SCHOOL CATEGORY

FOLLOW YOUR PATH 2.0

BY

YARL IT HUB

YGC INNOVATION FESTIVAL 2024

Disclaimer

The content of this prospectus is subject to change. Participants are advised to regularly check the official website,emails and our social media pages for updates and announcements.

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YARL IT HUB

- Yarl IT Hub (YIT) is a not for profit social enterprise which strives towards inspiring, supporting and fostering Technology, Innovation and Entrepreneurship in the community.

- It’s an organization by the community for the community. The Yarl IT Hub community consists of all those who share the dream of making Jaffna in to the next Silicon Valley and abides by the core values of the organization.

YGC INNOVATION FESTIVAL 2024

01 YGC Innovation Festival is a captivating celebration that unites the spirit of innovation, imagination, and entrepreneurship under one event. It brings together entrepreneurs, seasoned professionals, and enthusiasts.

02 It includes groundbreaking pitch competitions and ingenious student expos to engage in hands-on workshops and insightful masterclasses, the festival offers an enriching experience that transcends boundaries and sparks new possibilities.

03 This year it is happening on the 1st,2nd,3rd and 4th of August 2024 at Jaffna Cultural Center

FOLLOW YOUR PATH - ROBOTIC CHALLENGE

Follow Your Path is a line following robotic competition where the robot goes through complex path. YGC Innovation festival is to be held on first four days of August, where the robotic challenge will be conducted second time this year. Last time it held only for school students and this time challenge is expanding into two categories.

PLOT BEGINNING

Once upon a time, in a small town where the stars twinkled brightly at night, there lived a curious little girl named Shampavi. Shampavi loved gazing at the sky and dreaming about outer space. She had a telescope that she used every night to look at the moon and the stars. One evening, Shampavi heard exciting news on the television. The announcer said, "A new rover has just landed on Mars, and it's exploring the red planet to find signs of life!"

Shampavi's eyes sparkled with excitement. "I wish I could go on a space adventure too," she thought. That night, as she was deep thinking, something magical happened. Suddenly, she heard a voice “Welcome aboard, Shampavi! We're on a mission to explore Mars, just like the rover. Are you ready?" "Yes, I'm ready!" Shampavi exclaimed. Shampavi's room filled with a soft, glowing light, and before she knew it, she was in a shiny silver spaceship. Shampavi felt herself as an astronaut and get ready for an adventure in space!

The spaceship zoomed through the sky, past the moon and the stars, until it landed gently on the surface of Mars. Shampavi stepped out, her heart pounding with excitement. She looked around and clicked the pictures of red rocks, dusty hills, and a bright pink sky using her special camera.

As she was exploring, she noticed something strange. There was a small, sparkling blue flower growing between the rocks. With a radiant smile on face, Shampavi tried to capture the flower on her camera. In that moment, the flower bloomed gigantically, its petals closing around Shampavi, enveloping her completely and taking her somewhere nearby.

Suddenly she realized, it is an arm of a robot.....

Hello Sambavi You have come from Earth to research Mars. My name is Chattanus Mars 001, I am the first robot sent on an experimental mission for this research, and I am ready to help you.

You scared me in no time. It's a little calmer now. Glad to have your help.Tell me what information you have saved so far

So far no trace of organic matter has been found but some such as natural metals have been found. I have found a map to a cave during the search. We have to start preparations. There must be a parent rock from which the metallic elements can be formed.

The beginning of the cave was too narrow for my hand to reach. It can also be dangerous for us to travel inside the cave. The passage of the cave is narrow and curvy. We need to design a small robot to penetrate it and find the mother rock.

Elated, Sambavi began to think deeply about her next move in research.....

