Board-Bot

JUNIOR YEAR COMPETITION

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Batch-28

INITIAL IDEA

Board-bot is a vertical board plotter capable of writing text and images on white board using board marker.

PROBLEM DEFINITION

A team of 4 students will fabricate a vertical board-bot. The robot should be able write/draw the text/art on a white board. Following are the important points:

- Design a 3D mechanical body of the bot on any CAD software.
- Design the respective electronic circuitry on PCB only.
- Design a GUI depicting a white board on any software.
- Wirelessly transfer the file to the robot.
- Execute the task and verify through an LED.

Technical Specifications

- Minimum board size: 3x3 feet
- Raspberry pi, STM discovery, STM nucleo, beaglebone, PIC, AVR allowed
- 5-minute maximum execution time
- PCB only
- Optional battery operated or external supply
- Maximum weight 2.5kg

Contents of Report (IEEE Format)

- Introduction
- Literature review
- Specifications
- Components list
- 3D model
- Circuit diagram
- Flowchart
- Working
- Conclusion

Note

- Submission & viva date: 20 May
- A team of maximum **4** students is allowed.
- Sharing anything between groups will be considered cheating and awarded F grade to both teams in all 3 labs.

MARKS DISTRIBUTION

TASKS	Marks (30)
3D Modelling	**2**
Mechanical Fabrication	**2**
Electrical Fabrication	**2**
GUI Interface	**2**
Wireless Communication	**2**
Task Execution	**6**
Viva	**10**
Report	**4**

* Marks are tentative and can be changed during the time period.