



NATIONAL INSTITUTE OF BUSINESS MANAGEMENT

BSc (Hons) ITB Year 24.2

Robotics – 2nd progress report

Group-8

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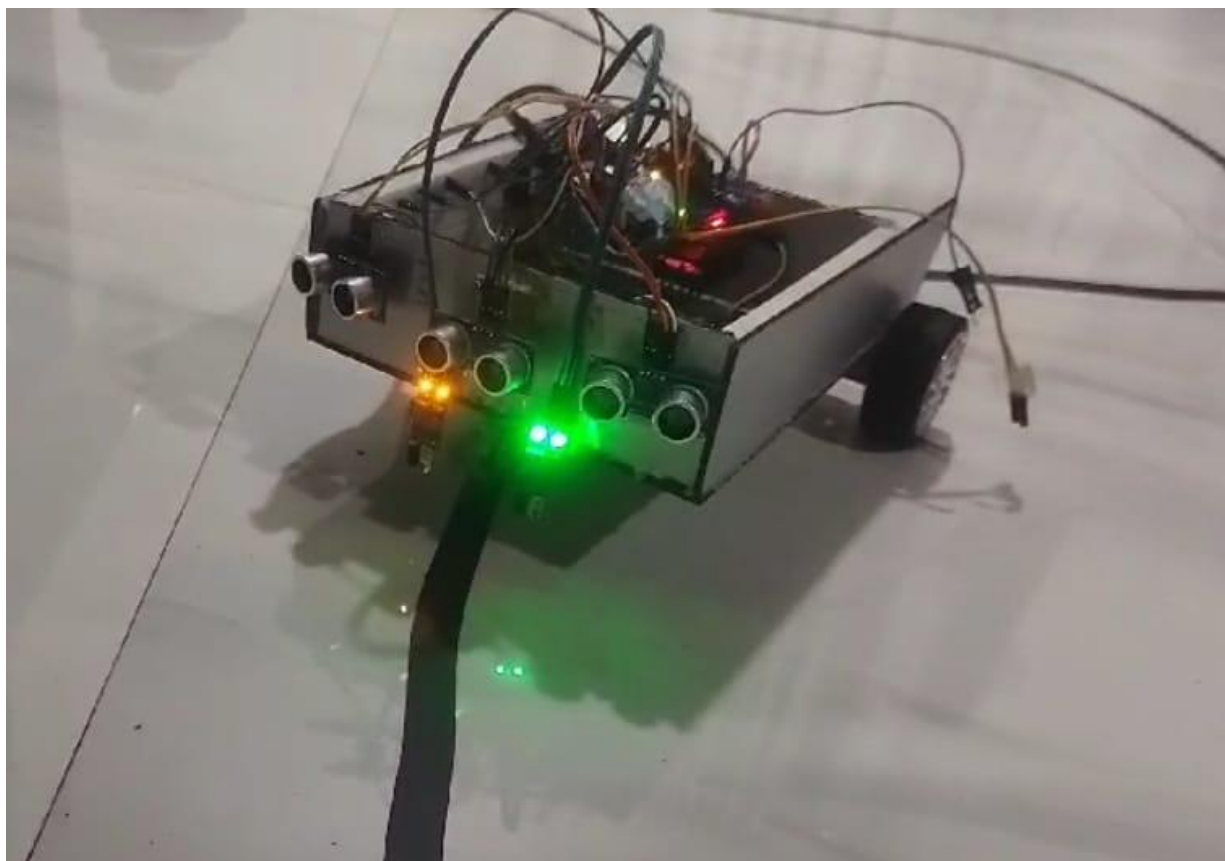
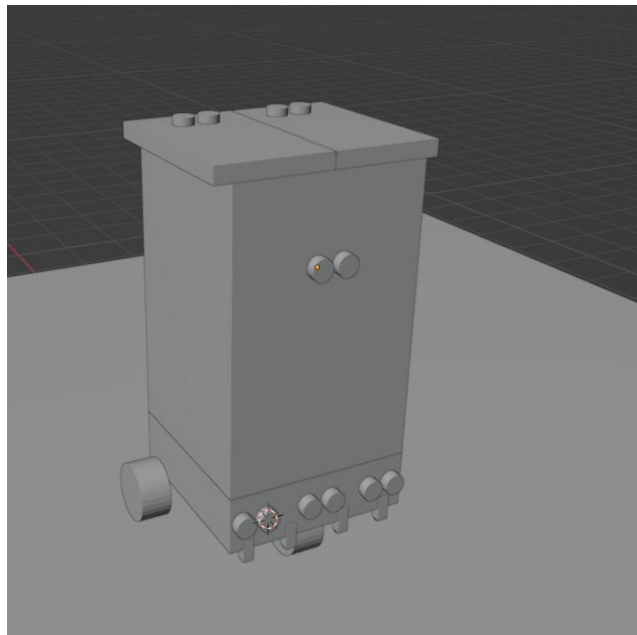
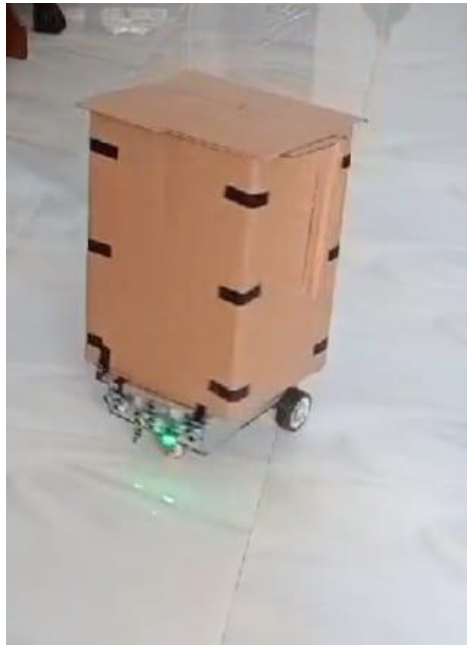
Introduction

