CODEAVOUR 8.0
INTERNATIONAL

Track 1 - Innovation and Entrepreneurship

Rules and Regulation

Where Innovators Become Entrepreneurs

Coding for the Future

VERSION 1
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Track 1 - Innovation and Entrepreneurship

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1. Track 1 - Innovation and Entrepreneurship

The **Innovation & Entrepreneurship Track** is a global platform that empowers students to transform bold ideas into impactful innovations. Participants are challenged to design technology-driven solutions that address real-world challenges across diverse sectors, improve lives, and create meaningful societal impact. **By fostering creativity, critical thinking, and entrepreneurial skills**, this track inspires the next generation of innovators to build solutions that shape a smarter, more sustainable, and inclusive future.

1.1. Project Pillars

1. Empower Health

Innovate for healthier lives through healthcare, MedTech, and Well-being.

Focus:

- Smart Healthcare & Medical Technology
- Mental Health & Wellness
- Assistive Technologies
- Disease Prevention & Remote Monitoring

Aligned SDGs:

- SDG 3 - Good Health & Well-being
- SDG 10 - Reduced Inequalities

Sample Projects:

- **AI Health Monitoring System**
  Platform: Quarky + PictoBlox
  - Monitor heart rate and body temperature
  - AI predicts abnormal health conditions
  - IoT dashboard for caregivers

- **Smart Medicine Reminder**
  Platform: ESP32 + Arduino
  - Automatic medicine reminders
  - Mobile notifications
  - Medication adherence tracking

- **AI Fall Detection Assistant**
  Platform: Quarky + PictoBlox
  - Detects elderly falls using AI Vision
  - Sends emergency alerts

- GPS location sharing

2. Move Tomorrow

Reimagine mobility, smart infrastructure, and connected communities.

Focus:

- Smart Transportation
- Intelligent Traffic Systems
- Future Mobility
- Connected Smart Cities
- Smart Public Safety

Aligned SDGs:

- SDG 9 - Industry, Innovation & Infrastructure
- SDG 11 - Sustainable Cities & Communities
- SDG 16 - Peace, Justice & Strong Institutions

Sample Projects:

- **AI Smart Traffic Management**
  Platform: Quarky + PictoBlox
  - AI vehicle detection
  - Adaptive traffic lights
  - Congestion prediction

- **Hydrogen Smart EV Dashboard**
  Platform: ESP32
  - Battery/Fuel monitoring
  - AI energy optimization
  - IoT vehicle analytics

- **Maglev Transit Simulator**
  Platform: Arduino
  - Magnetic levitation demonstration
  - Smart station automation
  - Collision prevention simulation

3. Feed the Future

Transform agriculture and food systems for a resilient world.

Focus:

- Precision Agriculture
- Smart Irrigation
- Food Security

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- Livestock Monitoring

Aligned SDGs:

- SDG 1 - Zero Poverty
- SDG 2 - Zero Hunger

Sample Projects:

- **AI Crop Disease Detector**
  Platform: PictoBlox + Quarky
  - Image-based disease identification
  - AI crop recommendations
  - Farmer dashboard

- **Smart Irrigation System**
  Platform: Arduino + ESP32
  - Soil moisture sensing
  - Automatic watering
  - Weather-based irrigation

- **Food Storage Monitor**
  Platform: ESP32
  - Temperature monitoring
  - Spoilage alerts
  - Cloud dashboard

4. Restore Earth

Create sustainable solutions to protect our planet and natural resources.

Focus:

- Renewable Energy
- Climate Action
- Waste Management
- Water Conservation

Aligned SDGs:

- SDG 6 - Clean Water & Sanitation
- SDG 12 - Responsible Consumption & Production
- SDG 13 - Climate Action
- SDG 14 – Life Below Water
- SDG 15 – Life on Land

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Sample Projects:

- **Smart Waste Segregator**
  Platform: Arduino
  - Automatic waste classification
  - Smart bins
  - Recycling statistics

- **AI Air Quality Monitor**
  Platform: ESP32
  - Pollution monitoring
  - AQI prediction
  - IoT dashboard

- **Solar Energy Optimizer**
  Platform: Quarky + PictoBlox
  - Solar tracking system
  - AI power optimization
  - Energy analytics

5. Unlock Potential

Advance equitable education and opportunities for every learner.

