform:- Online

CONTACT DETAILS:

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GENERAL RULES:

- For designing the models, SOLIDWORKS software is mandatory.
- The design must be completed in the given time restriction.
- Submissions should be provided in the appropriate format given by the judges.
- The participants would be required to submit the CAD model in the link provided by the judges in the beginning of the competition.
- Bring your college/student I-Card at the time of competition.
- Decision Taken by Judges will be final and binding for all.
- Any misbehavior will lead you to disqualification from the competition.
- If less than 5 teams will be registered, then only the first prize will be given, and if less than 10 teams will register, only two prizes will be given.

TEAM SPECIFICATIONS:

- Team with maximum 2 participants is permitted in this event.
- Any number of individuals may participate from one college.
- Professionals are not allowed. Only students can participate.
- Participants are required to bring their school/college ID cards.
- Once registered, the same team cannot register with another name or for another model other than previously registered one.
- Every team must have a unique name that should not be offensive conflicting or inappropriate.
- Organizers have the right to reject entries for any inappropriate team name.

JUDGING CRITERION:

- In first round the given parts for designing purpose have different weightage of points so the participant with more points will be Ranked higher.
- Time will also be a judging criteria.
- Among them 1/3rd of participants will be sent to 2nd round.
- In second round participant who has completed the assembly of defense vehicle with minimum amount of time taken will be Ranked higher.

Target Audience :- 2nd and 3rd year students of from Mechanical

Number of expected registrations :- 100 teams



EVENT TIMELINE

ROUND 1

Declaration of shortlisted candidates: 25th March, 2023

ROUND 2

Final submission: 30th March, 2023

REGISTRATION DETAILS

Fees : Rs. 30

Registration window will open soon!

CONTACT DETAILS:

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STRUCTURE FOR FUTURE

INTRODUCTION

This event focuses on how participants make structures engineered to withstand weight, are durable, and in some cases, are aesthetically pleasing.

PRIIZE MONEY

1st prize: 3500

2nd prize: 2500

3rd prize: 1500

PROBLEM STATEMENT

Participants need to design and build their structure using popsicle sticks and glue. Participants can use the fewest number of popsicle sticks while still achieving their goals.

Round 1

- Participants need to submit a CAD model of the tower.
- The CAD file must be in .sldasm/ .dwg/ .step format.
- Teams have to manufacture the same CAD model in the next round, so design it accordingly.
- The structure should support at least 1 kg of weight applied normally downwards to the top surface.
- The top and bottom surfaces of the tower should be made flat.

Round 2

- This would be an offline round.
- Teams have to manufacture the CAD model on the spot.
- The time duration given would be 4 hours.
- The materials required for building the tower will be provided to the teams.
- The completed structure would be first measured by the coordinators.
- If the dimensions are found to exceed the allowed dimensions by a considerable margin, the team will be disqualified.
- The structure would then be weighed on a weighing scale.
- Weights ranging from 1kg to 10kg would be placed on the top surface of the structure.



- The procedure of placing weights would be the same for every team.
- The maximum weight the tower can hold without collapsing would be noted.

MATERIAL TO BE USED

- The organizers will provide popsicle sticks. Sticks can have the following maximum dimensions: Length = 112 mm, Breadth = 95 mm, Width = 02 mm
- Sticks can be altered physically by cutting or notching at any angle.
- Only Fevicol can be used as an adhesive; using other adhesives may lead to disqualification. The use of threads is not allowed.
- Participants must bring basic stationary items, such as pens, scissors, cutters, etc.
- Clips for support and fevicol would be provided to the participants.
- The maximum number of sticks that can be overlapped together is 2.

STRUCTURE DIMENSIONS

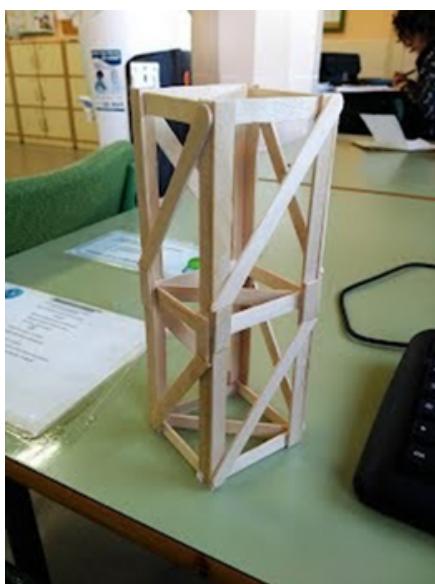
Length - 25 cm (maximum);

Width - 25 cm (maximum);

Height - 25 cm (minimum),

(No limit for maximum height)

A sample of the tower is given below:





TEAM SPECIFICATIONS

- The team should have a minimum of 2 members and up to 6 members.
- Members of a team may be from the same college or different.
- Any number of teams can participate from one college.
- Professionals are not allowed. Only students can participate.
- Once registered, the same team cannot register with another name or for another model other than the previously registered one.
- Every team must have a unique name that should not be offensive, conflicting, or inappropriate.
- Organizers must be notified if a team's name has been changed.
- Team Representative: Each team must specify their Team Representative (Leader) at registration on the website. All important communications between the organizer and the registered teams will be done through their Team Representatives. The Team representatives must submit valid contact details (phone no., email id, etc.) at the time of registration.

GENERAL RULES

- Bring your college/student I-Card at the time of the competition.
- Decisions taken by Judges will be final and binding for all.
- Any misbehavior will lead you to disqualification from the competition.
- Organizers have the right to reject entries for any inappropriate team name.
- Teams who don't show up on allotted slots will be disqualified.
- If less than 25 teams have registered for the event only two prizes will be given and if less than 15 teams have registered for the event only two prize will be given.

JUDGING CRITERIA

ROUND 1

The CAD model would be judged on the following criteria:

- Originality
- Aesthetics

ROUND 2

- The weight of the structure would be noted.
- The maximum weight the structure can hold just before collapsing would also be noted.
- The structure made with minimum material and holding the maximum weight would be considered the winner.



- The ratio of maximum weight withstand to the weight of the structure itself would be the efficiency of the tower
- The aesthetics of the bridge will also be evaluated.
- The judges will evaluate the bridge based on its appearance, the originality of its design, and the connection of members.
- The weightage of each criterion is given as follows: Efficiency = 70 points Aesthetics = 30 points
- The total score will be given out of 100 points.