The main purpose of this bot would be to move around automatically and store garbage and make the problem of collecting garbage more efficient and easy for everyone. And this project aim to fix and address the common issues in waste management by making sure a bin is always near by and encourage people not to litter.

Problem Identification

- **Accessibility:**
 - People often face difficulty reaching garbage bins, either due to bins being too far away or hard to locate. This can lead to littering, especially in areas where waste disposal is inconvenient.
- **Hygiene Concerns:**
 - In public spaces like malls and airports, touching garbage bins may pose hygiene risks, deterring proper waste disposal.
- **Littering and Environmental Impact:**
 - The lack of easily accessible garbage bins near people makes people litter more as there are no garbage bins near them. This will have a great impact on the environment.
- **Lack of Immediate Waste Collection Solutions:**
 - During public events or gatherings, there may not be enough garbage bins available to meet the demand. Additionally, finding bins in crowded areas can be difficult, leading to waste being left unattended

Design



Bill Of Materials

Item Name	Quantity	Price (Rs)
Ir sensor	4	440
Ultra sonic sensor	8	1,840
Motor driver	1	460
Arduino board	1	2,600
Mini buzzer	1	40
Gear motor	2	1,920
Wheels	2	900
Hex coupler	2	360
Caster wheel	1	115
DC jack male	2	80
Jumper wire m2m	2 (sets)	320
Jumper wire m2f	2 (sets)	340
Bread board	2	700
Servo Motor	2	860
Screwdriver	1	350
Soldering Iron	1	1,000
Glue Gun	1	350
Glue gun sticks	5	550
PIR sensor	1	230
Electrical tape	1	130
3.7V Rechargeable Battery	6	1,380
Arduino mini pro	1	800
HC-06(Bluetooth module)	1	960
Acrylic Sheet (12x12)	2	2,580
Total Price :		Rs. 20,505

Flowchart

Gantt Chart

[illegible]