Focus:

- AI in Education
- Inclusive Learning
- Digital Literacy
- Career Readiness

Aligned SDGs:

- SDG 4 - Quality Education
- SDG 5 - Gender Equality
- SDG 8 - Decent Work & Economic Growth

Sample Projects:

- **AI Personal Tutor**
  Platform: PictoBlox
  - Personalized learning
  - Quiz generation
  - Learning analytics

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- **Smart Attendance System**
  Platform: ESP32
    - Face recognition
    - Attendance reports
    - Parent notifications

- **Interactive STEM Learning Kit**
  Platform: Quarky
    - Robotics-based learning
    - Gamified education
    - Classroom automation

6. Explore Beyond

Push the boundaries of space, astronomy, and frontier technologies.

Focus:

- Space Exploration
- Astronomy
- Space-based Energy
- Future Technologies

Aligned SDGs:

- SDG 7 - Affordable & Clean Energy
- SDG 17 - Partnerships for the Goals

Sample Projects:

- **AI Satellite Tracker**
  Platform: ESP32
    - Tracks satellite movement
    - Weather integration
    - Live visualization

- **Cosmic Energy Optimizer**
  Platform: Quarky + PictoBlox
    - Space-inspired solar energy monitoring
    - AI energy prediction
    - IoT dashboard

- **Smart Space Weather Alert**
  Platform: Arduino
    - Solar storm simulation
    - Radiation monitoring
    - Satellite safety alerts

1.2. Rules and Regulations

1.2.1. Participation:

1. Please ensure reading the general guidelines of Codeavour 8.0.

2. One can participate as **an individual or as a team of 2-3 members with 1 mentor.**

3. The project should be aligned with one of the following Pillars:

    - Empower Health
    - Move Tomorrow
    - Feed the Future
    - Restore Earth
    - Unlock Potential
    - Explore Beyond

4. One can use any coding environment available inside PictoBlox including Block-Based Coding, PictoBlox Jr, PictoBlox 3D & XR Studio, ML, and Python Environment.

5. In the case of hardware-based projects, only the hardware that is compatible with PictoBlox is allowed, i.e., Quarky, evive, Micro: bit, Arduino, ESP32, Boffin, T-Watch, TECbits, LEGO, WizBot etc.

6. PictoBlox-based projects without hardware are also allowed to participate, compete, and win.

7. The mentor or coach's responsibility is limited to mentorship and guidance only. They should not be directly involved in project making, demonstration, or pitching ideas. Otherwise, it can lead to disqualification of the team.

8. Submission of the project online through the Codeavour dashboard is mandatory before participating in the physical event.

1.2.2. Online Submission Requirements for Track 1:

Participants must complete their online submission before taking part in any regional, national, or international showcase. Failure to do so may result in team disqualification from the event. It is essential that submissions are timely and thorough to secure a spot in the competition.

1. Only one project submission is allowed per team.
2. The project submitted should be authentic and made by participants only.

3. Teams are allowed to update the project before the regional/national/international levels of competition.

4. For successful Online submission, one must submit the following things:

   4.1. **Hardware Electronics Components Details:** Participants must provide a brief description of each component used in their project.

   4.2. **Image of Project:** Participants must submit a high-quality image that highlights their innovation and includes a representation of themselves (recommended size 1,920 x 1,080 pixels.)

   4.3. **Description:** Participants must write a 200-250 word description of their project covering the key highlights of their innovation.

   4.4. **PictoBlox File Link:** Participants are asked to share the link(s) of their PictoBlox projects file. (One can upload one or more file links if the project has multiple boards. They must make sure not to upload multiple file options for the same board.)

   4.5. **YouTube Video:** A link to a YouTube video should be created and added.

   Note: *One must upload a video on YouTube (Public or Unlisted) and submit the YouTube link of their video on the submission page. They are requested to ensure that the YouTube* ***video link provided is not marked as private****; otherwise, their submission will be considered unsuccessful.*

   4.6. **Project Presentation:** A presentation of 6-8 slides should be created and uploaded according to the given template.

   4.7. **Project Website:** Creating a project website is **mandatory only for teams qualifying for the International Finals**. Teams may use free platforms such as Google Sites or any other website builder, with either a free or paid domain, to showcase their project.

