

Smart Programmers Scratch Challenge

R U L E B O O K



GLOBAL
ROBOTICS
CHALLENGE



Smart programmers (scratch)

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1.scratch challenges

Considering the growing importance of programming as a global skill, we are pleased to introduce the Smart Programmers competition for individuals aged 5 and above. The competition consists of multiple rounds, each featuring distinct challenges. It is mandatory for every team to complete the challenge and submit their work within a specified time frame.

1.1 Coder age

Discover: (5 – 7 years).

junior: (8 – 10 years).

1.2 Team member

Team's members should be at maximum 4 members guided by a Coach/Teacher

It is not possible for teams to share a team member.

2. Rules

2.1 General rules

- 1) Every member is required to bring their own laptop.
- 2) The code/task must be submitted prior to the countdown.
- 3) During the competition time, accessing the internet is prohibited.
- 4) Teams will present their work to the judges once the round time is over.
- 5) The code created by the team for each challenge will be manually reviewed by the judges after the completion of each mission. It will be evaluated based on the judging criteria.
- 6) There will be a 15-minute period before each round to explain the challenge and allow team members to ask questions about it.
- 7) Any form of communication between team members and non-team members is strictly prohibited during the competition.
- 8) Interference or communication by mentors during the competition will result in a warning for the first offense, and repeated instances may lead to the team being potentially eliminated from the competition.

2.2 scratch programmer's rules:

- 1) Before considering these rules, please review the general rules as they form the foundation for all other rules.
- 2) Age eligibility ranges from 5 to 10 years.
- 3) The permitted software for this category is Scratch 3.
- 4) This competition consists of three rounds.
- 5) Each round has a duration of approximately one hour for each task (
 - a. **Discover Task:** simple game and story.
 - b. **Juniors Task:** a game.)
- 6) Internet connection is not allowed.

3.Requirements

Good knowledge about basic programming concepts as the following:

- **Variables**
- **Inputs**
- **Conditions**
- **Loops**
- **Events**
- **Functions**
- **Sprites**
- **My Blocks**

4. Samples

4.1 Dodge the Asteroids

You are a spaceship pilot navigating through an asteroid field. Your mission is to dodge the incoming Rocks and survive as long as possible. The longer you survive, the higher your score will be.

4.1.1 Game Setup:

Set up the stage with a Galaxy backdrop.

Create a sprite for the spaceship (controlled by the player).

Create several Rocks sprites (controlled by the computer) that will move from the right to the left of the stage at different positions.

4.1.2 Game Rules:

The player can control the spaceship using the arrow keys (up and down) to move vertically.

The Rocks will start appearing randomly from the right to the left of the stage.

If the spaceship collides with a Rocks, the game ends (Game Over).

The player's score increases by 2 over time as they survive.

4.1.3 Expected Game:

You can see the detailed video from this link:

https://drive.google.com/file/d/1GXo3UDldnq8VRROlZkFv_0yOqZo9E5uY/view?usp=sharing

The screenshot from the game:

