



TechZephyr

- 2 0 2 2 -

DURATION

7 Nov - 14 Nov 2022

BROUGHT TO YOU BY

*Science and Technology Council
IIT Bhubaneswar*

Online Competition

HACK THE BOX

Date: 10th to 11th November

"If you think you know-it-all about cybersecurity, this discipline was probably ill-explained to you."

— Stephane Nappo

Hack the Box is an computer security based exercise in which "flags" are secretly hidden in purposefully-vulnerable machine. Competitors have to capture the flags from the organizers to increase their score. The competitors will have 2 days to capture as many flags as they can to increase their score.

Rules for the Contest:

1. Team 2-3 members
2. You are not allowed to change any files except those in the home directory.
3. You have to find two 256-character long hashes, these are in files marked flag1 and flag2 on the server.
4. Malpractices which prevent other users from accessing the machine will lead to immediate expulsion from the competition.

5. Grading system:

Teams with two flags lead all teams with a single flag, among teams with both the flags the first team to capture the flag2 is ranked higher, among teams with only flag1 the team which submitted the flag first is ranked higher.

6. In case of any disputes, the decision made by the organizing committee shall be final and binding.

1. Registration cost per person in each team - Rs. 75
2. Prizes worth Rs. 3000
3. All the participants will get a participation certificates

Register here - <https://forms.gle/hdf5m7xACPx3w8Py8>

Offline Competition

CODEVERSE

"Make it work, make it right, make it fast." – Kent Beck

Codeverse is the team-based competitive programming contest of TechZephyr and is held on the lines of ACM-ICPC. It is a two-round competitive programming contest consisting of a preliminary online round and a final onsite offline round. Participants will be given a set of problems and a fixed time limit in which they have to gain as many points as possible by finishing the maximum number of problems in the minimum amount of time. All submissions are run through a set of test cases, and only those who pass all the test cases are considered correct. There will be a specific penalty for wrong submissions and re-submissions for a given problem.

1. Registration cost per person in each team - Rs. 100
2. Prizes worth Rs. 5000
3. Refreshments will be provided
4. All the participants will get a participation certificates

Round 1

Date: 5th November

Time: 6:30 PM to 9 PM

Round 2

Date: 8th November

Time: 10 AM to 1 PM

Rules for the Contest:

1. A team should consist of 2-3 members only.
2. Preliminary Round will be conducted in online mode and top 10 teams will qualify for Round 2 which will be held offline at IIT Bhubaneswar.
3. The teams should avoid use of unfair means during the preliminary contest. All submissions shall be checked for plagiarism and teams suspected of plagiarism will face serious action.
4. Round 2 will be a 3 hours long contest.
5. All qualified teams are required to bring their own laptop for Round 2. Only one laptop is allowed per team and no other devices are allowed in the contest hall.
6. Use of internet will be limited to only some selected sites for accessing the contest and necessary documentation.
7. Qualified teams can submit a text file of maximum size 65kB which they can use during the contest.
8. In case of any disputes, the decision made by the organizing committee shall be final and binding.

Register here - <https://forms.gle/eUJ9eFphWHAs9pbHA>

Offline Competition

DEBUG THE BUG

Date: 12th November

Time: 12 Noon to 3 PM

"If debugging is the process of removing software bugs, then programming must be the process of putting them in."

- Edsger Dijkstra

In this team competition, each team will first get a website that is completely functional and free of bugs before receiving a copy of the same website that has a bug. You have a set amount of time to identify the bug and fix it. Each bug will have a specific number of points assigned to it, and the team with the most points at the top of the scoreboard wins.

Rules & Regulations -

- A team can have a minimum of one member and a maximum of three.
- All teams need to bring their own laptops.
- At the end of the event the team with the maximum points wins.
- Collaboration between competing teams is not allowed.
- Violation of any rule may lead to disqualification.
- In case of any disputes, the decision made by the organizing committee shall be final and binding.

TechZephyr
- 2022 -

1. Registration cost per person in each team - Rs. 100
2. Refreshments will be provided
3. Prizes worth Rs. 5000

Register here - <https://forms.gle/Jo5G5YFJBbce941f8>

Online Competition

UXTIVITY

Date: 7th to 10th November

"Design used to be the seasoning you'd sprinkle on for taste; now it's the flour you need at the start of the recipe."