1.2.3. Showcase Your Innovation During Physical Events for Track 1:

For successful participation in physical events (Regional, National, International), the participants must come up with the following things:

1. Prototype or model of their innovation
2. Banner or poster covering key innovation features (2x3 feet with the National Flag in the design)
3. Necessary equipment (laptop, tablet, etc.)
4. Chargers and spare batteries
5. Extension cords, International Travel Adapter, and power strips
6. Tape, scissors, Gluedots and other setup tools

Note: *Tutorial links will be provided for YouTube videos, Banners, and poster designing.*

1.3. Preparing Your Codeavour Track 1 Project Submission and Presentations for Physical Events

All participants must submit the Project YouTube Video and Presentation through the online submission portal. Some participants will be selected for the Nationals and will also have a live presentation with a panel of international judges and peer innovators.

This section offers requirements and tips for the materials the participants will upload and the presentation (s) they will deliver.

1. Image of Individual or Team
2. Image of the Project
3. 4 -8 Minutes Pitch Video
4. 6-8 Slide/Page Presentation
5. Banner/Poster
6. Team Website on any free/paid domain like Google Sites (for National Winners)

1.3.1. Image of Individual or Team

A JPEG or PNG image of oneself or the team should be created (max. file size: 5MB).

1.3.2. Image of the Project

One must create a JPEG or PNG image of their project (max. file size: 5MB). The purpose of the image is to enable the judges to generally understand more about one's innovation.
Example images:

1. Idea: a small portion of the blueprint, diagram, illustration, or outline saved as a PDF
2. App: screenshot(s) of a portion of the code as well as screenshot(s) of the user interface
3. Prototype: picture(s) that does not show all of the critical pieces
4. Social-good program or service: high-level business plan
5. Process: process diagram/chart

1.3.3 Pitch Video [4-8 Minutes]

1. Technical Requirements

1.1. The video may not exceed 4–8 minutes.

1.2. Participants may create their videos using whatever technology is available to them.

1.3. If a cell phone is used, the video should be captured in landscape, not portrait.

1.4. One must edit their pitch video.

1.5. The participants must include the innovation name and the name(s) of the innovator(s).

1.6. A link to a YouTube video of 4-8 minutes in duration should be created and added.

1.6.1. Project demonstration.

1.6.2. Overview of their innovation.

1.6.3. Brief about oneself and their teammates.

1.6.4. Brief about the selected Pillar and why they chose it.

2. Tips on how to make a great video

2.1. **Start with a Captivating Hook:** A strong opening statement or question should be used to grab the viewer's attention and spark their interest.

2.2. **Highlight the Problem:** Clearly defining the problem or challenge that the product or service addresses ensures it resonates with the target audience.

2.3. **Present Your Solution:** Briefly explain how the product or service resolves the issue, showcasing the unique features or benefits that distinguish it from competitors.

2.4. **Keep It Simple:** Technical jargon and complex language must be avoided. The message should be straightforward, concise, and easy to grasp.

2.5. **Show, Don't Just Tell:** Visuals, animations, or real-life examples should be used to demonstrate the product or service, to illustrate its effectiveness.

2.6. **Emphasize Key Benefits:** Focusing on the main benefits or outcomes that users gain from the product or service is essential. Highlighting how it enhances their lives or solves their problems demonstrates its value and effectiveness.

2.7. **Incorporate Social Proof:** Testimonials, case studies, or success stories from satisfied customers can be included, to enhance credibility and build trust.

2.8. **Include a Strong Call to Action (CTA):** Concluding with a clear and compelling call to action, urging viewers to take the next step, whether it's signing up for a trial, visiting the website, or contacting for more information.

2.9. **Practice, Practice, Practice:** The pitch must be rehearsed multiple times to ensure it flows smoothly and fits within the 4-8 minutes limit. One must aim for a confident and natural delivery.

2.10. **Edit Ruthlessly:** Any unnecessary or repetitive content must be removed to keep the pitch focused, engaging, and impactful.

