GLOBAL ROBOTICS CHALLENGE

RULE BOOK 2025

GLOBAL ROBOTICS CHALLENGE

SCRATCH CHALLENGE

Smart Programmers CHALLENGE

For More Information:

Scan QR Code

GLOBAL ROBOTICS CHALLENGE

1. Technical Introduction :

The Scratch Challenge is an educational and creative software competition aimed at young age groups, where the Scratch 3 programming environment is used that provides a fun and easy-to-understand visual style to learn the principles of programming.

The challenge aims to:

- **Develop logical thinking by designing orderly orders and solutions.**
- **Boost creativity by building interactive games, stories, and simple real-life projects.**
- **Develop problem-solving skills using blocks instead of complex text codes.**
- **Encourage teamwork and communication skills among students through joint projects.**

During the competition, participants are asked to implement various projects such as:

- **Design simple educational games.**
- **Create interactive stories with a purpose.**
- **Build projects that raise awareness of life issues (such as health or the environment) in fun ways.**

The competition combines fun and learning, and is a gateway for young students to enter the world of programming and technology in a practical and exciting way.

2. Team Composition :

- **Number of team members: 2 to 4 Students, guided by a Coach.**
- **Age Group:**

  1. Discover Category:

  - **Ages: 5 to 7 years.**

  2. Junior Category :

  - **Ages: 8 to 11 years.**

3. General Rules:

- **Each participant must bring their own laptop.**
- **The code/task must be delivered before the specified time (countdown).**
- **It is strictly forbidden to use the internet during the time of the competition.**
- **After each round, the team presents their work to the judging panel.**
- **The judging panel reviews the submitted code manually and evaluates it according to specific criteria.**
- **Before the start of each round, 15 minutes will be set aside to explain the challenge and answer the teams' questions.**
- **Any contact with people outside the team during the competition time is strictly prohibited.**
- **Any intervention or assistance from coaches/supervisors during the time of the rounds will result in a first warning, and its repetition may result in the team being disqualified from the competition.**

4. Rules for Scratch Programmers :

- **Age group allowed to participate: 5 to 11 years old.**
- **Must be committed to using Scratch 3 only.**
- **The competition consists of 3 rounds, and each round is a different challenge explained by the moderator during the 15 minutes allotted before the start.**
- **Duration of each round: one hour only.**
- **The challenges are broken down by age group:**
- **Each mission must be completed on time.**
  - ❖ **Discover Mission: Create a game or short story.**
  - ❖ **Junior Mission: Create a complete game with clear rules.**

5. Technical Requirements:

- **Discover level :**

❖ **The participant must possess basic knowledge of:**

- **Events : such as "When you click the green flag" or press a key to start the interaction.**
- **Conditions : such as "If he touches the edge" or "If the points = 10".**
- **Sprites : How to add and animate characters within a project.**
- **Inputs: Interacting with the project using a keyboard or mouse.**

❖ **Type of Challenges:**

- **Create a simple story.**
- **Short game with basic action and interaction.**

- **Junior Level:**

❖ **The participant must possess advanced knowledge of:**

- **Variables: To store points, time, or any other in-game data.**
- **Conditions : such as "If he touches the edge" or "If the points = 10".**
- **Loops : For repeated control of game logic.**
- **Functions /My Blocks: Create reusable special commands.**
- **Events: The interaction between more than one character at the same time.**
- **Sprites : Advanced customization and control of movements and interactions.**

❖ **Type of Challenges:**

- **Designing an integrated game with clear rules (Game Rules).**
- **Use of the Lives Points system .**

6. Guiding Examples :

- **Discover level:**

❖ **Game: Catch the Mouse**

❖ **Description: The player controls a cat trying to catch a fast-moving mouse.**

❖ **Objective: Move the cat left and right to catch up with the mouse. When you touch the mouse, a success sound is made and a message "Well done!" appears.**

❖ **Rules of the game:**

- **The cat moves with arrows.**
- **The mouse moves randomly.**
- **Win when you touch the mouse and a success + message appears "Well done!".**

❖ **Expected Game:**

- **The cat moves with the arrows.**
- **The mouse constantly changes its position randomly.**
- **The game ends when you touch the mouse (Win Condition).**

- **Junior Level:**
  - **Game: Avoid the Asteroids**
  - **Description: The player controls a spacecraft that tries to traverse a field full of asteroids.**
  - **The objective: To dodge the coming rocks and stay alive for as long as possible. The longer a player holds, the higher their points will be.**
  - **Rules of the game:**
    - **The player moves the vehicle using the arrows (up/down) to move vertically.**
    - **The rocks appear from the right and are constantly moving towards the left.**
    - **If the vehicle hits a rock: Game Over is over.**
    - **The player gets two bonus points every time they survive without collision.**
  - **Expected Game:**
    - **A spacecraft moving vertically.**
    - **Rocks appear from random places and move towards the vehicle.**
    - **The system automatically calculates points and displays a message when the game ends.**
    - **A detailed example of the idea can be viewed via the link:**
      https://drive.google.com/drive/folders/1SBi1HobtQx-uaeQrnJCSQl-4bayDOGIg?usp=sharing

Good Luck.