EVENT TIMELINE

ROUND 1

Abstract Submission: Before 15th March, 2023

Declaration of shortlisted candidates: 18th March, 2023

ROUND 2

Final submission: 31st March, 2023

REGISTRATION DETAILS

Fees : Rs. 50

Registration window will open soon!



MODE: OVERDRIVE

The fun begins where the pavement ends

INTRODUCTION

Engineering students are competitive by nature and the notion of competition was an appealing approach to capitalize on this characteristic. And therefore, here participants have to win with the help of their RC Nitro cars. Students have to Design a remote-controlled car consisting of an IC Engine that can compete with other opponents on a dirt track full of various types of obstacles.

PRIZE MONEY

1st Prize: Rs. 55,000

2nd Prize: Rs. 40,000

3rd Prize: Rs. 25,000

PROBLEM STATEMENT

ROUND 1

Teams will need to submit a proof of concept (POC) of the model.

ROUND 2

It will be an on-site competition. Each team will be given 2 laps out of which faster lap will be considered. There will be points system for clearing each obstacle on the track.

Depending on the score, teams will be selected for next round.

ROUND 3

It will be a race between three teams qualified from round 2.

TRACK SPECIFICATION

- Exact design of the track will be disclosed on the day of the event.
- Track will be made up of either dry ground or mud consisting of up and downs, bumpers, turns, etc.
- Borders of the track will be clearly indicated.
- The minimum width of the track will be around 5 feet.
- A lap of the track is completed when the car comes back to the start-finish line.
- Driver has to operate car from specific control stand provided on the side to the track. More than one car may race on the track at the same time.



- Despite the organizer's efforts to keep the track's quality intact, the track may undergo wear and the car is expected to be able to perform on such a weakened track as well.

CAR SPECIFICATION

- Bot should fit in a box of dimensions 500mm x 300mm x 300mm at any moment of time during the race.
- Only wireless communication is allowed throughout the race.
- Functional parts - Gears, differential gear, engine, springs, shock absorbers, batteries, wheels and wheel hub can be directly used as available in the market.
- Structural parts - Chassis, steering mechanism, shock towers and suspension (excluding upper suspension arm, suspension spring and shock absorbers) have to be built by the participants themselves.
- Only single-cylinder, two-stroke, normally aspirated, air-cooled, glow- ignition engines utilizing standard or turbo plugs will be permitted. IC engine specification- up to 6cc.
- Fuel tanks must be safely mounted.

GAME RULES

- There will be 3 rounds among which round 2 and round 3 will be in offline mode
- Number of stages in each round may vary accordingly.
- Team members are not allowed to touch car once race Hand touch is allowed at cost of the penalty.

GENERAL RULES

- Teams are not permitted to damage other team's car during race intentionally.
- Any damage to track due to car will not be tolerated.
- The car is not allowed to lose any loose parts on any part of the arena. Any car disintegrating during the race will be disqualified.
- Bring your college/student I-Card at the time of competition.
- Decision Taken by Judges will be final and binding for all.
- Any misbehaviour will lead you to disqualification from the competition.

If less than 5 teams will be registered, then only first prize will be given and if less than 10 teams will register, only two prizes will be given.



TEAM SPECIFICATIONS

- Team should be of 3-5 members.
- Members of a team may be from the same college/school or different (K12/UG/PG).
- Any number of teams can participate from one college/school.
- Professionals are not allowed. Only students can participate.
- Participants are required to bring their school/college ID cards.
- Once registered, the same team cannot register with another name or for another car other than previously registered one.
- Every team must have a unique name that should not be offensive conflicting or inappropriate.
- Organizers have the right to reject entries for any inappropriate team name.
- Organizers must be notified if a team's name has been changed.
- Team Representative: Each team must specify their Team Representative (Leader) at the time of registration on the website. All important communications between the organizer and the registered teams will be done through their Team Representative. The Team representatives must submit valid contact details (phone no., email id, etc.) at the time of registration.
- If teams don't show up on allotted slot, they will be disqualified.

EVENT TIMELINE

ROUND 1

Abstract Submission: Before 15th March, 2023

Declaration of shortlisted candidates: 18th March, 2023

ROUND 2

Offline Event: 1st April, 2023

ROUND 3

Offline Event: 1st April, 2023

REGISTRATION DETAILS

Fees : Rs. 500

Registration window will open soon!

CONTACT DETAILS:

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ROBOWARS

Beat, Defeat, Win, Repeat

INTRODUCTION

Robo-wars is a major combat robotics event which focuses on designing and manufacturing of robots made to annihilate its opponents and keeping itself as safe as possible. Winner is decided on the basis of destruction it has caused to its opponents. It will have two categories: 15 kg and 60 kg.

PRIZE MONEY

For 15 kg Category:

1st prize: Rs. 40,000

2nd Prize: Rs. 25,000

3rd Prize: Rs. 15,000

For 60 kg category:

1st prize: Rs. 60,000

2nd Prize: Rs. 35,000

3rd Prize: Rs. 25,000

PROBLEM STATEMENT

ROUND 1

Teams will need to submit a proof of concept (POC) of the model.

ROUND 2

It will be an on-site one-to-one fight. The two robots will be fighting in the arena. The track of points will be maintained for both the teams and the team having maximum points will be declared as winner for that round. This round can be further divided in sub rounds e.g. semifinals and final.

TRACK SPECIFICATION

- Arena is rectangular in shape with dimension 18 x 16 x 10 foot.
- Height of the side safety wall, which is made of M. S, has a height of 0.5m.
- Height above the safety plate is of polycarbonate plate with cage. Top of the arena is covered with cage.



JUDGING CRITERIA

- A bot is declared victorious if its opponent is immobilized.
- A bot is declared immobilized if it cannot move linearly/rotationally for more than 30 seconds.
- A robot with one side of its drive train disabled will not be counted immobilized, if it can demonstrate some degree of controlled movement.
- In case both the robots remain mobile after the end of the round then the winner will be decided subjectively.
- Points will be given on the basis of aggression, damage, control, and strategy.
- Pinning occurs when one robot, through sheer force, holds an opponent stationary in order to immobilize it.
- Organizers will allow pinning or lifting for a maximum of 15 seconds per pin/lift then the attacker robot will be instructed to release the opponent.
- If a team fails to stop the pinning/lifting for several times, that team can also be disqualified.

MACHINE SPECIFICATION

- The bot should not exceed 60kg weight including the pneumatic/hydraulic (the components of bot which will be out of arena do not count in this 60kg).
- Robots must be wireless.
- Source, batteries (including external) and any other component excluding remote. The robot should fit in the box of 750mm x 750mm x 1000mm.
- All times, the external device used to control the robot or any external tank is not included in the size constraint.
- Bots can have zero ground clearance provided they do not damage the arena.

MOBILITY

- Rolling (wheels or whole bot).
- Linear actuated legs or cam operated motion or any non-wheeled drive system.
- Jumping or flying with the help of propellers or gas balloons is not allowed.



ELECTRICAL SYSTEM SPECIFICATIONS

- Bot can be powered electrically (DC) by batteries with electrolytes such as Li-ion, Li-Po, NiCad, gel cells, lead-acid, etc.
- The electric voltage between 2 points anywhere in the machine should not be more than 48 V DC at any point of time.
- Batteries should be charged up before advancing to the match.
- All efforts must be made to protect battery terminals from a direct short and causing a battery fire, failure to do so will cause direct disqualification.
- Internal combustion engines as a source of power will not be allowed.
- Any kind of inflammable liquid will not be allowed to use in the bot by any means.

PNEUMATICS AND HYDRAULICS

- Robot can use non-inflammable liquid to actuate hydraulic devices.
- Maximum pressure in the storage/source tank must not exceed 8 bars.
- There should be provision to check the storage tank or source tank pressure with an integrated or temporarily fitted pressure gauge.
- All hydraulic liquids should be non-corrosive and leak proof.
- Special care must be taken while mounting pump, accumulator, and armor to ensure that if ruptured direct fluid streams will not escape the robot.

ATTACKING/WEAPON SYSTEM

- Robots can have any kind of cutters, flippers, saws, lifting devices, spinning hammers, Spinning drums, etc. as weapons.
- Following weapons or attacking systems are not permitted:
- Liquid projectiles and tethered or untethered projectiles.
- Any kind of inflammable liquid.
- Any kind of explosive or intentionally ignited solid or potentially ignitable solid.
- Nets, tape, glue, chains or any other entanglement device.
- High power magnets or electromagnets.
- Radio jamming, lasers, tesla coils, or any other high-voltage device.
- Spinning weapons that do not come in contact with the arena at any point of time are allowed.
- In any case, the arena should not be damaged by any bot.



GENERAL RULES

- Any damage caused to the arena at any point of time will lead to disqualification /penalty.
- A team member can't be a part of more than one team.
- Bring your college/student I-Card at the time of competition.
- Any of the above-mentioned rules, if found violated, teams would not be allowed to participate in the competition.
- Decision Taken by Judges will be final and binding for all.
- Any misbehavior will lead you to disqualification from the competition.
- In case of any disputes, the decision of the organizer's and the jury's decision will be final.
- If less than 5 teams will be registered, then only first prize will be given and if less than 10 teams will register, only two prizes will be given.

TEAM SPECIFICATIONS

- Members of a team may be from the same college/school or different (K12/UG/PG).
- Any number of teams can participate from one college/school.
- Participants can build a single robot or cluster of robots (according to given rules).
- A team can have a maximum of 6 participants may be of same or different colleges. But one participant cannot participate simultaneously in 2 or more teams.
- Once registered, the same team cannot register with another name or for another robot other than previously registered one.
- Every team must have a unique name that should not be offensive conflicting or inappropriate.
- Organizers have the right to reject entries for any inappropriate team name.
- Organizers must be notified if a team's name has been changed.
- Team Representative: Each team must specify their Team Representative (Leader) at the time of registration on the website. All-important communications between the organizer and the registered teams will be done through their Team Representative. The Team representatives must submit valid contact details (phone no., email id, etc.) at the time of registration.
- If teams don't show up on allotted slot, they will be disqualified.



SAFETY RULES

- Robots must be activated in the arena or with the expressed consent of the event coordinators.
- All participants build and operate robots at their own risk.
- Please take care you do not hurt yourself or others when building, testing and competing.
- Organizers will not be responsible for any injuries to the operator or team members.
- Violation of any of the above rules will lead to disqualification of the respective team.
- A robot that is deemed unsafe by the judges after the match has begun will be disqualified and therefore declared the loser. The match will be immediately halted and the opponent will be awarded a win.
- Robots intentionally damaging the wires of the opponent will be disqualified.
- Also, each team should keep their wires above the ground.
- Robots intentionally and/or extensively damaging the arena will be disqualified.
- If the wires of the robot are cut because of its own strategy and if fail to repair within match time then the team will be disqualified.
- Special care should be taken to protect the on-board batteries and pneumatics, robot without proper protection will not be allowed to compete.

EVENT TIMELINE

Date of Conduct: 2nd April, 2023

REGISTRATION DETAILS

Fees : Rs. 500

Registration window will open soon!

CONTACT DETAILS:

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HUNT THE LINE

A chase for all!

INTRODUCTION

In this competition participants would be competing against each other in an arena which would be having white stripes on a black background. Robots should be designed in such a way that it can take turn whenever there is a curve.

PRIIZE MONEY

1st Prize: Rs. 13,000

2nd Prize: Rs. 10,000

3rd Prize: Rs. 7,000

PROBLEM STATEMENT

ROUND 1

Teams will need to submit working video of their robot as a Proof of Concept.

- Duration of video must not be more 5 minutes.
- Video must be in mp4 format.
- Ensure the proper visibility of bot in video.
- Bot shown must be the one which is to be operated over arena.
- Any sort of malpractice might lead to disqualification.

ROUND 2

The robot will be required to follow the path on the arena. The layout of the arena will be disclosed on the spot.

TRACK SPECIFICATION

- The layout of the track will be disclosed on the spot.
- The track will have straight paths and smooth circular turns.
- The lines will be of standard white color of the width of 3 cm (with a dark background).
- The starting point and ending point will not coincide.
- White strip will be present at the end of the arena.



MACHINE SPECIFICATION

- The robot must be fully autonomous.
- It should be controlled by a micro-controller using differential drive.
- At any time of the event, the robot dimensions must not exceed 250x250 mm length and breadthwise.
- There isn't any constraint on height and weight.
- The maximum DC voltage between any two points in the circuitry must not exceed 24V.
- No pneumatics and hydraulics are allowed. Mechanisms which can harm other robot are NOT allowed.