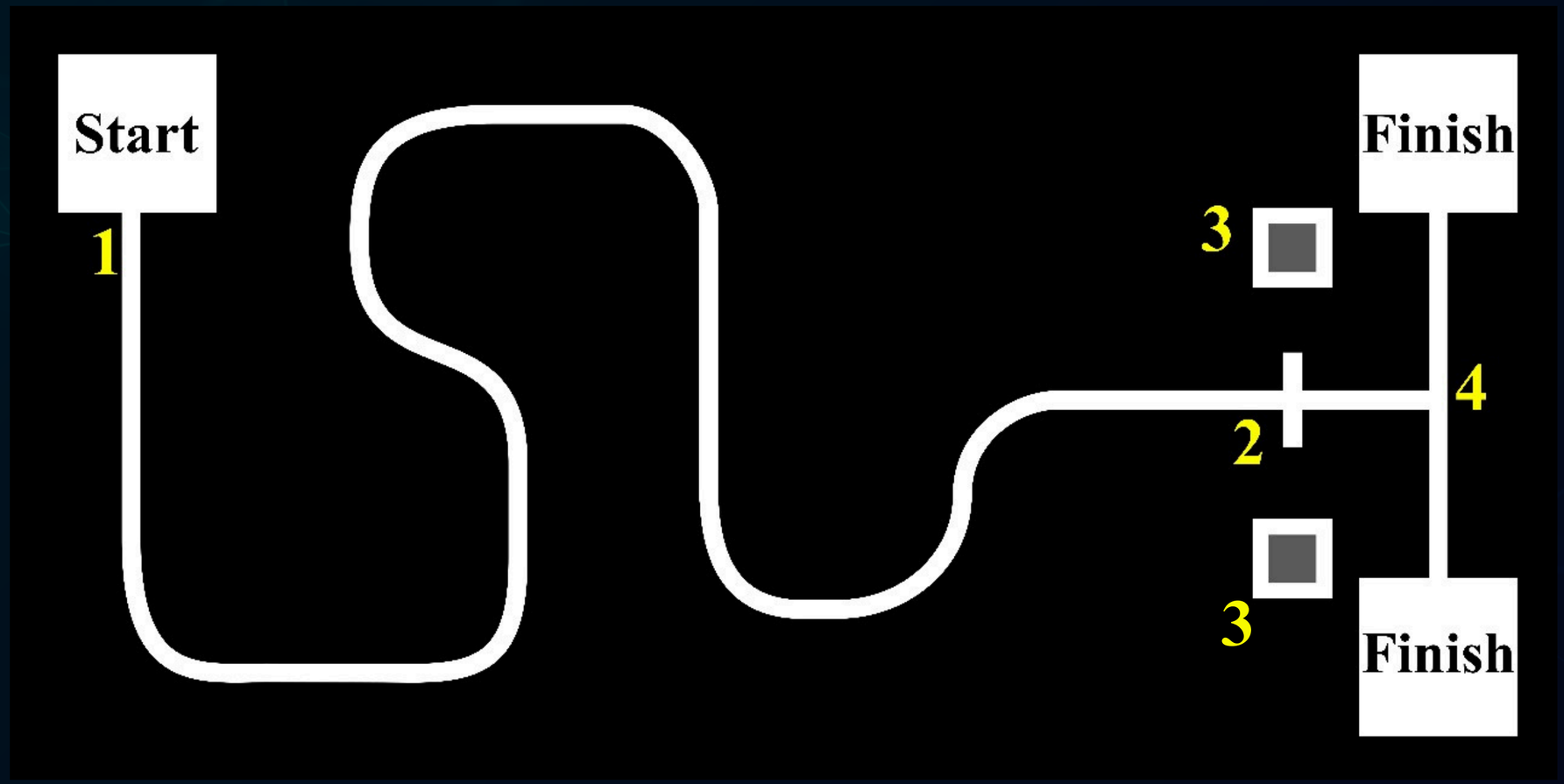
Shall we set up a small robot to travel through the cave and find the mother rock?

Based on the map, she began to give instructions on how to set up the robot to reach the mother rock through the cave.

