



**THEME:-** Clean Environment

**TOPIC NAME:-** Automatic Sanitation System in Railways

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# INTRODUCTION

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- DETAILS OF THIS PROJECT
- COMPONENTS USED IN THIS PROJECT
- WORKING OF NEW AUTOMATED SANITATION SYSTEM

# DETAILS OF PROJECT

- This type of project with high budget is already applied in the special trains like Maharaja Express, Deccan Odyssey, Golden Chariot, Palace on Wheels, etc.
- **But**, we are in hope to apply this system in passenger trains & local express trains working in India, because this is the low budget project.
- There are no special additions to this project that we have added. The basic aim of our project was to reduce the work load of the workers who are daily working on the railway tracks to keep it clean and smell free.



# COMPONENTS AND MATERIAL

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1. Stainless Steel Tank
2. Arduino Uno
3. One GSM with simcard
4. Two Obstructive Sensors
5. Wires
6. Power Supply

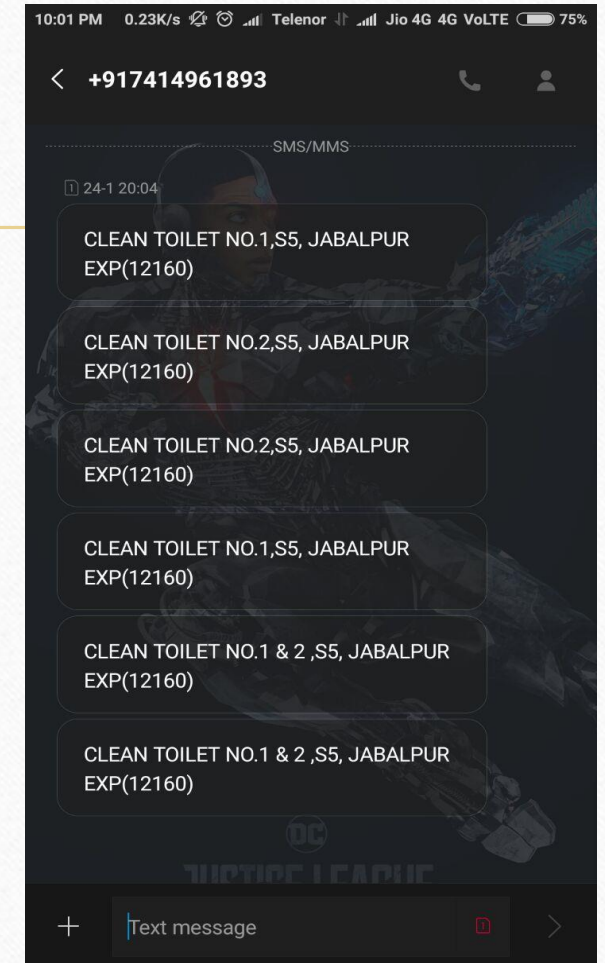
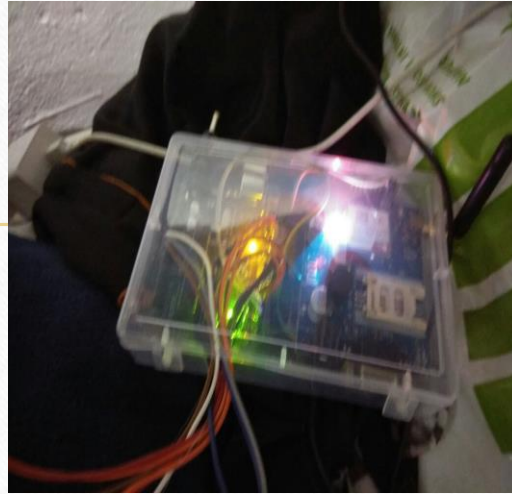
# WORKING OF NEW AUTOMATED SANITATION SYSTEM

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- Automated sanitation system works with the help of Arduino UNO and GSM system.
- There will be total 4 tanks in a boogie.
- Only one arduino will be required to control 2 toilets at a time with one GSM.
- If a single toilet tank gets filled up then the obstructive sensor will detect the level of the tank.
- After the delay of 5 sec a message will be sent to the nearest station sanitary cleaner where the cleaner will have to use a vaccum cleaner to clean the tank. All he will have to do is attach the vaccum cleaner opening to the tank outlet. All the waste will be sucked inside the vaccun cleaner tank & the tank will be ready for use again.



# IMAGES OF THE MODEL WHILE WORKING



# COST OF THE MODEL

**Cost of Arduino UNO:-** Rs 450

**Cost of GSM :-** Rs 900

**Cost of 2 Obstacle sensor:-** Rs 60 each

**Cost of Box and decoration :-** Rs 300

**Total cost for the model:-** Rs 1770 (Approx)





Thank You