



# University Category Task

## COMPLETION ROUND

### WELCOME TO THE ROBOGAMES 2024!

We are thrilled to announce the upcoming RoboGames competition, featuring three thrilling rounds: the Completion round, the Elimination round, and the Final round. Our primary objective is to foster robotics knowledge and provide an exciting platform for robot enthusiasts to showcase their skills and innovations.

In the Completion round, participants will have the chance to compete and demonstrate their capabilities using the Webots robots simulation platform. From there, all teams who complete the task successfully will advance to the second round, the Elimination round.

For any questions or clarifications, please contact:

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Stay tuned for further announcements and exciting developments in the world of RoboGames!

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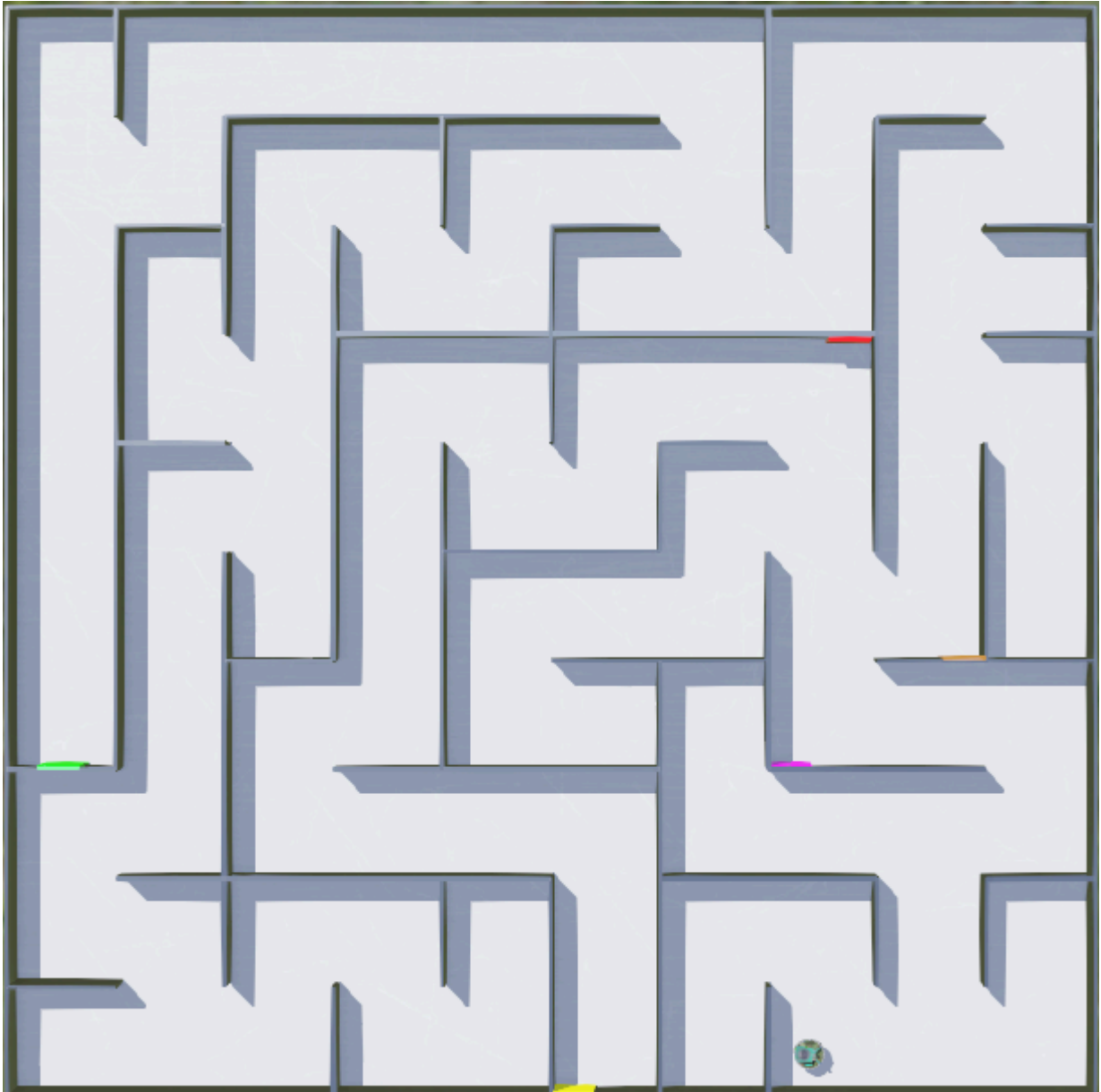
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## **GENERAL RULES**

1. A team can consist of a maximum of **5 members** and a minimum of 1 student. All students must be from the same university/institute.
2. The teams that will pass the Completion round will be selected for the second round.
3. Plagiarism is a serious offense and will cause a team to be disqualified. The judge panel may carry out a viva if solutions provided by a team are suspected to be plagiarised.

**Note: The decision of the judges will be final.**

## THE ARENA



- The competitors have to design a Webots environment named the “RoboGames 2024 University Category(team\_name).wbt” Webots world file.

### Arena specifications

1. The grid should be 2.5 by 2.5 meters
2. The gap between walls should be 0.25m
3. A wall should be height 0.1 m, breadth 0.01 m, length should be a multiple of

0.25m to be consistent with the gap  
Any design diverge from the above figure is acceptable but it should follow the specifications.

### **Colored Wall Properties:**

1. Height: 0.1m
2. Width: 0.1m
3. Breadth: 0.01m
4. Colors: Red(#FF0000), Yellow(#FFFF00), Pink(#FF00FF), Brown(#A5691E), Green(#00FF00)

### **THE TASK**

1. Build an arena according to the above specification.
2. Go to each color in the pattern given. The robot should work for any position placed in the maze.  
Pattern: Red - Yellow - Pink - Brown - Green
3. The robot must stop after achieving its goal.

### **Video submission**

- Include a camera feed in the recording.
- Show the complete task execution from start to finish.

### **THE ROBOT**

- **E puck robot** must be used for simulation.

### **VIOLATIONS**

1. Manipulating/editing the video demonstration intended to mislead the judges is a violation. The code you submit will be executed and checked against the video submission and any discrepancy will be investigated.

**Any violation will cause the submission to be rejected.**

## SUBMISSION

1. The submission period **starts at 12:01 am on the 6th of January** and **ends at 11:59 pm on the 18th of January 2025**.
2. Participants will receive the submission link via email, and it will also be shared in the WhatsApp group.
3. A submission should include the following contents:
  - I. The code of the robot controller and the environment.  
(A zip file of the project directory)
  - II. A video demonstrating the robot performing the task.
  - III. A scanned copy of the university record book or university identity card for each team member compiled into a single document, ensuring the following details are included:
    - Your photograph
    - Personal details
    - University identity number