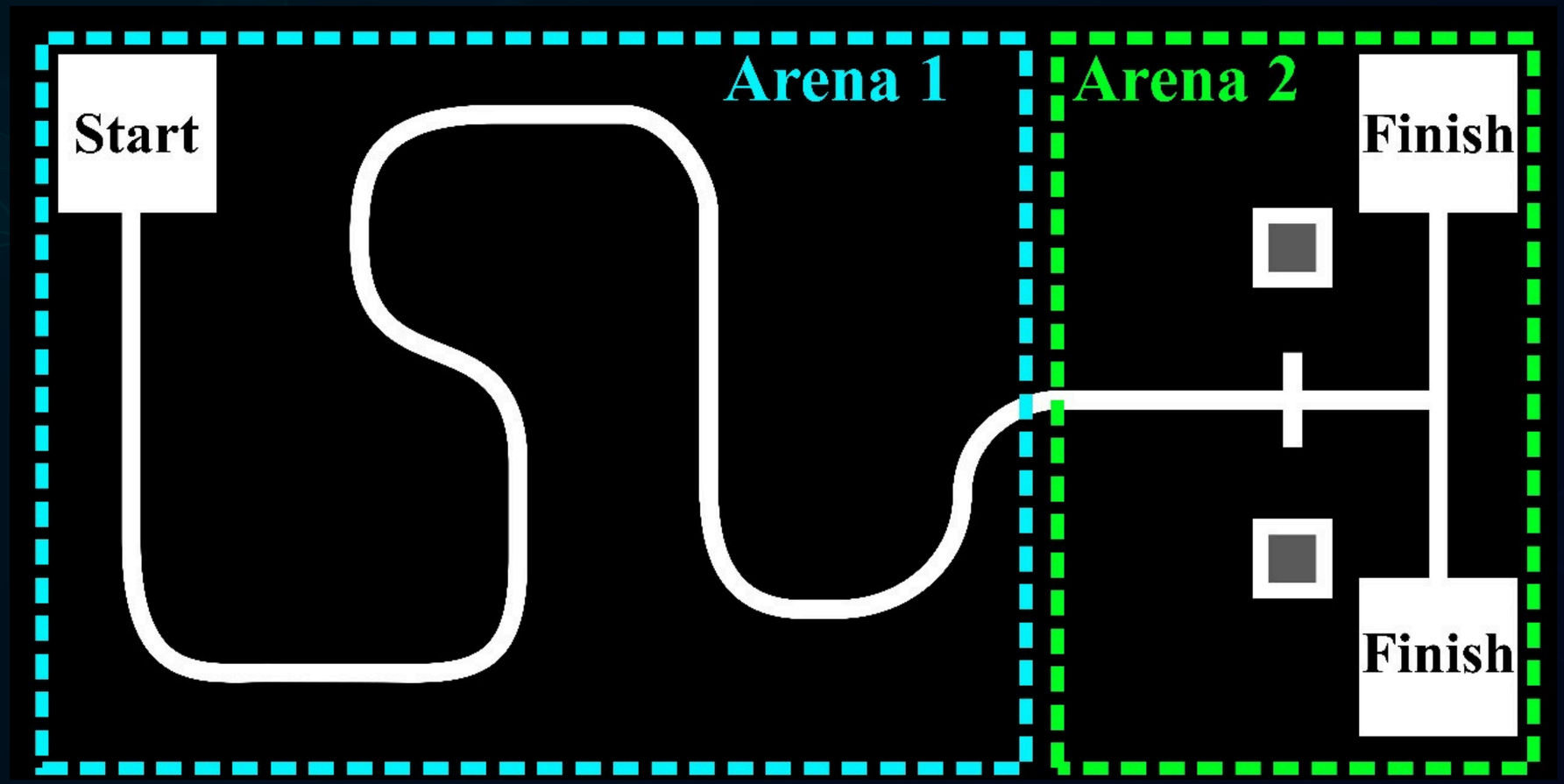
YOUR TASK

- **Your robot should automatically travel from the starting point after you activate it.**
- **First you have to go through all the curved paths of the cave(section 01)**
- **There will be two junctions, first will be an indicator junction(section 02), there should lie the mother rock(section 03), where it will show the correct direction to the metal treasury. Your robot should not turn any sides in the indicator junction**
- **Then it should face the junction connecting the two new roads(section 04). The robot should follow the direction indicated by the mother rock to find the metal treasury.**
- **For example, if the mother rock lies in the right side, the robot should follow the right path in the final junction (Section 4) to reach the metal treasure.**