GENERAL RULES

- Any damage caused to the arena at any point in time will lead to disqualification /penalty.
- The robot has to travel only on the prescribed arena, and if the bot completely leaves the arena it will have to start from the previous checkpoint.
- Bring your college/student I-Card at the time of competition.
- Any of the above-mentioned rules, if found violated, teams would not be allowed to participate in the competition.
- Decision Taken by Judges will be final and binding for all.
- Any misbehaviour will lead you to disqualification from the competition.
- If less than 5 teams will be registered, then only first prize will be given and if less than 10 teams will register, only two prizes will be given. Team Specifications
- Team should be of 3-5 members.
- Members of a team may be from the same college/school or different (K12/UG/PG).
- Any number of teams can participate from one college/school.
- Professionals are not allowed. Only students can participate.
- Participants are required to bring their school/college ID cards.
- Once registered, the same team cannot register with another name or for another robot other than previously registered one.
- Every team must have a unique name that should not be offensive conflicting or inappropriate.
- Organizers have the right to reject entries for any inappropriate team name.
- Organizers must be notified if a team's name has been changed.



- Team Representative: Each team must specify their Team Representative (Leader) at the time of registration on the website. All important communications between the organizer and the registered teams will be done through their Team Representative. The Team representatives must submit valid contact details (phone no., email id, etc.) at the time of registration.
- If teams don't show up on allotted slot, they will be disqualified.

EVENT TIMELINE

ROUND 1

Abstract Submission: Before 15 March, 2023

Declaration of shortlisted candidates: 18th March, 2023

ROUND 2

Offline : 31st March, 2023

REGISTRATION DETAILS

Fees : Rs. 200

Registration window will open soon!

CONTACT DETAILS:

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CHEM-E-CAR

Voraciously Chem-E-Engineered Car

INTRODUCTION

The Chem-E Car is a competition in which engineering undergraduate students are challenged to design and build a shoebox-sized car that is powered and stopped by chemical processes. The car does not compete in a race, but rather in an accuracy test. The car moves and stops at a set distance using controlled chemical processes. The winning automobile is the one that comes the closest to hitting the target solely based on chemistry.

PRIZE MONEY

1st Prize: Rs. 8000

2nd Prize: Rs. 5000

3rd Prize: Rs. 3000

PROBLEM STATEMENT

ROUND 1

- The teams have to submit an Engineering Design Package (or EDP) of their working model. by the posted deadline. Failure to meet the posted deadline will result in exclusion from the competition. The layout of the EDP is attached below.

[EDP Layout: Chem-e-Car .docx](#)

ROUND 2

The teams have to run their working models on the specified tract and execute the stopping mechanism for a specified distance. All the teams will be judged on the basis of how close their car gets to the endline in a specific amount of time and winners will be decided on this basis. The judges' decision will be final on all matters.

TRACK SPECIFICATION

- Kindly refer the following video and document: [Chem-E-Car track figure.pdf](#)
Disclaimer: The mechanisms and track shown as above are purely on an example basis. Participants must note that mechanisms apart from the one shown in the above video are also acceptable.



GENERAL RULES

- Bring your college/student I-Card at the time of competition.
- Decision Taken by Judges will be final and binding for all.
- Any misbehavior will lead you to disqualification from the competition.
- If less than 15 teams will be registered, then only first prize will be given and if less than 10 teams will register, only two prizes will be given.

TEAM SPECIFICATIONS

- Team should be of 4 to 6 members.
- Members of a team may be from the same college/school or different (K12/UG/PG).
- Any number of teams can participate from one college/school.
- Professionals are not allowed. Only students can participate.
- Participants are required to bring their school/college ID cards.
- Once registered, the same team cannot register with another name or for another model other than previously registered one.
- Every team must have a unique name that should not be offensive, conflicting or inappropriate.
- Organizers have the right to reject entries for any inappropriate team name.
- Organizers must be notified if a team's name has been changed.
- Team Representative: Each team must specify their Team Representative (Leader) at the time of registration on the website. All important communications between the organizer and the registered teams will be done through their Team Representative. The Team representatives must submit valid contact details (phone no., email id, etc.) at the time of registration.
- If teams don't show up on allotted slot, they will be disqualified.

EVENT TIMELINE:

ROUND 1:

Abstract Submission: Before 15th March, 2023

Declaration of shortlisted candidates: 18th March, 2023

ROUND 2:

Final submission: 1st April, 2023

Declaration of winners:



REGISTRATION DETAILS

Fees : Rs. 50

Registration window will open soon!

CONTACT DETAILS:

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BUG-N-FEATURE

INTRODUCTION:

Finding a bug and making a new feature is what all happens when it comes to industrial level development. This event is inspired by this nature of programs. This event is divided into two rounds. Round 1 will be all about debugging the given problem statement. This round tests the debugging, analytical, logical skills of the participants. It will bring out those who can clearly see the mistakes and correct them in the best possible manner. Round 2 will be on finding the most optimal solution. This round tests the algorithm development skills of the participants. Those who will be able to figure out the steps to solve and implement it will come out as most skillful of all.

PRIZE MONEY:

1st Prize: Rs. 3500

2nd Prize: Rs. 2500

3rd Prize: Rs. 1500

PROBLEM STATEMENT:

ROUND 1:

- Total no. of questions - 5 (A, B, C, D, E)
- Total Duration - 60 minutes
- Language of Code Snippets - C++

This round will consist of 5 problems with increasing difficulty levels A to E. The participants will be given the question, code snippets, sample input & output. The code will contain errors like syntax errors, logical errors, semantic errors, runtime errors, segmentation faults, endless loops etc. Under a time constraint the participants will have to debug the given code. The participants have to look for such errors and try to fix as many as bugs possible.

ROUND 2:

- Total no. of questions - 2 (A, B)
- Total Duration - 120 minutes
- Language - Any Language of Choice

This round will consist of 2 problems with increasing difficulty levels A to B. The participants will be given the question, sample input & output, input test cases text file. The participants will have to formulate a program which can give correct output for maximum of the given test cases.



GENERAL RULES:

- Any misbehavior will lead you to disqualification from the competition.
- Decision Taken by Judges will be final and binding for all
- All decisions taken by the organizing team will be deemed final, and no more changes will be encouraged.
- Plagiarism in any form is strictly prohibited and can even result in the disqualification of contestants involved.
- The idea presented by the teams should be original (not protected by patent/copyright/technical publication by anyone else).
- If less than 10 teams will be registered, then only first prize will be given and if less than 15 teams will register, only two prizes will be given.
- No one shall enter the arena except the organizers.
- Any of the above-mentioned rules, if found violated, teams would not be allowed to participate in the competition.
- Any damage caused to the arena at any point in time will lead to disqualification /penalty.