- John Maeda

Design is the glue that holds everything together, and much like baking a cake, good UX relies on a combination of ingredients. What does this mean in real-world terms? Design needs to be present from day one of a project; it can't be merely an afterthought. As we've already seen, design-led thinking is a huge business advantage, so it needs to be applied at strategic level – not just viewed as mere decoration. Uxtivity - The UX/ UI Competition will test your designing skills as a professional designer. Participants will be assigned a challenge that involves creating the user interface of an app or website and must complete it before the deadline.

1. Registration cost per person - Rs. 75
2. Prizes worth Rs. 2000

Rules & Regulations -

- This is an individual task.
- Recommended softwares for the task are Figma and Adobe XD
- The submissions should be strictly anonymous. The final work that you will submit should not contain any personal data.
- If we find similarity in text or illustrations between two different works, then both participants will be disqualified. Please do not share drafts of your work with others to avoid getting into such situations.
- Submit your work in PDF format. The task can be completed in any tool, but then it should be exported to a PDF. All screens must be in PDF format along with prototype link. It is possible to share a link to Figma in addition to the PDF task. This is necessary as we need to make sure that the work cannot be changed after submission.
- In case of any disputes, the decision made by the organizing committee shall be final and binding.

Register here - <https://forms.gle/TnPcLKvc2BArLnad8>

Offline Competition

INVESTO

"Invest for the long haul. Don't get too greedy and don't get too scared."
"The best way to measure your investing success is not by whether you're beating the market but by whether you've put in place a financial plan and a behavioral discipline that are likely to get you where you want to go."

Investo is a competition which will test you on your trading skills. Being conducted in offline mode at Community Centre, IIT Bhubaneswar, it will be a thrilling experience for you watching other teams compete with you for the title of this coveted competition.

Registration Charge: Rs. 100 per participant (*and not team).

Location- Community Centre, IIT Bhubaneswar
Date- 8th November 2022
Time- 1:30 PM to 5:30 PM

Refreshments will be served during the competition. **Prizes worth Rs. 4500 await the winners.**

For queries- Sanjana: 8106319434
Prisha: 9345010803

" RULES AND REGULATIONS

1. A team of at least 2 and not more than 5 members are allowed.
2. Each team will be allotted a fixed initial amount of virtual money.
3. Before the company is auctioned, the past stock value of some companies will be provided, along with the details of the performance of the stock over a fixed duration of time.
4. Based on this data, teams should analyze if it is profitable to buy the stocks of that company or not, and should decide the amount that they will be investing in each company's stock.
5. The winner will be decided on the most amount of profits made/the least amount of losses incurred by the team.
6. Teams will be judged based on the stock values of the future. For instance, let us say that the teams were provided with the stock performance data in the duration of June-Dec of the year 2010. Then, the team's current value will be decided based on the value of the stock as of 10th Jan 2011. (Some arbitrary day in the future)
7. Three rounds will be held (The stock values of three companies will be shown in each round), and the team with the highest amount will be declared the winner.
8. In case of any tie, an additional tie-breaker round will be conducted.
9. In case of any dispute, the decision of FEBS, IIT Bhubaneswar would be final and binding.

Register here - <https://forms.gle/q8vpaYL17tSRDgvC8>

Offline Competition

RUFURYUS

Date: 12th November

Time: 10:30 AM - 5:00PM

*Location: MHR Ground,
IIT Bhubaneswar*

Team Specification and Eligibility

Eligibility: Team from any recognized engineering college/Institute is eligible to participate. All Participants must bring their respective ID cards.

Team Specification: Any participating team can have a maximum of 4 members .

Team Name: Every team must have an appropriate name. Team's name can't be changed once submitted. Each team must specify their Team Representative (Leader) at the time of registration.

Task

To build a manually controlled wired/wireless robot capable of finishing the race track by competing with the opponent bot. This will be a knockout race.

The participant shall hereafter be referred to as the player and their robot, the bot. In this event, the players are supposed to run their bots through a path with obstacles that may either be active or passive, implying that they may attempt to cause structural damage to the bot or just make the path tougher to traverse.

The player who finishes the track in the least time wins the event. Several checkpoints are set up on the track. The bots must pass through all these checkpoints in the order they are provided and may return to an already crossed checkpoint if the need arises. Time penalties are awarded, as will be explained at the start of a round, for getting trapped at particular spots. The bot should not harm the arena. The bot designs must strictly adhere to the event rules.