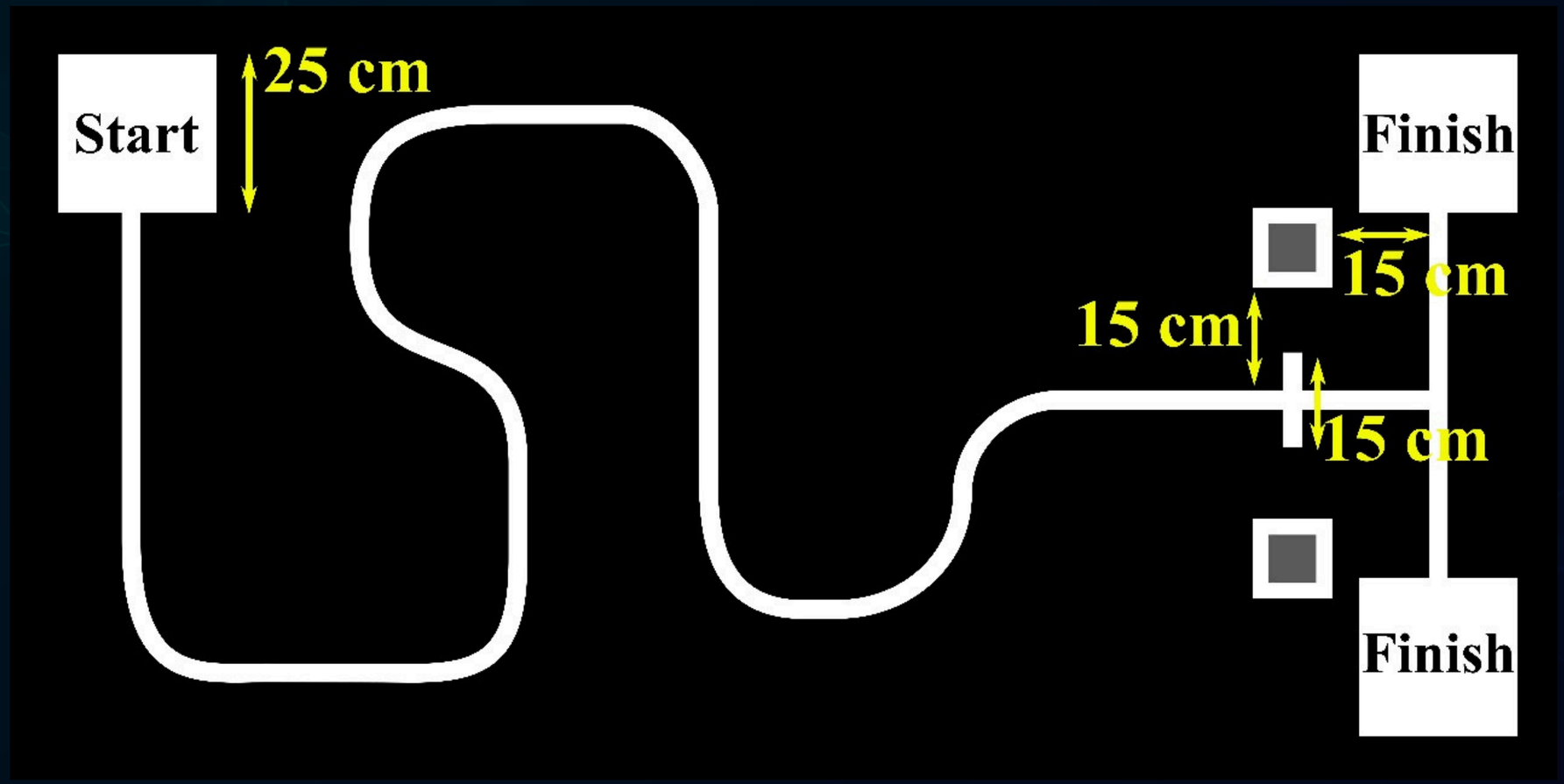
SAMPLE ARENA



SAMPLE ARENA



SAMPLE ARENA



TEAM REQUIREMENTS

- Teams can consist of up to 5 students from the same school.
- Each school can enter multiple teams if they wish.
- Age Limit: Up to 19 years

ROBOT REQUIREMENTS

- Each team must design and build their own line-following robot. Teams may use DIY Car Kits.
- Robots must be fully autonomous and not remote-controlled during the competition.
- The robot's power source must be self-contained (e.g., batteries).
- Teams must bring their own robot, sensors, and electronics.
- The robot must fit within a 25 x 25 cm dimension.

RULES AND REGULATIONS

- One minute will be allowed for setup and calibration.
- The robot must fit within the 25x25 cm starting box (no weight limit).
- The team operator is only allowed to place the robot on the board and to push its starting button when told to do so.
- The judge will time the robot.
- Each robot can be given a maximum of three official trials from the Starting square and a total of 10 minutes run time will be given. The Robots finishing the path in the First Trial will only have the Time Bonus. The team may request for the other trials.
- The arena is 4 x 4 foot and black in colour.
- The lines are 3 cm wide white lines on black arena.
- The minimum line gap is 15cm.
- Robots should be submitted 10 minutes prior to the beginning of the competition

ROBOT SCORING

- Robots will be scored based on their performance in following the line and completing the course.
- Points will be awarded for Speed, Time Limit, Accuracy, and successful navigation.
- Penalties may be applied for leaving the line or other rule violations.
- Originality of the robots will be checked by the judges
- Judges' decisions are final.

CODE OF CONDUCT

- Participants are expected to demonstrate good sportsmanship and fair play throughout the competition.