JUDGING CRITERION:

- Round 1: The code will be judged based on the error corrected and depending on the importance of the line on which the error was corrected. If the error is on a line which is more important than others then it will be assigned maximum marks.
- Round 2: The received codes will be run through the test input cases. The team will be scored depending on the no. of inputs for which the code gives the correct output. If there is a tie in the scores then the time complexity will be given priority over space complexity.

EVENT PLATFORM

ROUND 1 & 2:

- Discord: For sharing all the materials and queries.
- Google Meet: For instructing about the event.

CONTACT DETAILS:

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TEAM SPECIFICATIONS:

- Team of 1/2/3
- It is an open event so anyone (within or outside SVNIT) can team up with anyone in the age bracket (16-21)
- Participants are required to bring their school/college ID cards.
- Once registered, the same team cannot register with another name or for another model other than previously registered one.
- Every team must have a unique name that should not be offensive, conflicting or inappropriate.
- Organizers have the right to reject entries for any inappropriate team name

TARGET AUDIENCE:

- Students of age 16-21

EVENT TIMELINE:

ROUND 1:

Abstract Submission: Before 15th March, 2023

Declaration of shortlisted candidates: 18th March, 2023

ROUND 2:

Final submission: 30th March, 2023

REGISTRATION DETAILS:

Fees : Rs. 30

Registration window will open soon!

CONTACT DETAILS:

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CONNECTIFY

INTRODUCTION:

Put your IoT knowledge to the test by participating in our three-round challenge! This includes a workshop, quiz, and an application ability round. Explore the creativity and real-world applications of IoT and discover new ways it can be used.

PRIZE MONEY:

1st Prize: Rs. 3500

2nd Prize: Rs. 2500

3rd Prize: Rs. 1500

PROBLEM STATEMENT:

ROUND 1:

The first round will be a workshop by some professionals in which some projects demonstration and basic components will be introduced. Whatever basic knowledge is required for round 2 & round 3 will be given in the workshop.

ROUND 2:

The second round will consist of interesting an quiz based on basic concepts of sensors &IOT. The quiz will consist of subjective and objective questions.

ROUND 3:

Based on the performance of teams in the 2nd round, participants will be rewarded with virtual money through which they can purchase different components from the organizers such that they need to make a real-world solution by using the components purchased.



GENERAL RULES:

- Bring your college/student I-Card at the time of the competition.
- Decisions taken by Judges will be final and binding for all.
- Any misbehavior will lead you to disqualification from the competition.
- Organizers have the right to reject entries for any inappropriate team name.
- If teams don't show up on allotted slots, they will be disqualified.
- If less than 15 teams have registered for the event only two prizes will be given and if less than 10 teams have registered for the event only two prizes will be given.

TEAM SPECIFICATIONS:

- Team should be of a maximum of 3 members.
- Members of a team may be from the same college or different.
- Any number of teams can participate from one college.
- Professionals are not allowed. Only students can participate.
- Once registered, the same team cannot register with another name or for another model other than the previously registered one.
- Every team must have a unique name that should not be offensive, conflicting, or inappropriate.
- Organizers must be notified if a team's name has been changed.
- Team Representative: Each team must specify their Team Representative (Leader) at the time of registration on the website. All important communications between the organizer and the registered teams will be done through their Team Representatives. The Team representatives must submit valid contact details (phone no., email id, etc.) at the time of registration.

JUDGING CRITERIA:

- In round 2, teams will be qualified on the basis of their performance and score on the quiz.
- Round 3 is the final round in which teams will be given a time limit and they need to make a working IoT solution within the given time. On the basis of the solution, the one with the most advanced solution with a wide application will be considered the winner.



EVENT TIMELINE:

ROUND 1 (Offline/Online):

A workshop- 1st April, 2023

ROUND 2 (Online - Kahoot):

Submission: 1st April, 2023

ROUND 3 (Offline - SVNIT Campus):

Final submission: 1st April, 2023

Declaration of winners:

REGISTRATION DETAILS:

Fees : Rs. 50

Registration window will open soon!

CONTACT DETAILS:

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TECH CITY

INTRODUCTION

A Smart City stimulation model on tinkercad or any other equivalent platform using electronic devices such as sensors, microprocessor and microcontroller, or any other available devices. The Hi-Tech city should be using different mechanisms to serve the society and cater the needs of resources with requiring minimum human intervention. Participants will have to demonstrate various technologies to resolve the problems while creating a safe and secure Smart City model. The city can demonstrate different categories like township, farm area, power supply along with a good transportation system etc.

PRIZE MONEY

1st Prize: Rs. 3000

2nd Prize: Rs. 2000

3rd Prize: Rs. 1000

PROBLEM STATEMENT

The event will be conducted in 2 rounds. The first one will be the online presentation of the idea of smart city model in front of judges. Shortlisted teams will be required to submit the simulation circuit of the model on tinkercad.

ROUND 1

Online Presentation Round:

- Duration of presentation must not be more than 5 minutes.
- Teams need to make a PPT explaining their model.
- PPT must include images of their own model.
- An overview of their model should be presented during the given time span.
- Ensure that all innovative ideas present in your model are included.
- Documentation of around 5-6 pages of the work should be submitted.
- Any sort of malpractice might lead to disqualification.

ROUND 2:

- In this round participants need to submit a video of their simulation model on tinkercard.
- Whatever the specifications given by teams in 1st round they need to make simulation on tinkercad.
- Teams need to submit the video of simulation within the timelimit in the form link that will be provided.
- Video should be in mp4 format and maximum time limit is 40 seconds.
- Any kind of malpractice will result into disqualification.



GENERAL RULES:

- Any violation of constraints will result in disqualification of the team.
- Decisions Taken by Judges will be final and binding for all.
- Any misbehavior will lead you to disqualification from the competition.
- Plagiarism is strictly prohibited. Anyone found using the ppts available online or copying content from the internet will be immediately disqualified.
- If less than 20 teams will be registered, then only two prize will be given and if less than 10 teams will register, only one prizes will be given.

TEAM SPECIFICATIONS:

- The team should be of 3 to 5 members.
- Members of a team may be from the same college/school or different (K12/UG/PG).
- Any number of teams can participate from one college/school.
- Professionals are not allowed. Only students can participate.
- Participants are required to bring their school/college ID cards.
- Once registered, the same team cannot register with another name or for another model other than previously registered one.
- Every team must have a unique name that should not be offensive, conflicting or inappropriate.
- Organizers have the right to reject entries for any inappropriate team name.
- Organizers must be notified if a team's name has been changed.
- Team Representative: Each team must specify their Team Representative (Leader) at the time of registration on the website. All important communications between the organizer and the registered teams will be done through their Team Representative. The Team representatives must submit valid contact details (phone no., email id, etc.) at the time of registration.
- If teams don't show up on allotted slot, they will be disqualified.