General Rules

- It must be a manually controlled wired/wireless bot, i.e., there must be a way for the player to control the movements of the bot wired/wirelessly.
- It can have some automatic features, but deciding to toggle those features should lie with the player.
- There would be bonus points for wirelessly controlled bots..
- The dimensions of the bot must be less than 25 centimeters by 25 centimeters (length by width), and it must have a height of less than 20 centimeters.

- The maximum permissible weight of the bot is 3 kilograms. Teams are not allowed to use any readymade Lego kits or assemblies.
- The bot must complete the entire race track. Shortcuts are strictly prohibited.
- In case of any discrepancies in the rules, the view of the organizer and jury over the event shall be final and binding.
- Decisions regarding exceptional circumstances shall also lie in the hands of the organizer.

Power Supply

- It can not use AC-powered components.
- The player must bring an adapter to the arena to resolve issues with the length of the wire and faulty equipment.
- The player can use the provided socket or have their supply with a maximum of 24V DC Voltage between any two points in the bot during the game.

1. Registration cost per person - Rs. 150/ per participant

2. Lunch will be provided to the participants.

3. Prizes worth Rs. 10,000

Mobility

- Freedom of mobility may include Rolling (wheels, tracks, or the whole robot).
- Walking (linear actuated legs with no rolling).
- Any other method of mobility that leads the robot to lose contact with the ground is not allowed.

Gameplay Rules

- A Bot is allowed to participate only once in this event. TechZephyr organizing committee is not responsible for any damage to your bot on or off the event.
- We request the participants not to assume anything not mentioned in the document without contacting the organizers
- The players must not enter the arena unless permitted by the organizer.
- The player must not directly or indirectly nudge or touch the bot once the race has started without prior permission of the organizer.
- The bot shall only be controlled by one person who cannot be changed once the race has started. The team leader shall intimate the identity of the controller to the organizer.
- Violation of any rules or misconduct will lead to disqualification.

Register here - <https://forms.gle/DbkVthUCpgBJPjLq9>

Online Competition

BIOT

Date: 6th November - 8th November

Team Specification and Eligibility

Eligibility: Team from any recognized engineering college/Institute is eligible to participate.

Team Specification: Any participating team can have a maximum of 4 members.

Team Name: Every team must have an appropriate name. Team's name can't be changed once submitted.

Each team must specify their Team Representative (Leader) at the time of registration.

IoT-based energy management system:

Management of energy is a major factor in determining the economic as well as environmental impact of the consumption of energy and resources. Hence, the challenge here is to make a viable and sustainable IoT-based energy management system, in any sector of your choice, be it home, public spaces like roads, malls, etc, or industries. The system should increase the efficiency of energy consumption, or reduce the overall wastage of energy by smartly controlling consumption needs.

Rules:

Each participating team will need to submit a working video of their model, and present, via a slideshow, their idea. 48 hours in total will be given between this problem statement and to submission of the video.

Video:

The video that will be submitted needs to have the following:

1. Create a circuit and a bench prototype showcasing your idea in action.
2. The code at this stage can just execute the basic functionality.
3. Submit a video of the bench design in action.

Powerpoint Presentation:

To give the proof of concept, viability, and overall information about the proposed design, the participants will give a presentation to the panel of judges. It should include:

i. Title

ii. Abstract

- Objectives
- Beneficiaries (For whom)
- Value of results (Usage)

iii. Background

iv. Statement of Problem

A succinct definition of the problem addressed (follows from material in the background section)

v. Research

- Present methods of tackling the problem (if any)
- Proposed Solution
- Alternate solutions/approaches
- The novelty of Approach: How is/will your solution be better than the existing products that address the same problem?

vi. Technical Report

1. Description of concepts, theories, and/or approaches involved in the proposed Solution
2. Financial details of the proposed solution
3. Detailed technical specifications and pictorial representations (block diagrams/ flow chart)
4. Description of the flow of operations demonstrating key features and functionality
5. Performance estimate of the solution

vii. Final Prototype Creation (MVP)

1. A working demonstration of the MVP, with the code complete with error checks and state transitions

viii. Results

1. Actual findings, the significant output of tests and analysis (Must be readable)
2. Include problems encountered, the credibility of results, and accuracy estimates
3. Pros and cons of your solution
4. Utility of results

ix. Application

1. Your idea as a solution to the problem
2. Additional applications
3. Benefits to the users

- Deadline for submission of the event: 23:59 hrs IST, 8th November
- Link for submission/registration: Will be added.

