

WALL STREET

"Follow lines. Break walls, be the king beyond the walls."

Problem Statement:

Build an autonomous line follower bot based on microcontroller which is capable of following lines as well as walls (where line may or may not be present) and detecting crossroads.

General Rules:

- A team can consist of maximum 4 members.
- The candidates may or may not be from different colleges.
- No person can be in two teams of the same event.
- The members must bring IDENTITY CARDS of the college.
- No person should be a member of two teams.
- No bot can be shared by two teams.
- Any kind of damage to the arena by the robot will lead to direct disqualification.
- Any act of misbehavior or misconduct will lead to immediate disqualification of the team.
- Damaging the path will lead to immediate disqualification.
- The decision of the co-ordinators will be final and binding.

****The rules are subject to change.**

Event Rules:

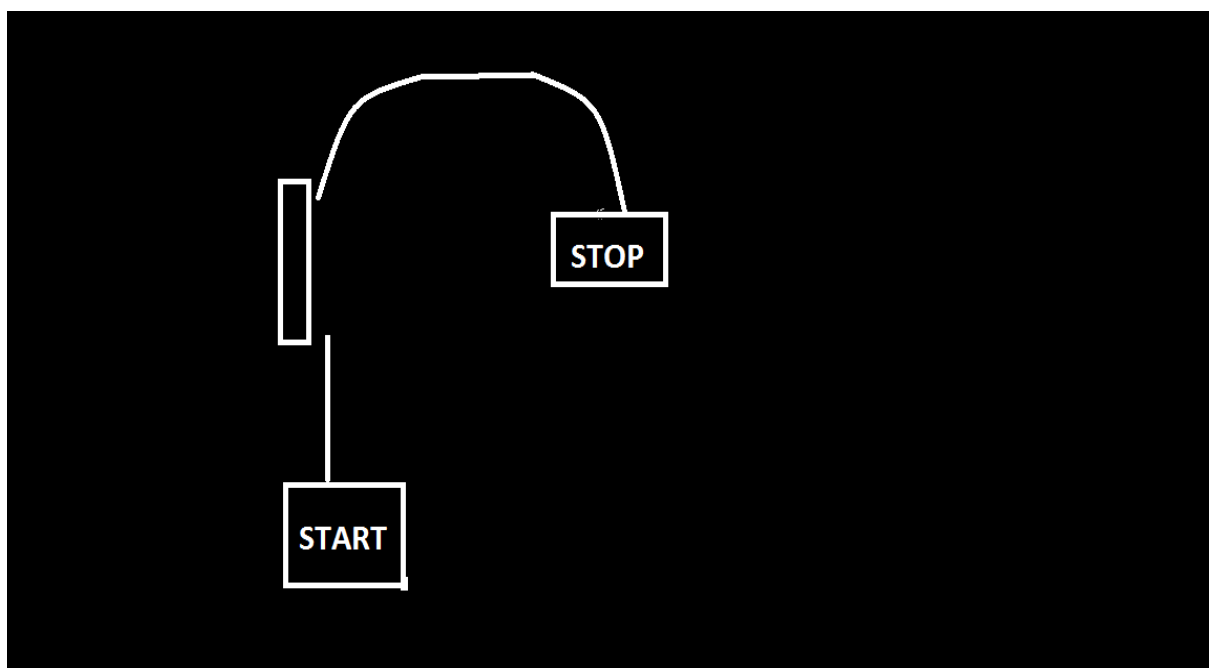
- The dimension of the bot should be 20x20x20 cm with a tolerance of 10%.
- The width of line would be 2.5cm. approx.
- There will be a total of 2 rounds.
- The maximum time allotted to complete the task is 4 minutes in the prelims and 5 minutes in the finals.
- The run will start from a predefined starting point.
- A team can have maximum of six hand-touches, two restarts, and two timeouts in each round.
- If a team wants a restart, the bot will be placed at the starting point.
- After every hand-touch, the bot will be placed on previous check-point.

- The walls will present at a distance of 12-15 cm from the path of the robot.
- Any collision with the wall treats as penalty.
- When the robot follows the wall the bot has to indicate that by glowing and LED or by sounding a buzzer.
- While following the walls the bot has to ignore the lines (if present).
- In the first round, the bot has to follow the line as well as wall, detect check points and indicate wall. Here the line is present in only one side (either left or right).
- In the second round, the bot has to follow the line as well as walls, detect check points, indicate wall and has to stop at the finishing point. In the second round, walls may be present on both the sides (left and right).
- In the final round small obstacle may be present at some distance, collision with which be considered a penalty.

Scoring:

- Penalty of **150** points will be imposed for no of restarts taken.
- Penalty of **100** points will be imposed for no of timeouts taken.
- Penalty of **50** points will be imposed for each hand touch.
- Penalty of **100** points will be imposed for each skips.
- Penalty of **50** points will be imposed for each collision with wall.
- **50** points will be awarded for each wall if indicating properly.
- **50** points will be awarded for each detection of checkpoint.
- **100** points will be awarded for stopping at finishing point.

Sample Schematic:



*** The Real arena may differ from this given sample. Rules may vary.**

Contacts:

- Utsav Shah : **+91-8697108688**
- Dwitam Ghosh : **+91-8293929077**