JUDGING CRITERIA :

Usefulness of the simulation model and number of various applications performed mentioned in the 1st round



EVENT TIMELINE:

ROUND 1

Online presentation- 15th March, 2023

ROUND 2

Simulation model submisson - 31st March, 2023

REGISTRATION DETAILS:

Fees : Rs. 50

Registration window will open soon!





CodeWars

INTRODUCTION

Any technical fest is incomplete without a ‘Coding Challenge’, isn’t it? Here we are with CodeWars, a 3-hour long ICPC style coding competition based on Algorithms, Data-structures, and problem-solving. The problem statements will be themed on defense technologies with the participants solving coding puzzles to decrypt enemy military codes and win the battle for the homeland!

PRIZE MONEY

1st Prize: Rs. 12000

2nd Prize: Rs. 8000

3rd Prize: Rs. 5000

PROBLEM STATEMENT

3-hour marathon classic ICPC style coding contest participated by students across are required to code and submit the solutions of given problem statements in any language of their choice. A reference algorithm booklet PDF will be provided to all registered teams and they can bring the printed form with them to the site of contest for reference.

GENERAL RULES:

- The contest will be conducted on CodeForces.
- Each team will get one computer to submit their solutions to the problem statements (ICPC style)
- The team will be rewarded points based on the number of test samples solved.
- The team will be ranked as per the number of problem. Statements solved and ties will be broken by total time taken by each participant/penalty incurred on wrong submission.
- Plagiarism/Use of internet in any form is strictly prohibited and can even result in disqualification of contestants involved.
- All decisions taken by the organizing team will be deemed as final, and no more changes will be made.
- Any misbehavior will lead you to disqualification from the competition.
- If less than 20 teams will be registered, then only two prizes will be given and if less than 10 teams register, only first prize will be given.



TEAM SPECIFICATIONS

- This will be a team event of maximum three members each team.
- The participants must be enrolled in a college/university at the time of application and must not be graduated as of March .
- All team members must be from the same college or university.
- Participants are required to bring final COVID vaccination certificates and wear masks according to government COVID advisory guidelines.
- Participants are required to bring their school/college ID cards as a proof of admission.
- 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 candidate.
- Organizers must be notified if a candidate's username has been changed.

EVENT TIMELINE

Round: 31st March, 2023

REGISTRATION DETAILS

Fees : Rs. 150

Registration window will open soon!

CONTACT DETAILS:

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KRYPTOS

INTRODUCTION

Kryptos is an event filled with cryptic puzzles that require multitudes of genius to come up with bizarre solutions to questions posed to participants.

PRIZE MONEY

1st Prize: Rs. 3000

2nd Prize: Rs. 2000

3rd Prize: Rs. 1000

PROBLEM STATEMENT

ROUND 1

- The prelims event will be a general physics quiz with standard quizzing rules and format to screen participants for the finale.

ROUND 2

- The finale event will be a physics problem-solving event in which the participants will have to devise out-of-the-box solutions to physics puzzles presented to them in a time-bound fashion.
- The puzzles will require a comprehensive understanding of physics concepts taught till class 12th.
- For this round, participants will be provided with printed question papers which they will have to solve and move on to the next questions.
- The team which finishes first, or which finishes the greatest number of questions within the stipulated time wins.
- Participants will only be provided with subsequent questions upon completing the previous question.

CONTACT DETAILS:

Rohan Umesh : 98454 66082

Vinit Pandya : 95107 78182

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GENERAL RULES:

- Any misbehavior will lead you to disqualification from the competition.
- Decision Taken by Judges will be final and binding for all
- All decisions taken by the organizing team will be deemed final, and no more changes will be encouraged.
- Plagiarism in any form is strictly prohibited and can even result in the disqualification of contestants involved.
- The idea presented by the teams should be original (not protected by patent/copyright/technical publication by anyone else).
- If less than 10 teams will be registered, then only first prize will be given and if less than 15 teams will register, only two prizes will be given.
- No one shall enter the arena except the organisers.
- Any of the above-mentioned rules, if found violated, teams would not be allowed to participate in the competition.
- Any damage caused to the arena at any point in time will lead to disqualification /penalty.

TEAM SPECIFICATIONS:

- This will be a team event. You can participate individually or with a team of a maximum of 3 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

The judging criteria will be merely based on the marks obtained in the quiz.

ROUND 2

The second round will be judged upon the approach as well concept clarity towards the questions.

CONTACT DETAILS:

Rohan Umesh : 98454 66082

Vinit Pandya : 95107 78182

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MINDBEND

Physics Club

EVENT TIMELINE:

ROUND 1

Quiz: 27th March, 2023

ROUND 2

27th March, 2023

REGISTRATION DETAILS:

Fees : Rs. 30

Registration window will open soon!

SVNIT SURAT

mindbendsvnit.in



CONTACT DETAILS:

Rohan Umesh : 98454 66082

Vinit Pandya : 95107 78182

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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 have been very well known about the Autonomous Two wheeler self balancing where the bot has to travel only on just two wheels and complete the track which will consists of various stages having uneven path.

PRIZE MONEY:

1st Prize: Rs. 6000

2nd Prize: Rs. 5000

3rd Prize: Rs. 4000

PROBLEM STATEMENT:

to make a two-wheeler self-balancing line follower bot which has to travel the track having various stages and complete the trajectory. The bot must be autonomous which can detect the track by itself just by observing the white and black path and complete the stages accordingly.

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.

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.



GENERAL RULES:

Bot must be autonomous detecting the white and black track.

- Width of bot should be around 60-70 cm (as width of track = 80-90 cm)
- Weight of bot should be around 5-10 kg.
- Each team should give certain space to fix the plate of the container.
- No further mechanism should be involved to support the container except the 4 marks.
- Only one chance will be given for round 1
- Participants will be given 2 chances even in the case their ball on head falls down.
- In round 2 the best of two scores will be considered in 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 check points marked after every stage in round 2.
- If less than 15 teams have registered for the event only two prizes will be given and if less than 10 teams have registered for the event only two prize will be given.

TEAM SPECIFICATIONS:

a team of 3 to 5 members

JUDGING CRITERIA :

ROUND 1

- -5 score will be awarded with the fall of one ping pong ball.
- Additional -10 score will be awarded when 2nd ball fall 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 -5 score will be counted.
- Total time of bot reaching the end point is noted.
- 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 -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.
- 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 check points a team passes will be considered in assigning scores.



