SMARTBIN
SMART HOME GARBAGE SEGREGATION SYSTEM

Problem Statement
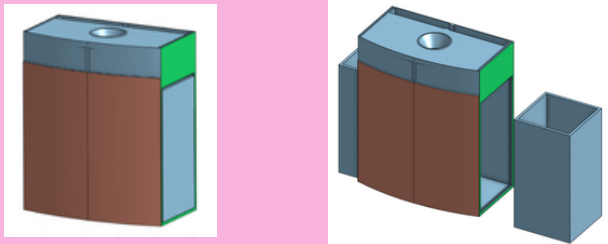No efficient methods of waste segregation and collection at initial stages.

Motivation
- Due to increase in global waste, there is no sustainable method for waste segregation.
- As wastes are dumped in landfills, segregation becomes difficult.
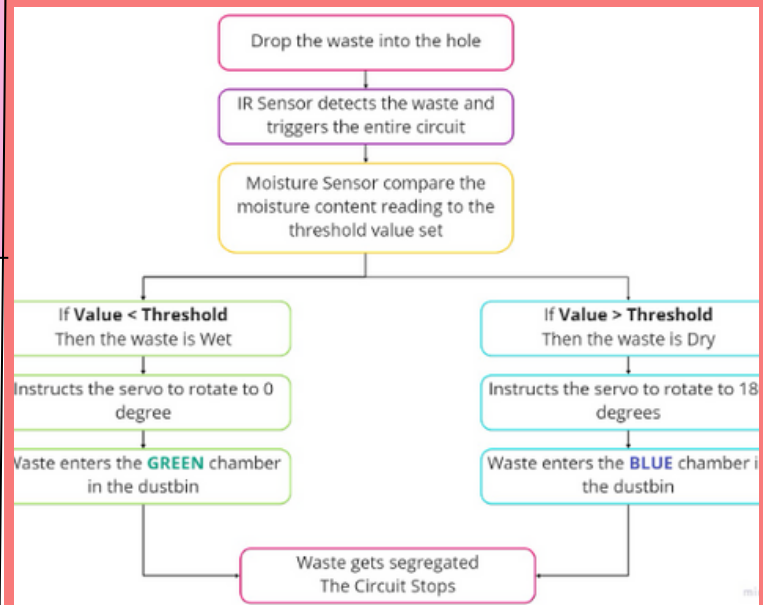- Separate dustbins are inefficient as people are lazy.

Why Smart Dustbin?
- Auto-segregation into biodegradable & non-biodegradable.
- Alarm alerts the user when the bin gets filled by 90%
- Segregation process is automatic
- User-friendly.

CAD Model

Prototype

How does it work?

Drop the waste into the hole

IR Sensor detects the waste and triggers the entire circuit

Moisture Sensor compare the moisture content reading to the threshold value set

If **Value < Threshold** Then the waste is Wet

Instructs the servo to rotate to 0 degree

Waste enters the **GREEN** chamber in the dustbin

If **Value > Threshold** Then the waste is Dry

Instructs the servo to rotate to 18 degrees

Waste enters the **BLUE** chamber in the dustbin

Waste gets segregated The Circuit Stops

Competitive Landscape
- There is no similar pre-existing model.
- A market worth 542.7 billion USD can be captured.
- The cost of a model can be brought down by mass production.

Future Plans
- Addition of GSM Model into community bins.
- Solar panels for outdoors.
- Automatic lid opening system

Team Members
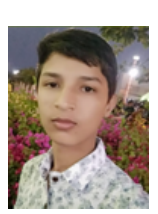

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