

## 1. Competition overview

### a. Customized kit details

- Components of the kit

S.No.	Components
1.	Battery Li-ion
2.	Ultrasonic Sensor
3.	Robot Frame and mechanical connectors
4.	BO Motor
5.	wheel
6.	Encoder
7.	Arduino Mega2560
8.	Arduino programming cable
9.	Motor driver 2 channel
10.	IMU 6050
11.	Castor wheel
12.	Wires and connectors
13.	Board for connecting the sensors
14.	Buck converter
15.	IR Sensor

- Common tools

S.No.	Components
1.	tools set (screw drivers + others)
2.	Soldering iron kit
3.	double side tape, insulatoion
4.	Charger Li-ion
5.	Multi-meter
6.	Extension cords
7.	Wire clippers
8.	Scissors
9.	Cutting pliers

### b. Task description:

The teams need to build a maze solving bot using the components of the provided kit. The bot needs to traverse a maze from the start point and navigate the robot through the maze to reach the end point. (as its unknown environment)  
Once it reaches the end point, the bot needs to take the shortest path back to the start point. The team which takes the least time while coming back wins.

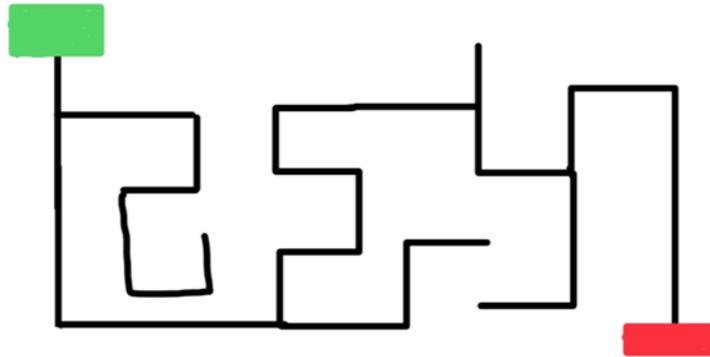


Figure 1. Sample maze

- c. Evaluation criterion:
  1. Successful solving of a given maze.
  2. Completion time.
  3. Documentation and presentation.

## 2. Prize money

- a. First prize – INR 50,000
- b. Second prize – INR 30,000
- c. Third prize – INR 20,000

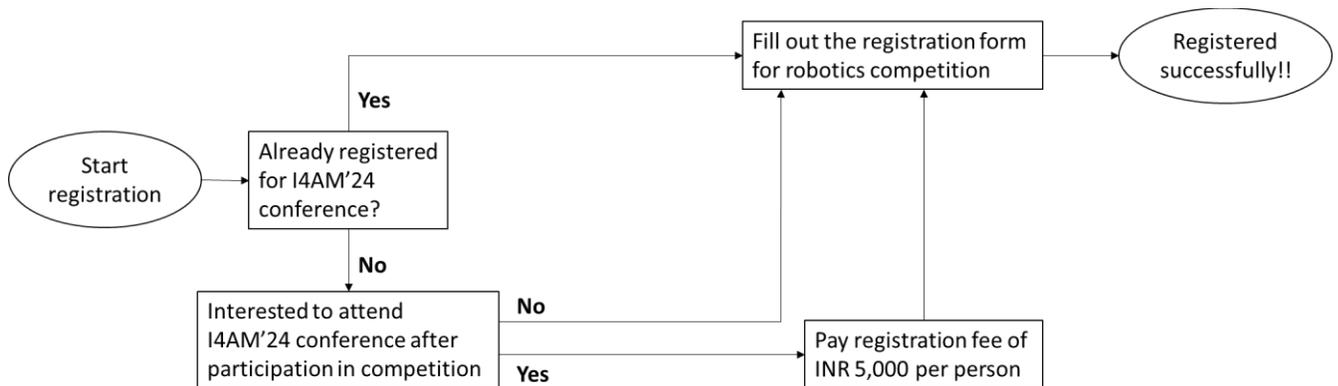
## 3. Opportunities

- a. Top 6 teams will win an internship opportunity with IISc/Art Park/Robert-Bosch

## 4. Registration details

- a. Registration fee:
  1. Those students who have already registered for I4AM'24 are eligible to participate in this competition without having to pay any additional fee. However, they need to register separately for this competition (see registration process).
  2. Participants only interested in the robotics competition on 10<sup>th</sup> January can register for free (see registration process).
  3. Participants interested to attend I4AM'24 conference post participating in the competition need to pay a registration fee of INR 5000 per person and fill out the registration form. This includes registration for attending I4AM'24 on 11<sup>th</sup> and 12<sup>th</sup> Jan 2024 (only if the person has already participated in the competition on 10<sup>th</sup> Jan 2024).

b. Registration process:



c. Mode of payment:

Online transfer

NOTE: Please ensure that all charges should be to the account of remitter.

Bank Transfer to-

Beneficiary Name: SOCIETY FOR INNOVATION AND DEVELOPMENT

Account Number: SID2411001

Bank Name: HDFC BANK LTD

Branch: M G ROAD BENGALURU Branch, BENGALURU (KARNATAKA)

IFSC Code: HDFC0000076

STEPS FOR MAKING REGISTRATION FEE PAYMENT FROM HDFC ACCOUNT

[RegFeePaymentSteps.docx](#)

d. Registration form for participation in robotics competition:

<https://shorturl.at/dsEKY>

5. **Eligibility:** Bachelors, Masters and PhD students.

6. **Number of members in a team:** 3

If you want to come as an individual, you will be randomly allotted to a team on the first day of the competition, i.e., 10<sup>th</sup> Jan 2024.

7. **Important dates**

Registration begins	23-12-23
Registration ends	08-01-24 (at 23:59)
Competition	10-01-24 (0900-1900)
Announcement of Winners and Prize distribution	12-01-24 (1700-1800)

8. **Venue (for the competition)** – MMCR, Department of Design & Manufacturing (formerly CPDM), Indian Institute of Science, Bengaluru