EVENT TIMELINE:

ABSTRACT SUBMISSION ROUND

Abstract Submission: Before 15th March, 2023

Declaration of shortlisted candidates: 18th March, 2023

ROUND 1 & 2

Final submission: 2nd April, 2023

REGISTRATION DETAILS:

Fees : Rs. 50

Registration window will open soon!



CARRY THE CONSIGNMENT

INTRODUCTION

In the competition, the participants must design and fabricate an RC aircraft within specified dimensions and technical specifications later specified in the document.

PRIZE MONEY

1st Prize: Rs. 21000

2nd Prize: Rs. 17000

3rd Prize: Rs. 13000

PROBLEM STATEMENT

The participants are required to design and fly RC aircraft that can carry payload successfully.

ROUND 1 (ONLINE)

- In round one, the teams are required to send us an abstract in which they have to justify their research and design aspects and how they designed the aircraft to carry maximum payload.
- The abstract should be a minimum of 6 pages (A4 size 1.5 line spacing) with standard formatting.
- The document must include the basic design of the aircraft (dimensions, wing areas, velocity, etc.) and explain how their design is suitable for the given problem.
- Teams will be shortlisted on the basis of abstract and shortlisted teams will be announced 20 days before the competition date.

ROUND 2 (OFFLINE)

The RC aircraft should be able to carry payload and must be designed within the specified dimensions.



AIRCRAFT SPECIFICATIONS

1. The competition requires participants to design and fabricate an RC aircraft.
2. T/W <=0.75 without payload. (Thrust to weight ratio of aircraft without payload)
3. Propeller diameter should not be greater than 13 inches.
4. Metal propellers are not allowed.
5. The models can have powered take-off with landing gear or be hand launched.
6. Total wingspan should be a maximum of 1.2 m.
7. Only electrical motors are allowed.
8. Use of gyroscopes and programming assistance in receivers is prohibited.

TEAM SPECIFICATIONS

- In the competition you can either participate individually or in a team consisting a maximum of 5 members including pilot.
- Any number of teams can participate from one college/school.
- Participants must bring their school/college ID cards.
- A particular participant cannot register with more than one team.
- The organizers have the right to reject entries if any ambiguity is found in the above-mentioned rules.

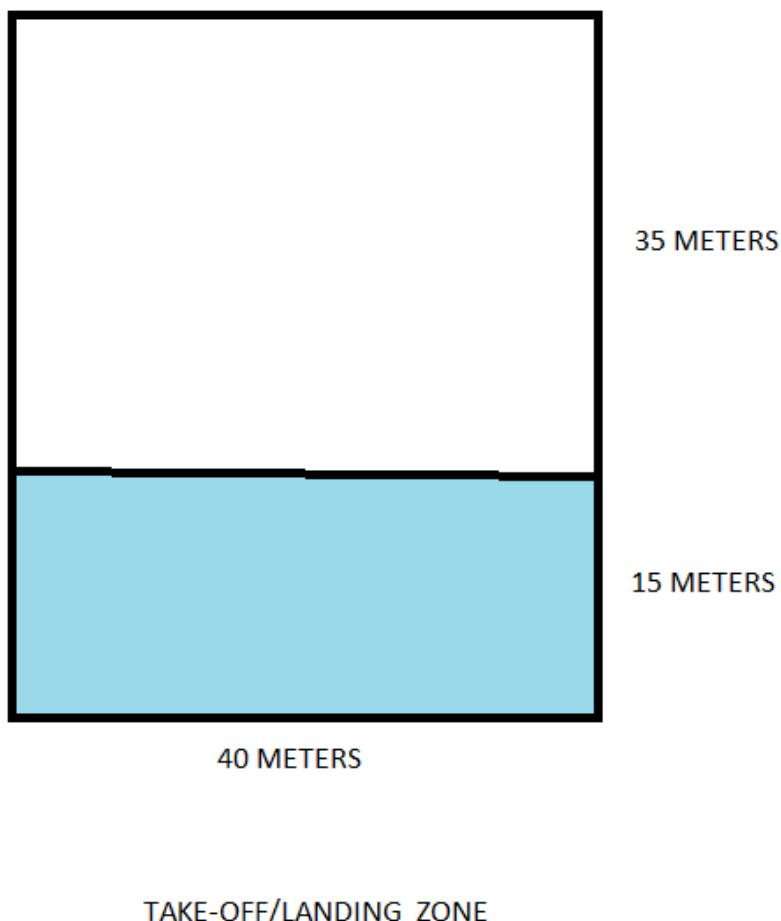
JUDGING CRITERIA

- The judging will be done on the basis of the maximum weight carried. The aircraft that carries the highest weight successfully will be declared the winner.
- The term successfully here means that the aircraft must take proper take-off and while flying, the weight shouldn't be dropped and should land successfully in the landing zone.
- The aircraft must be landed within 3 minutes of take-off.
- In case the aircraft falls after take-off, the team will be given a total of 5 minutes to repair the damages (if any) and return to the take-off zone for the second attempt.
- Note- only two attempts will be given.
- The blue area depicted in the arena top view is the minimum distance (15 meters) that the aircraft must cover in order to consider for its scoring.



The formula used for scoring will be:

$$\frac{\text{weight of payload (grams)} * \text{time of flight(secs)}}{\text{weight of aircraft (grams)}}$$



IMP POINTS TO BE CONSIDERED WHILE SCORING

- The aircraft must be designed to increase the score.
- Here time of flight can be a maximum of 180 seconds only.
- If you are unable to land the aircraft after 180 secs. We will deduct 3 seconds for every flight extra second the aircraft flies.



GENERAL RULES

- Any misbehavior will lead you to disqualification from the competition.
- Decision Taken by Judges will be final and binding for all.
- All decisions taken by the organizing team will be deemed final, and no more changes will be encouraged.
- If less than 5 teams will be registered, then only the first prize will be given and if less than 10 teams will register, only two prizes will be given.
- No one shall enter the arena except the organizers.
- If Any of the above-mentioned rules, if found violated, teams would not be allowed to participate in the competition.
- Any damage caused to the arena at any point in time will lead to disqualification /penalty.

TEAM SPECIFICATIONS

- This will be a team event. You can participate individually or with a team of a maximum of 3 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.