1.3.4 Presentation and Your Live Verbal Presentations [6-Slide/Page]

Tips on how to present your project: Everyone has a unique style, and embracing it is important! Here are some tips for guiding individuals:

1. **Time Management:** Participants have 7 minutes to present, followed by 3 minutes for Q&A. They must ensure that they use the 10 -minute window effectively.
2. **Slide Planning:** The content of each slide must be outlined to make sure all key points are addressed.
3. **Structure Your Presentation:** One must start with a strong opening, maintain the audience's interest throughout your presentation, and end with a compelling closing.
4. **Balance Information and Visuals:** Text and images must be combined to keep the presentation engaging.
5. **Concise Content:** Short summaries or bullet points must be used instead of long paragraphs. This makes the presentation easier to follow.
6. **Organize Your Slides:** One must sketch a plan in a notebook. Dividing the slides into two sections should be considered: one for visuals (illustrations, photos) and the other for key details.
7. **Support for Young Innovators:** During the preparation phase, students are encouraged to seek guidance and mentorship from parents, teachers, or mentors to strengthen their ideas and enhance their presentation.
8. **Team Presentations:**

   8.1. One must begin by introducing themselves and their teammates.

   8.2. Teammates should support by demonstrating or explaining parts of the solution when relevant.

8.3. A presentation template will be shared on the Track 1 page of the website as a guideline. While the use of the template is optional, teams must ensure that their presentation includes all the required sections specified in the template.

9. **Focus on Your Story:** Participants must explain what they've done, why they chose to do it, how they executed it, and what the outcome was.

10. **Practice Makes Perfect:** Presentation must be rehearsed multiple times to ensure smooth delivery.

1.3.5 Banner/Poster

1. The banner or poster should effectively convey the Pillar, key concepts, and innovation behind the project, providing an engaging and informative visual summary for judges and attendees.

2. A banner template will be shared on the Track 1 page of the website as a guideline. While the use of the template is optional, teams must ensure that their banner includes all the required sections specified in the template.

1.3.6 Team Website on any free/paid domain like Google Sites (for National Winners)

1. **National winners** are required to create a team website hosted on any free or paid domain, such as Google Sites.

2. The website should showcase the project, including details about the innovation, team members, and the project's development process.

3. It serves as a digital portfolio, providing a comprehensive overview of their work and achievements.

Good luck, and remember, you've got this!

1.4. How we define Innovation and Entrepreneurship

1.4.1 Innovation: Innovation is the process of turning creative ideas into tangible solutions that address real-world problems. For students participating in Codeavour 8.0, innovation involves:

1. **Identifying Real-World Problems:** Recognizing challenges in their communities or globally that need creative solutions.

2. **Thinking Creatively:** Using imagination and original thinking to brainstorm new ideas and approaches.

3. **Applying Technology:** Leveraging coding, robotics, and AI to develop practical and effective solutions.

4. **Prototyping:** Creating models or prototypes to test and refine their ideas.

5. **Iterating:** Continuously improving their solutions based on feedback and testing.

1.4.2 Entrepreneurship: Entrepreneurship is about transforming innovative ideas into viable projects or businesses that can have a meaningful impact. For students in Codeavour 8.0, entrepreneurship involves:

1. **Problem-Solving:** Tackling real-world issues with practical and innovative solutions.
2. **Planning:** Develop a clear plan for their project, including goals, resources needed, and steps to achieve their objectives.
3. **Market Understanding:** Identifying who will benefit from their solution and understanding the needs of their target audience.
4. **Execution:** Implementing their plan, creating their product or service, and bringing it to life.
5. **Pitching:** Presenting their projects compellingly and convincingly to potential judges, investors, or collaborators.

Conclusion

Thank you for being a part of **Codeavour 8.0**. This rulebook has been designed to provide clear guidelines and ensure a fair, transparent, and enriching competition experience for every participant. We encourage all teams to carefully follow the rules, adhere to the timelines, and uphold the values of originality, innovation, teamwork, and ethical conduct throughout the competition.

Remember, Codeavour is more than a competition—it's a platform to learn, innovate, collaborate, and create solutions that make a real-world impact. We wish you the very best on your innovation journey and look forward to celebrating your ideas at the Regional, National, and International stages.

Innovate with purpose. Create with passion. Shape the future with Codeavour 8.0! 🚀

Register Now!

Join thousands of young innovators worldwide and be part of Codeavour International!

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