1. **Registration cost per person - Rs. 75/ per participant**

1. **Prizes worth Rs. 3,000**

2. **For queries, contact:**

Vudit Srivastava - 7985638709

Hrushikesh Joshi - 9422811114

Offline Competition

ASTRAZENECA

Mode - Offline

Date - 13th Nov

Timing - 10am - 1pm (Round 1) & 2pm-
5pm (Round 2)

Location - LBC 101

Team Size - 2-4

Registration Fees - 150 rupees per
person.

- Deadline for submission of the event:
13th November
- Link for submission/registration: Will be
added.

Contacts: Shivam (9081682954)
Mubasshir (8309139456)

Rulebook:

- Each team can have a maximum of 4 participants.
- This is an event comprising 2 rounds. For the first round, a problem statement will be released. Each team has to work on the given problem statement and make a detailed PDF report of the solution. Each team can submit multiple entries and in that case, only the latest entry will be considered.
- The participants must deliver a PPT-based presentation during the fest with all their results; details of which will be shared later. The presentation will be followed by a Q&A session for round 2. The top 3 teams will be awarded prizes and Certificates of Excellence. All participants that submit their entries for round 1 will get participation certificates.

Register here - <https://forms.gle/hH4RF47r91RvAVLh8>

Online Competition

SHOOTING STARS

Shooting Stars (Astrophotography)

Mode - Online

Date - 9th - 10th Nov

Registration Fees - 75 rupees/person
for outside college & 25
rupees/person for college

Budget Required

About

This is an online astrophotography contest for all the stargazers out there. The contest will run until 13th November 2022. The participants have to submit only one entry (One of the best pictures) that they have clicked. The entries will be posted on our Facebook page and Instagram. The likes and shares of the entries till 13th November will be counted. Participants will be required to send their submissions to the Submission link. The photographs will be judged both on the technical aspects and their popularity on social media.

Timeline and Submission

- This is an online astrophotography contest.
- Participants must submit the images by 23:59 hrs IST, 13th November 2022.

Judging Criteria:

The photographs will be uploaded on Nakshatra's Facebook page and Nakshatra's Instagram within a few days of your submission. The judges will decide 80% of the total points according to the following factors with given weightage:

- Concept and technical excellence **20%**
- Composition **25%**
- Exposure and post-processing **15%**
- Overall Impact, Creativity and uniqueness **20%**

Remaining 20% weightage will be given to the Instagram likes, Facebook reacts and shares. Here's the **marking scheme(applicable only to Original Post):**

1 point for each like on Instagram.

1 point for each like on Facebook.

2 points for each wow reaction on Facebook.

3 points for each love reaction on Facebook.

5 points for each share on Facebook.
(sharing of original post only)

Please note that

- Auto likes will not be taken into consideration and the entry may be disqualified.
- You cannot share the same photo on the same group/page/wall twice. A percentile will be taken to calculate the **total score out of 20**.

Rules and Regulations:

- Camera Resolution should be at least 3.2 megapixels.
 - The images must be clicked in the current year only i.e. **after 00:00 hrs, 1st January 2022.**
 - In photo editing, global editing, photomorphing, and photo stacking are allowed provided everything used for the manipulations has been clicked by the participant himself/herself.
- Participants need to submit both the **final image** (in JPEG or JPG format) and **the raw images used to make the final image**. In the case of stacking, participants can send all or 10 images (whichever is lower) taken at different intervals to cover the whole span.
- Participants have to submit their entries at ----link----
 - You have to mention your Facebook and Instagram handles in the form so we can tag you when we upload the photographs.
 - Participants have to submit an overall description of the photo (not exceeding 50 words),

Any sign of plagiarism will lead to disqualification.

Any picture submitted which is not relevant to the theme of astrophotography will be disqualified.

In case of any dispute, the decision of the organizing committee will be final.

NOTE:

Any sign of plagiarism will lead to disqualification.

Any picture submitted which is not relevant to the theme of astrophotography will be disqualified.

In case of any dispute, the decision of the organizing committee will be final.