EVENT TIMELINE

ABSTRACT SUBMISSION ROUND

Abstract Submission: Before 15th March, 2023

Declaration of shortlisted candidates: 18th March, 2023

ROUND 1

Final competition: 1st April, 2023

REGISTRATION DETAILS

Fees : Rs. 400

Registration window will open soon!

CONTACT DETAILS:

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CHEM-E-JEOPARDY

INTRODUCTION:

Competition is always a good thing. It forces us to do our best. A monopoly renders people complacent satisfied with mediocrity. CHEM-E-JEOPARDY game utilizes questions from Chemical Engineering Undergraduate Coursework.

PRIZE MONEY:

1st Prize: Rs. 3000

2nd Prize: Rs. 2000

3rd Prize: Rs. 1000

PROBLEM STATEMENT:

The CHEM-E-JEOPARDY game consists of 5 different sections i.e., 3 sections related to core topics and 2 sections related to non-core topics.

- Each section consists of 5 clues of different categories according to their difficulty level.
- The team that buzzes the buzzer first may respond to the clue. The corresponding points should be awarded on correct response while the same points should be deducted on incorrect response.
- The game also contains 2 Double Jeopardy. The team that responds the Double Jeopardy correctly should be awarded double points while the team that responds incorrectly should be deducted double points of the corresponding clue.

GENERAL RULES:

- The team should respond to the clue in the question format. For example, the clue is "Where is Taj Mahal?". The answer should not be given Agra directly rather than this it should be given in the format "Where is Agra?"
- Negative marking for response not submitted in question format along with deduction of clue's value.
- After reading the clue, every team will be given 4-5 seconds to buzz the buzzer. No team should buzz the buzzer while host was reading the clues and points shall be deducted for such conduct.



- It is not allowed to talk among team members after buzzing and scores will be deducted for such conduct.
- The decision taken by the host would be final.
- Any misbehavior will lead to disqualification from the game.
- If less than 10 teams have registered for the event only two prizes will be given and if less than 5 teams have registered for the event only two prize will be given.

TEAM SPECIFICATIONS:

- A maximum of four teams can play in each game and each team's limit must be four players.
- Once registered, the same person can't be registered for more than one team.

ROUND SPECIFICATIONS:

Jeopardy and Final Jeopardy constitute the preliminary qualifying games which the teams shall get an opportunity to play in the semifinals.

EVENT TIMELINE:

ROUND 1

Online submission: 25th March, 2023

ROUND 2

Offline round: 31st March, 2023

REGISTRATION DETAILS

Fees : Rs. 100

Registration window will open soon!



Dr. Driving

INTRODUCTION

To test the ability of the finest technocrats of the nation, Phoenix Racing brings to you "Dr. Driving". Don't be misled by its name, it's an event that will surely cater your needs of adrenaline and speed.

So get your best vehicle on the grid, because only the fastest will conquer the checkered flag.

PRIZE MONEY

1st Prize: Rs. 5000

2nd Prize: Rs. 3000

3rd Prize: Rs. 2000

PROBLEM STATEMENT

Build a wireless RC car controlled by a smartphone under the enlisted general rules, which includes a mechanism to steer itself through various turns. There will be two dynamic events in the competition, Parallel Park and Lap Time.

ROUND 1

- Mode: Online
- Submission of the following documents about the RC car:
 - The code used (if any) in the vehicle
 - A video of the working model
- The above will be collected through a google form which will be sent to the registered e-mail id.

ROUND 2

- Mode: Offline
- The vehicles will be judged in the following dynamic events
 - Parallel Park
 - Lap Time



MINDBEND

SAE Phoenix Racing

SVNIT SURAT

mindbendsvnit.in



GENERAL RULES:

- Vehicle means a four wheeled, electric motor driven RC car.
- The RC car must be controllable wirelessly by smartphone.
- Maximum RC car dimensions: L=30 cm; B=20 cm; H=20cm
- Use appropriate steering and control method.
- Participants can use any material for car bodyworks.
- Only teams who submit a video showing proof of a working model can proceed to Round 2.
- For the Lap Time event, vehicles will have to time 5 laps on the fixed arena.
- Any misbehavior will lead you to disqualification from the competition.
- Decision Taken by Judges will be final and binding for all
- All decisions taken by the organizing team will be deemed final, and no more changes will be encouraged.
- Bring your college/student I-Card at the time of competition.
- If less than 5 teams will be registered, then only the first prize will be given, and if less than 10 teams will register, only two prizes will be given.

TEAM SPECIFICATIONS:

- You can participate individually or with a team of a maximum of 5 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 :

- Points will be awarded based on the dynamic performance of the vehicle in Round 2. Points awarded in the events will be summed up.
- For the Parallel Parking event, points will be awarded based on video proof, recorded during the event.
- Point system for Parallel Park Event:
 - Points awarded = $100 - (5*S) - (5*N)$
 - S: Time in seconds taken for the team to park the RC car, completely inside the designated parking space.
 - N: Number of times, any part of the RC car touches the walls of the designated parking space.

CONTACT DETAILS:

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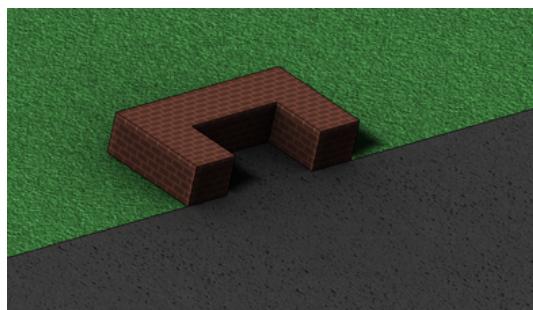




- Point system for Lap Time Event:
 - Points awarded = $100 * (\text{Tmin} / \text{Tteam})$
 - Tmin: Time of the fastest RC car in the event
 - Tteam: The time of the RC car of the team under consideration in the event

TRACK DETAILS:

- The arena for Parallel Park event will be based on the RC car size:
 - Length of parking spot = $1.5 * (\text{Total Length of RC car})$
 - Width of parking spot = $(\text{Total RC car width}) + 3 \text{ cm}$



- Arena for Lap Time
 - Track will be of an open space of 16 by 16 feet.
 - Track length of 42 m.
 - Track width of 2 ft.
 - Track will be on solid concrete and bounded by plastic cones.
 - Cost for 42 cones = 1323 INR

EVENT TIMELINE:

ROUND 1

Online submission: Before 15th March, 2023

ROUND 2

Offline round : 1st April, 2023

REGISTRATION DETAILS

Fees : Rs. 50

Registration window will open soon!

CONTACT DETAILS:

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