- Any unethical behaviour or cheating will result in disqualification.

PRESENTATION

- Judges may ask questions about the robot's construction and programming.

AWARDS

- Prizes will be awarded to the top-performing 3 teams based on their scores. Prize Giving will be held on the next day
- Participation Certificates will be provided to all the participants on the competition day

SAFETY PRECAUTIONS

- Teams must ensure that their robots are safe to operate and do not pose any hazards to spectators or other participants.
- Students should avoid touching any moving parts of the robot during operation.

INNOVATION

- Teams are encouraged to incorporate innovative features, sensors, or algorithms in their robot design to showcase creativity and problem-solving skills.

AWARENESS SESSION

- An awareness session will be held on 13th of July 2024 at 8pm via Zoom. Participants are expected to attend the session for more clarifications
- Link for the session will be sent via Email.
- There will be an awareness video with Frequently Asked Questions released in Yarl It Hub's Youtube Channel.
- For more doubts and clarifications, You can contact via 077 040 8802 / 077 074 0146 during office hours from 2 p.m. to 3 p.m.

REGISTRATION

- Schools must register their teams on or before 28th July 2024.
- Teams can register through this link https://www.yarlithub.org/festival/robotic

TIMELINE

2ND JULY 2024

Registration Opens

13TH JULY 2024
(8 P.M. - 9 P.M)
ONLINE

Awareness Session

28TH JULY 2024

Registration Closes

2ND AUGUST 2024
JAFFNA CULTURAL CENTER

Test run

3RD AUGUST 2024
JAFFNA CULTURAL CENTER
(7.30 A.M. ONWARDS)

Competition Day

4TH AUGUST 2024
JAFFNA CULTURAL CENTER

Prize Giving for winners

WINNER

25,000 LKR

1ST RUNNER UP

15,000 LKR

2ND RUNNER UP

10,000 LKR

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